ITS

DIMENSIONS V15

LIMITS

Nutrition Facts

Serving Size 1 Package
Servings Per Container 1

Amount Per Serving

Calories 80	Calories from Fat 35

% Daily LIMITS*

Total Fat 4g	6%
Saturated Fat 0.5g	3%
Cholesterol 0mg	0%
Sodium 110mg	5%
Total Carbohydrate 10 g	3%
Dietary Fiber 1g	
Sugars 1g	
Protein 1g	

Vitamin A 0%	Vitamin C 0%
Calcium 2%	Fiber 0%

*Percent Daily LIMITS are based on a 160 page diet.
Your daily LIMITS may be higher or lower depending on
you calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9   Carbohydrate 4   Protein 4

DIMENSIONS V15

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Journal of the A. Alfred Taubman College of Architecture + Urban Planning

L

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limit (lim˘it) *n.* 1. a determining feature or differentia in logic. 2. a prescribed maximum or minimum amount, quantity, or number. 3. a number that for an infinite sequence of numbers is such that ultimately each of the remaining terms of the sequence differs from this number by less than any given positive amount. 4. something that is exasperating or intolerable.
(Miriam Webster's Dictionary)

This book is a collection of thoughts that attempts to reinforce or redefine the possibility of limits in architecture. Dimensions V15 contains articles which address a broad range of interpretations of limits. We hope you find Dimensions V15 to be a comprehensive and provocative perspective in the realm of architectural discourse.

Lillie Arrazola
Alexander Briseno
Adrianna Jordan
Hilary Padget
John Wagner

EDGELESS-NESS

Craig Dykers

Limits of Geometry as Told Through Memories of Ferdinand Magellan

On Saturday,

September 6th, 1522

a weather beaten Spanish galleon named Victoria sailed into Seville harbor. The Victoria was the only remaining vessel of Ferdinand Magellan's epic 62,880-kilometer voyage and with its return to Spain it completed the first circumnavigation of the globe in human history. Magellan had died somewhat pathetically en route and upon the expedition's arrival in Spain Magellan's biographer delivered to awaiting Spanish officials his valuable diary that he had begun four years earlier on the day the ship left port, 'Tuesday, September 20, 1519.'

With some surprise the Spaniards ashore noted that the day the ship sailed into Seville was in fact September 7th and not September 6th as the diary claimed.

The dates were checked with the ship's log kept by the pilot of the Victoria and it was found that no mistake had been made, no days had been left out and each of the two men agreed to disagree that they had indeed arrived in Seville on September 7th. The Spaniards did not understand how the ship's crew could have forgotten a full day in the log and it was certain that all of Spain could not have inadvertently added a day to their calendars. Debate continued for decades to explain why the arrival date in the ship's log was one day behind the same calendar date in Spain.

This first circumnavigation of the earth had exposed one of the fundamental effects of living on a spinning, spherical, solar-centric planet; the ship had unknowingly crossed the "date line." A solar day had been lost in the expedition's westward travels; a concept not understood by any of the persons involved with the journey.

It had been reasonably well established at that time that the world was round and with Magellan's venture its geometry had been proven, yet the spherical nature of the earth was not entirely appreciated, the loss of a day could not be tied to westerly travel around the world. Although the event occurred nearly 500 years ago, this fluke of context is still not quickly understood. Flying across the Pacific Ocean from Los Angeles to Tokyo is accompanied by a surreal turning forward of the watch by twenty-four hours that seems more political than physically necessary.

Returning to Magellan's voyage there remains further insight into context beyond the formal encirclement of the globe. Magellan never completed his adventure, his remaining ship, Victoria, returned to Europe without him and in this aspect clues can be found relating this story to limitations of society rather than of geometry.

Magellan was both an intelligent politician and a well-traveled captain. Born to Portuguese nobility, his expedition began in the courts of Portugal where he tried to convince the sovereign Don Manuel I to fund his voyage to circumnavigate the world. This expedition was fueled by Magellan's previous excursions to the Orient, discussions with Pacific mariners and his knowledge of the exploits of explorers such as Marco Polo. Although the Portuguese court was intrigued, he could not find enough enthusiasm to secure the resources necessary to fund the expedition. His interview skills failed him and Magellan turned his attention to rival Spain where he would likely find similar difficulties in financing but with whom remained his last serious alternative. At that time, however, the Spanish were eager to find a means to overcome Portugal's monopoly on the lucrative natural resources of the Spice Islands and Mollucas in the Indian Ocean.

After the surprising appearance of the New World where India was supposed to be and a long series of wars which followed, Portuguese ownership of the Spice Islands was granted by a papal decree. In a moment of unbelievable wit, Pope Alexander VI, by popular accounts, placed a map of a flat world upon a table and drew a line across it from top to bottom. This line crossed through the Atlantic and parts of the Americas. He then claimed that all non-Christian lands to the east of the demarcation would belong to Portugal and all lands to the west would belong to Spain. The so-called Indies were divided into East and West and the Spice Islands that lay to the east of the pope's demarcation fell into the hands of the Portuguese. By sailing south along the coast of Africa and then east across the Indian Ocean, the Portuguese navigated freely within their territory to reach the East Indies.

Magellan convinced the Spanish and Carlos I that because the world was round he could reach the Spice Islands by sailing to the west across the papal demarcation in the Atlantic, around South America and across the Pacific Ocean. This would place the islands to the west of the papal divide and allow the Spanish to claim these lands for themselves. The expedition then received considerable funding.
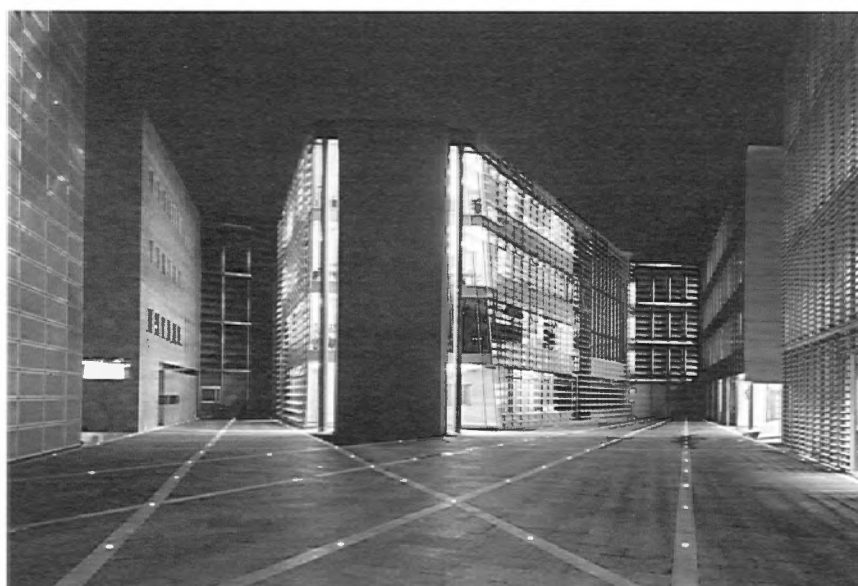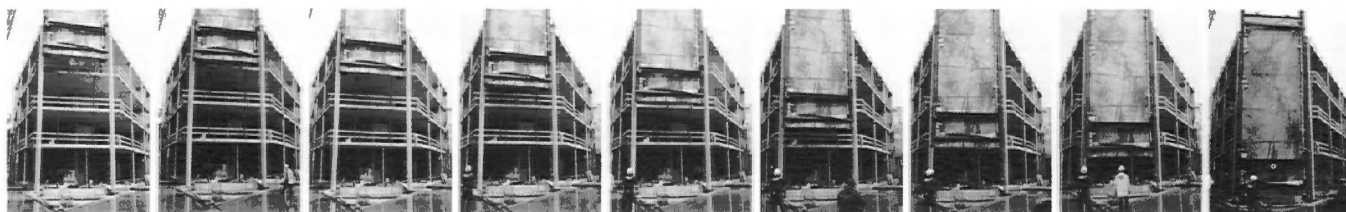
Norwegian Embassy in Berlin
120 tons of stone were ceremoniously yet fastidiously removed from the earth in a single, monolithic block. The stone remained as one piece, 15 meters by 5 meters and 70 centimeters thick. Despite the fears of many, it was transported 800 kilometers from Norway to Berlin. This piece of the Norwegian landscape was then lifted and rotated vertically where it now resides as the southern façade of a building.

By most accounts, Magellan was thought to be a considerate Captain by the standards of the day. At the beginning of the voyage, he was seen as somewhat benign yet resourceful and he gathered considerable respect from his crew. He brought sufficient food sources to allay scurvy and his fleet was healthy. The first portion of the journey was strenuous and the fleet labored to round the southern point of South America. The boats floundered aimlessly in the enormous basin at the mouth of the Rio de la Plata, thinking they had reached the end of the continent. After a considerable period, realizing their error, they continued southward where they passed the Straits at Cape Horn now given Magellan's name. The fleet then somewhat unceremoniously entered the Pacific Ocean from the East, the first time by Europeans. An arduous crossing of our planet's largest body of water followed, the limits of which were unknown to Magellan's weary fleet. Although educated estimates were made as to the size of this ocean, the fleet most likely remained restless throughout the long, island-free passage across the southeast Pacific.

Upon reaching the first Pacific Islands and encountering native Pacific Islanders, Magellan and his crew undertook the European evangelical notion of converting indigenous peoples to Christianity and simultaneously claimed lands for the court. The notion that their westerly journey into the Pacific was unprecedented provided the Captain and crew with the self-confidence of being messengers of God and of the Crown. Magellan's disposition remained benevolent and he allowed the first Islanders he encountered the ability to maintain both their indigenous religion as well as Christianity, provided they somehow mutter an allegiance to a European sovereignty and God. As time passed and greater distances were covered Magellan's self-confidence and in turn his arrogance grew.

By the time he reached the Philippines he no longer allowed for leniency when civilizing native peoples. At the island province of Cebu in the Philippines he gregariously proposed that a village of nearly two thousand natives give up their deeply rooted religious beliefs and alliances. Being of greater numbers, the Islanders strongly disagreed. After a series of protracted and complicated formal engagements with various leaders of the native community, Magellan assured his crew that the village could be converted to Spanish will with the evangelical intervention of God and the Holy Virgin. Leaving his marines behind, he led three small boats ashore with a few untrained guards and little weaponry. Magellan believed that the voice of the Almighty would somehow manifest itself as he beached at Mactan. His body was mutilated so badly by the enraged natives that the remaining crew could barely retrieve even a scrap of clothing with which to identify their captain.

Karmøy Fishing Museum
This simple yet unfamiliar form perches over the fjord. Its concrete skin has been fertilized to allow lichen, which grows on the surrounding rocks, to grow on the building. In time, the building will not be the same as it is today. This building was made without the complete set of drawings normally used in constructing buildings.

Alexandria Library

We observe it as a frozen moment in time. The building rises from out of the horizon. It is neither upon nor within the earth. It is a part of its landscape. The roof contains and reflects light and is the primary organizing tool which allows the building to be understood as a whole. Surrounding the building, a geologic structure is pulled upward, exposing the archeology of the function and site.

Yet the culmination of this story has yet to unfold. Prior to this voyage Magellan had been to the Mollucas on other expeditions financed from Portugal. He was familiar with the area and on one occasion he purchased a young Malayan who was sent from one of the islands at the rim of Sumatra, known as Limasawa, to be auctioned as a slave. This young slave returned to Europe with him and was trained to be his manservant. He was educated in European matters and languages and by the time he reached adolescence had probably forgotten much of his past including the island of his origin.

Magellan took this trusted companion and manservant, now known only as Enrique, on his expedition around the world. Prior to Magellan's final adventure on the island of Cebu in the Philippines, the fleet had landed on the Visayan Archipelago. Upon disembarking the crew met with indigenous Islanders and made attempts to communicate with typical difficulty. The language the crew heard was unknown to them, as had been routinely the case across the Pacific. According to reports, Magellan and his crew heard laughter from another crowd nearby their own. At the center of this crowd stood Enrique. To the surprise of Magellan and his crew the manservant spoke the words of those they had newly met. Enrique had unknowingly returned to his homeland and after decades of separation he had recalled the language of his birthplace. The unique consequence of this event meant that Enrique, the servant, was in fact the first person to circumnavigate the earth, albeit over some twenty years time between embarkation and return. At this point Magellan would have definitively realized that his assumptions regarding the globe were correct. He had returned Enrique to his home by traveling westward. Yet did Magellan, as we do not today, ascertain the fact that the remarkable feat of circumnavigating the world for the first time could be credited to a virtually nameless servant?

The world is not necessarily what we make of it. It is both the stories we tell about it and the story it wants to tell us. While objects, at the Euclidean level, appear uncomplicated and therefore become useful symbols for larger ideas, they do not exist solely as forms without relation to the places they inhabit. Consequence and form are inseparable in time.
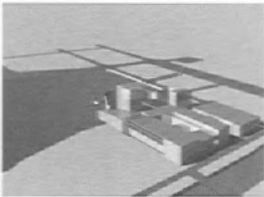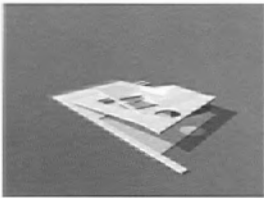
National Opera in Oslo
Emerging from the sea, the Opera reintroduces the natural landscape into the man-made environment. The tension between what appears to be new and what acts as though it were indigenous contains the function. In the summer it is hoped that visitors to the Opera will take off their shoes and wade into the fjord, as they like. In the winter the ice and the plaza will merge as one.

During the past thirty years astronomers have mapped the locations of over one million galaxies distributed in three dimensions throughout observable space. The resulting, almost incomprehensible map shows the largest-scale structure ever seen by the human eye and represents clusters of galaxies in an area of over two hundred million light years in all directions. The map shows a beautifully lacy, membranous pattern and sets the fairly obvious, our planet and the Milky Way Galaxy, into a uniquely exotic geometry. Our universe appears to be filled with a sparkling water-like fluid of curving, light-emitting, absorbing and reflecting currents, meandering through numerous tides of dimension. Like the waters of the Pacific below Magellan's pioneering ships, this vast galactic ocean has unknown shores across furiously unforgiving distances. But it will not be the discovery of distant shores that lends appreciation of our place on this map. As with the Magellan voyage, the circumnavigation of this place will prove more complex than simply illustrating its physical layout.

Similar to the first photographs of the earth taken by astronauts, a new view of the world separates our time from the past. Knowledge of our world has shifted from primitive sketches of a limited, earth-centered planet to globes spinning around the sun. Understanding has shifted yet again, to a fluid space and time continuum. Time and space no longer exist in discrete moments.

Closed geometrical forms artificially separate time and space but this useful limitatiom, this separation is far from essential. It would be considered ridiculous to physically separate the events of one day, one season or one year from the next, despite their clear divisions on a calendar. While there may be a middle of the day, there is neither an edge nor a center to time.

The things we create upon, over and within the earth are ultimately manifestations of intrigue greater than that which we initially observe. Objects, as they are created, contain both the intuitive and formal human sensibilities. As architects we still have the ability to entertain less limited, edgeless sensitivities of our place. As this occurs, creativity will evolve and architecture as we know it will become a backwash in the memories of our future ancestors.

All images courtesy of Snohetta
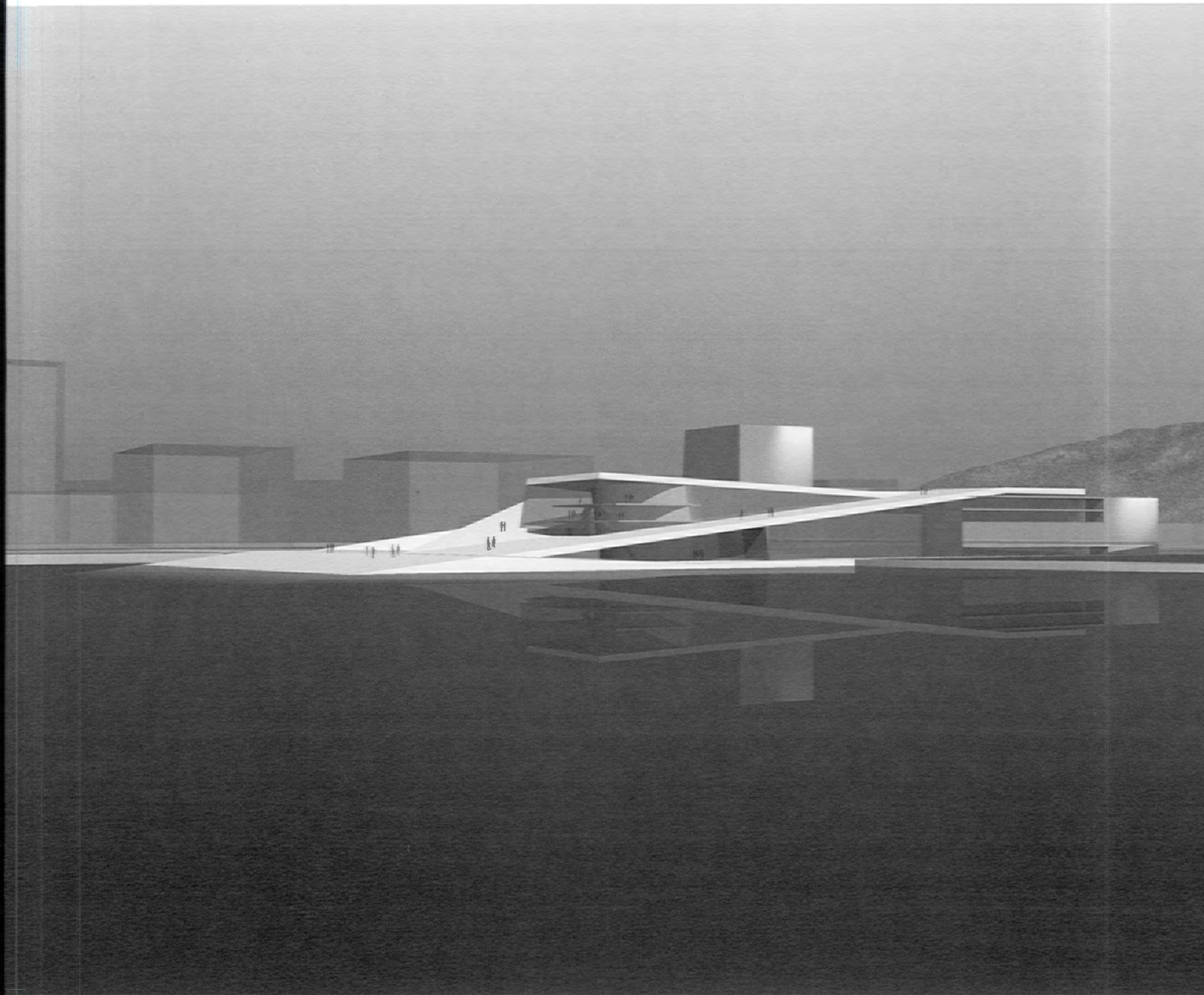
CITY LIMITS: An Interview with Carlos Jimenez

Ideas generated in your earlier private work seem to have formed the basis for more recent public buildings that you have designed. How do you reconcile this juxtaposition of public and private spaces?

I am always thinking urbanistically by implication and I understand the urban as a collective endeavor. It is obvious that the dominant force behind dwelling in this country emanates from the characterization of the individual house as the all-propelling American dream. The primacy of that single house on every lot, partially isolated and self-referential, is the currency of this dream. The right to pursue this dream, coupled with the vastness of space here, has rapidly eroded the significance of the urban environment.

Aside from exceptions, like New York or San Francisco, where water or topography exert strong limits, the American city in general is constituted by the emancipated expansion of its horizontal coordinates. Thus, a city like Houston or Detroit is basically a vast horizontal network of potential opportunities, as well as lost ones. I believe that within cities such as these, one can still aspire to create urban relationships, however limited or redefined the latter might be. Regardless of the private nature of any architecture, one feels obligated to establish more public interaction between its singular pieces. The intent is to break the singularity of the house as an object indiscriminately placed on a lot. The question becomes: How does the house become part of the sidewalk, of the street, of the neighborhood? What kind of potential can the house generate in merging these various relationships for the benefit of a collective purpose?

I am fully aware of the fractured, fragmented conditions of Houston, which has a vast proliferation of voids and partially filled spaces. I am interested in establishing particular orders within this rampant condition with the hope of contributing a way of measuring and creating references. These references or measuring devices as works of architecture are not only solutions for a present demand, but can be better constructions amid the cyclical building of the city. Again, urbanity for me is more about the collective contribution, or the contribution that one tries to make toward the collective.

Thinkers like Aldo Rossi, who see architecture as a background for life and as a vital participant in constructing, complementing and augmenting the meaning of the city have influenced my work. Aware of the benefits and abuses that freedom unravels in this country, I feel that we need to move beyond the idea of architecture solely as an individual pursuit. Combining rather than isolating the private as well as the public life of architecture in our cities is necessary. These roles are not antithetical, they are complementary entities along the wealth of experiences that a city generates.

Do you think that architecture can be an indulgence for the individual – the individual pursuit that you referred to?

We live in the wealthiest nation in the world, a nation that can afford to indulge certain architectural predilections. What is disturbing, though, is that many of these predilections tend to be stylistic facsimiles of both questionable construction and historical pedigree. The privilege of examining a place carefully, one of the many qualities that architecture can offer, is wasted. Architecture can be a critical instrument to see, to define, and to discover the singularity of a location, of a site, or of a program. Problems of architecture are still primarily resolved in the intensity of the local.

The majority of consumers buy a house as they would buy any other product, often not thinking much about it. Perhaps they are not aware that architecture can offer more viable alternatives. I feel that freedom of choice can be used to demand more than just owning something, and certainly more than just indulging in the limited domain that style promotes.

Your work could be characterized by its formal restraint. Why have you chosen a strategy of simplicity?

I am very interested in architecture and its relationship with time - an architecture that dissolves and endures in time, in moments that, although often ephemeral, are nonetheless well constructed. It is in this interchange that architecture exhibits its capacity, among others, to transfer, to construct, to transform, to discover. I have not been very interested in the urgency of "signature architecture" or in seeking an architecture fixed in the image of its time. In the end, it doesn't mean very much as architecture ultimately transcends individual vanities.

The appeal for me of what you describe as "restraint" is nothing more than a heartfelt desire for architecture to unfold in time. I feel closest to an architecture that contains the least encumbrances. I would like this to occur in my work, I would like my work to have this quality of allowing its dweller unimagined possibilities as space unfolds across the life of the work. I don't think it is about simplicity, it is more about allowing the work to be at ease in time. One has to surrender the desire to be imprinted in every element of the work at every minute of the day.

We are living through a period of extreme formal extravaganza and sadly, much of this architecture tends to have the shortest of lives, sustained artificially either by the architectural media or the mendacious computer program. My interest in architecture emanates from the paradox of the work's initial presence and in the work's eventual anonymity. Like a very good poem, its form or structure become unimportant or secondary as the feeling of the work transports you to an unforeseen destination or allows you to see a place or a moment in time that you've never seen.

Most people will experience your architecture through the medium of photography, drawing and written description - through the "packaging" of architecture. What do you think is lost or gained within your own work through its "packaging"?

I think that there is a lot of self-consciousness today in the way architecture is promoted and distributed and in the way the media establishes a very accessible visual reading of any work anywhere in the world. Unlike previous times, there is also an indiscriminate stream of images of architecture flowing across the world from page to page, from screen to screen. This velocity and availability obviously cannot supplant the reality of the building. With architecture you have to visit the work, to see it in its context, in its locality. I remember that I first understood the work of Frank Gehry precisely when I first visited Los Angeles. It's the same for his work in Bilbao. Here we have one of the most "packaged" and photogenic buildings in the history of architecture, dressed in all of its formal exuberance. Yet on my first visit, I was quite moved by the way Gehry understood Bilbao and its singular history. The building is a true monument in the city and one that will generate countless memories. A work of architecture will either transcend its "packaging" or is deflated by it. If the architecture is good, and you have a good photographer, both will communicate the message. There are really no tricks, as neither would allow it.

I am interested in photography as a message that conveys and reveals a moment in the work. I also see the photographic enticement as an invitation to visit the work or to want to experience the work at a certain time of the day. It is difficult to convey the richness in the life of a work of architecture or its ever-changing nuances. At best, photography is able to capture a singular moment as evidence of other interminable moments.

Section AA

Section BB
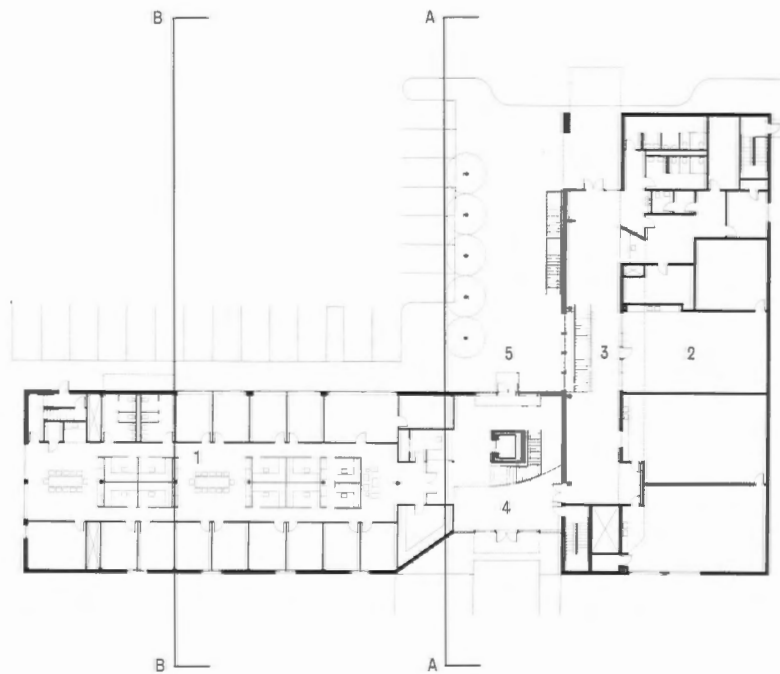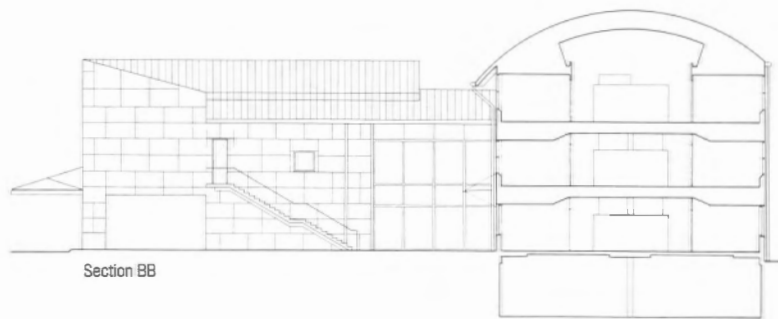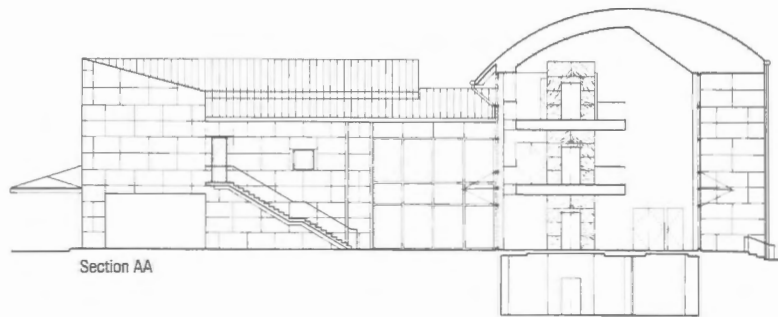
Central Administration & Junior School
Museum of Fine Arts, Houston
First Floor Plan
1. Administrative Offices
2. Junior School
3. Gallery
4. Lobby/Main Entrance
5. Courtyard

Cultural values, attitudes and the biases of the architect and society are inherent in architecture. What of your own values or biases are woven into your work that might be hidden or discovered?

This issue of values always manages to bring a certain contentiousness. I would prefer to answer your question by recalling certain essential things that I value about architecture. First, I enjoy works of architecture that invite me back, works which I can see forty different times or more and at each time the experience is always different and unique. A work extends generosity by virtue of the architect's own generosity. I find this gesture to be extremely important. I remember that upon my first visit to the Kimball Art Museum in Fort Worth, I was completely shaken precisely because the building was so vast in its generosity. I marvel at works of art and of life that can have this generous conviction. The Kimball is one of the most photogenic buildings ever and yet, there is no camera that can capture the emotive strength of this work. Kahn was a very generous artist and one who understood quite well the act of giving. I am often privileged to be in the presence of works of great generosity. I am saddened though, when I encounter the opposite – a work that is full of egotistical intentions aimed primarily at edifying the singularity of an architect. I think that in all great works of architecture, regardless of what they look like, one must always be able to find the generous friend, the architect always willing to exert or prolong this exchange. It is even sadder when you meet occupants of a building and their first response is the oppression they feel in being there. The architecture is simply blind, it never saw what was needed, what it could have offered. Even a minimum quality of light might be absent.

I also value modesty in any work of architecture. Modesty is not denying the pleasures of the world, it just means learning to measure them with gratitude. I do not like having many things around me as long as I have the most luxurious commodity - light. This most modest of all materials becomes the most splendid, as when a flash of morning light enters a room, or when a sunset awakens the most common of windows. I value above all these moments that you cannot really possess, moments that a work of architecture makes possible.


Central Administration & Junior School
Museum of Fine Arts, Houston

What are your experiences with conditions that allow architectural generosity? How has your work been affected by local limitations, even freedoms, within an urban scope?

I find your question interesting and provocative in the context of Houston, a city which promotes itself under the rubric or the illusion that it has no limits. The city is flat and has an endless horizon, it has energy galore, it can expand uncontainably as it has no geographical limitations, except for the Gulf of Mexico. Houston is the fourth largest city in the country and the largest without zoning laws. It is a fascinating paradox because in that freedom exists the city's potential as well as its waste. The city enjoys this illusion and reality of freedom and is rendered by indiscriminate growth. The whole idea of limits is almost antithetical to the nature of Houston, a city that best encapsulates the spirit of the "endless frontier" and expansionism which is the true engine of the United States.

Working in a city like Houston is both challenging and exhilarating. I seek limits when working anywhere in the city as a means of containing and expanding the meaning of the work. I pursue an architecture interested in these limits as a way to establish a discourse, a dialogue with what is available or with what can be made available. The limits are set not to corral its potential, but rather to expand it. After all, the city is eventually more about exchange than the glamour of illusory freedom. I ask myself the question when designing: What if you are able to prolong this exchange? What if this exchange is a far more profitable one for the city? Having to demolish something every twenty-five years or less generates an enormous amount of waste. Developers, investors and politicians move around the city simply looking for the most profitable venture while contributing very little in return to the city. Their appetite for swift profits ravages the city. However, this is something not new or unique to Houston alone. The sprawling neighborhoods and malls propelled by the incessant individual imperative are no different than the ones that you see in Ann Arbor or the ones that I see in Houston. These are places that make you wonder if the American Dream masks an American Nightmare in the making. People spend two or more hours of their day in a nightmarish river of traffic, passively sliding alone and along the flow. The evolution of freedom away from the city ends up in an ironic payment and penitence: self-incarceration. Sometimes even the destination is a further imprisonment, as detailed by walled-in communities. It is interesting to watch how recent American films are unleashing the effects of this urbanism of exclusion. Filmmakers pierce through its entangling layers to reveal its devastating effects on the human spirit.
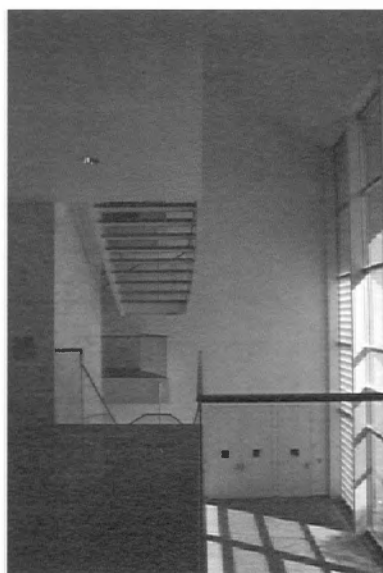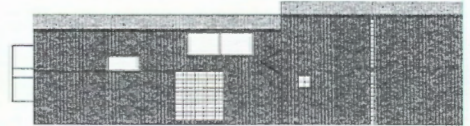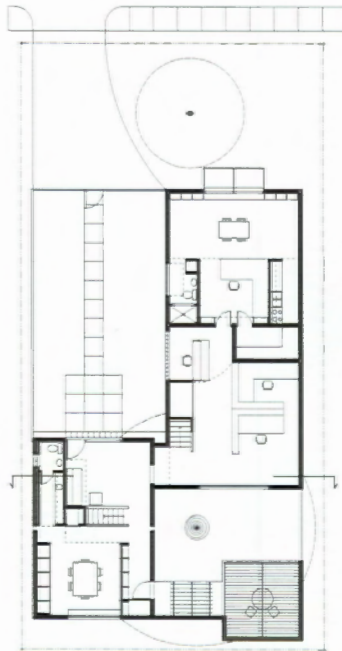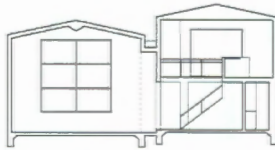
Jimenez Studio, Houston
Plan/Elevations/Section
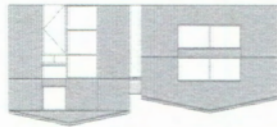
**Where do your responses towards these American values come from?
Does your Latin American cultural perspective help motivate them?**

It is a question I often ask myself, and one that I am often asked. I think it might
be prompted by the fact that one belongs to two cultures. This hybrid condi-
tion offers more perspectives as well as engenders certain discomforts. I am
not comfortable in my own country anymore, nor am I totally comfortable in
my adopted country. I belong to both, I move easily across both cultures while
maintaining a critical distance. I inhabit what I consider to be a rather interest-
ing free-zone which allows me to further appreciate my particular circum-
stances. The Spanish speaking world is very close to me. I have strong friend-
ships in these countries as well as in the United States. Ultimately, I cast aside
any exuberant patriotism for either and see my present culture as a rich
multicultural tapestry. I love cities energized by great multicultural interaction.
Miami and San Francisco come to mind, certainly New York and Houston.
They remind us of the amazing legacy ever present in this country, a world of
people from all places in the ongoing struggle to define a new culture which
has now become, for better or worse, the overwhelming culture of the world.

**How does your own cultural identity influence the cultural
identity of your work?**

Rather than identifying a cultural identity for my work through
the virtues and perils of a country, I prefer to identify what has
influenced my approach and perception of architecture. These
are my early experiences in Costa Rica. While growing up in this
small yet enormously blessed country I learned some incredible
lessons about place and how it influences architecture. Fore-
most, I understood and felt the irrepressible wisdom of nature.
Living in such a lush and intense environment greatly informed
my sensitivity and imagination. My faith in architecture resides in
understanding that any project – however humble or complex –
can make a difference when it is able to see, decipher or bring
out the qualities and uniqueness of a particular place. When I
was growing up, I was attracted to buildings through their
sensual invitation and in the process, I was deeply moved by
their inscribed humanity. If I belong to any culture, it is to a
culture which incites reflection, knowledge and love of the
singularity of place.

S I G N A L /

Christian Unverzagt
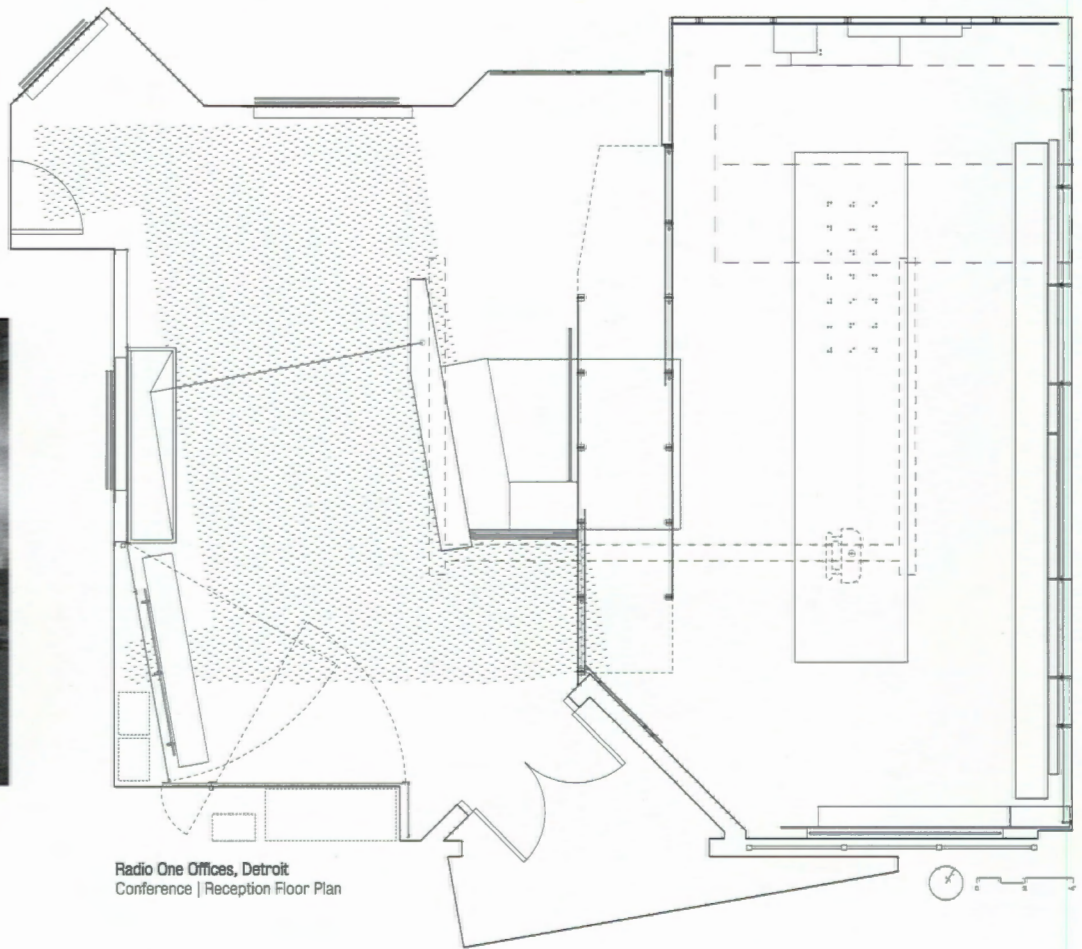
Radio One Offices, Detroit
Conference | Reception Floor Plan

T O / N O I S E

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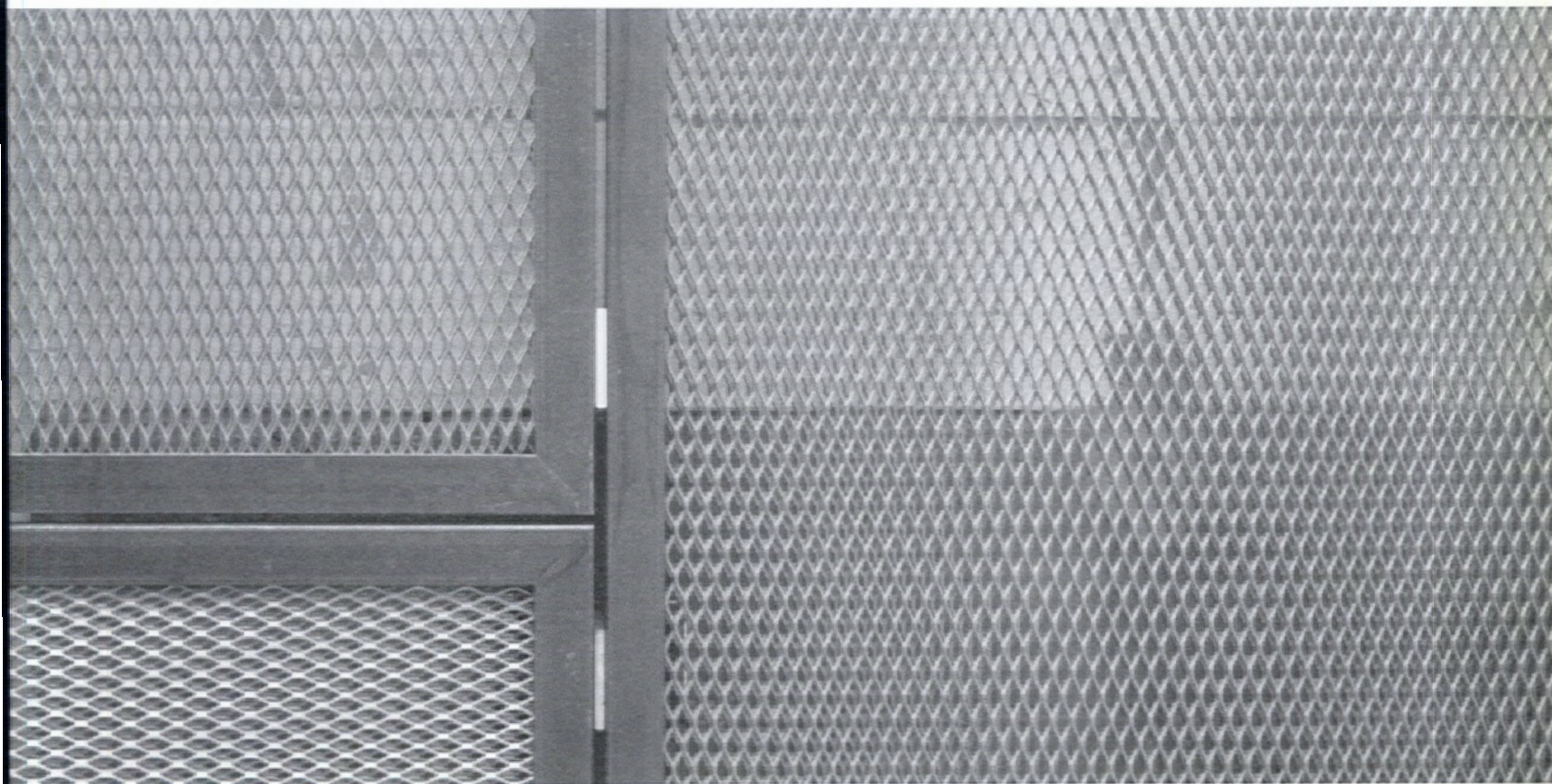
The site for this project is an existing warehouse in downtown Detroit. The client, a network of radio stations, was in the process of gathering three separate broadcasting studios and their associated offices into a single building and was interested in having reception and conference spaces serve as a cornerstone to their move.

M1 worked as both the designers and builders of this project, collapsing the traditional distinctions between conceptualization and materialization. Work done in the studio was challenged on site, and the lessons learned through the acts of making were cycled back into the design process. To a radio signal, interference is an enemy. As designers, we were interested in the potential interplay between what we considered signal and noise. The work as a whole was thought of as a form of interference with the existing shell. This strategy was central to the development of the types and uses of material and their relationship to natural and artificial light. Materials transform from semi-transparent to opaque, interrupted to continuous, and legible to invisible.

A new concrete floor was poured throughout with embedded steel wire-cloth in the reception area to define a public traffic zone. From this area, the network's three broadcast studios are visible through a series of acoustically separated openings cut in the walls. In contrast, the conference space re-connects to the outside through an existing skylight and clerestory lighting. These spaces are both separated by and connected through a polycarbonate clad, steel-framed corridor.

Unwilling to suppress the worn and textured surfaces accrued from decades of industrial use, a conscious decision was made not to conceal the existing walls by means of an indiscriminate refinishing, such as painting or sandblasting. Rather, an additional material was introduced which would allow the pre-existing conditions to be read through this new "finish." The existing masonry walls were therefore veiled by a series of screens composed of twin layers of non-flattened expanded metal set within a steel frame. In the reception area, the frames are combined to create a pair of 10' x 10' doors which provide access to a number of electrical boxes. Additional fixed frames are held just off of the remaining wall including a single horizontally hinged screen, operated by a counterweight at the receptionist's desk — which controls views to one of the studios. The frames also appear in the conference space, slipping behind the bench seating. Non-flattened mesh exerts a directionality which, depending on one's position relative to the screen, masks or permits a view through the material. Light, movement and this directionality conspire to produce a continuously transformed reading of the building's former state.


Conference Room Bench Construction Process

RADIO ONE
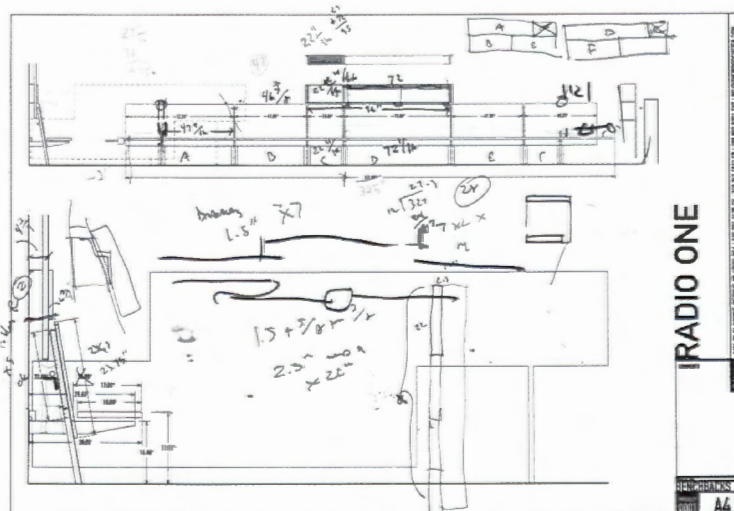
Conference Room Bench Construction Sketch

In contrast to the metal screens, a plywood normally used as a backing material for high-way signs is used to construct a series of surfaces which more directly frame existing material conditions and support new activities, such as the three studio blinders or the horizontal shelving in the conference room. A "memo shelf" dispenses reading materials upon entering the conference space, obstructs views to exterior vehicular traffic when seated at the conference table and illuminates a screen of dots etched on the lower glazing. This dot screen provides an additional sense of privacy on the interior while inscribing the facade with an ambiguous sense of occupation.

In places of occupied stasis, paralam beams, which are manufactured through the reconstitution of wood from other manufacturing processes, are thought of as a form of ground, such as the twenty-three foot long bench in the conference room, a reception desktop and the conference table. Measuring twenty feet long and less than five feet wide, the conference table rests upon a series of slender steel legs at one end and is held by a single chain and winch, formerly used to move material and equipment when the space was a loading dock.
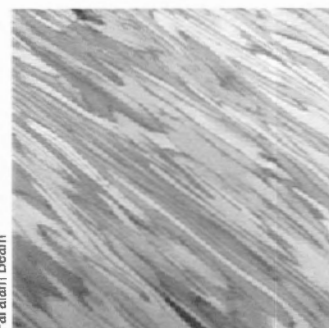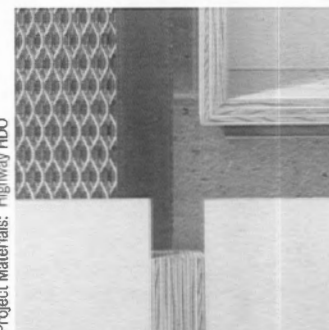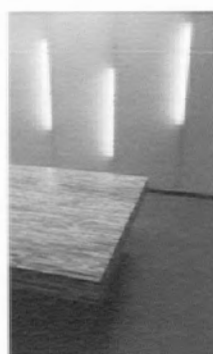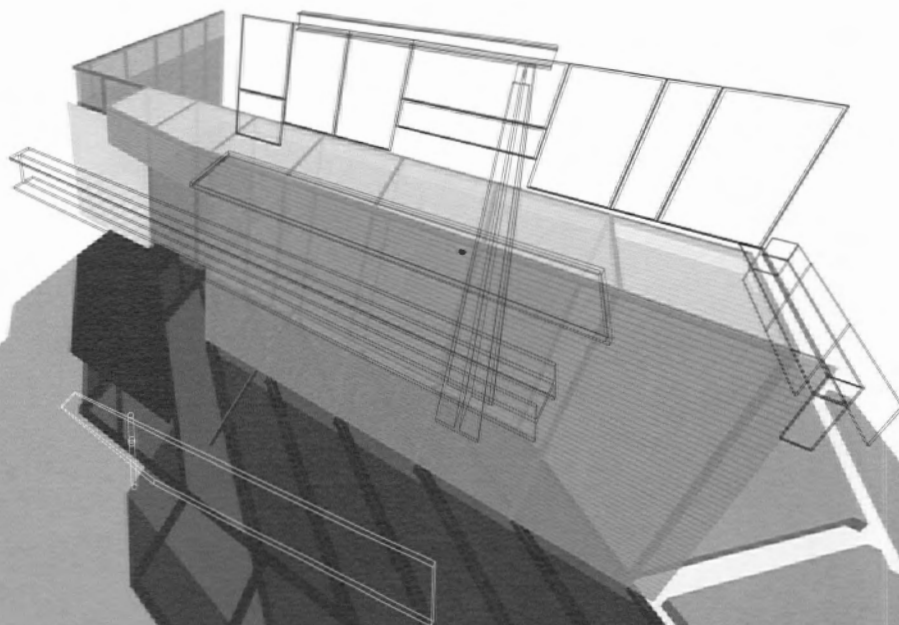
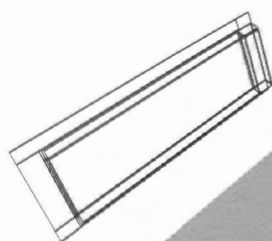Paralam Beam
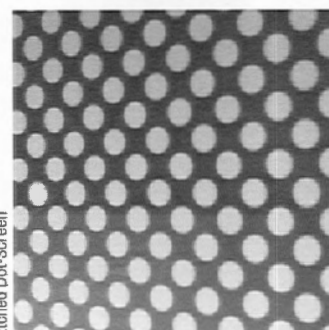
Etched Dot-Screen

Polycarbonate

Project Materials: Highway HDO

Ghostwall
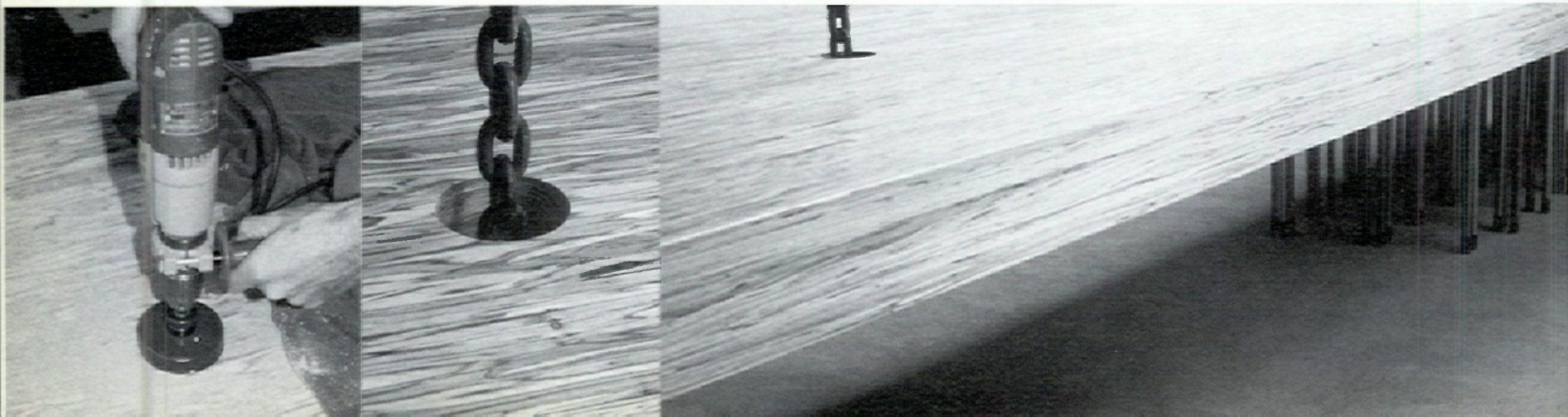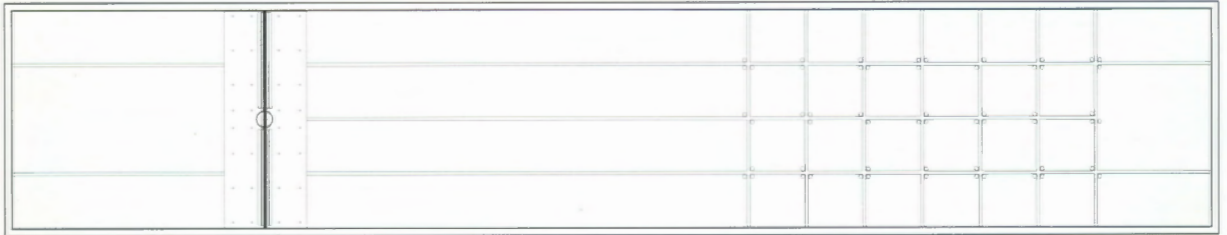
THE INHABITED BRIDGE
Il Ponte Abito

Robert M. Beckley
with Ryan von Drahle and Tonino Vicari

The importance and relevance of the practice of architecture is in the way it relates to the context around it, which is primarily but not exclusively physical. The Florence studio conducted in the Fall of 1999 by the A. Alfred Taubman College of Architecture + Urban Planning was dedicated to exploring the concept of the inhabited bridge and the potential application of that concept in Florence, Italy. Florence has one of the world's best known inhabited bridges, the Ponte Vecchio, which served as an archetypal example. The design studio's central project provided an opportunity to experiment with an architecture that would relate physically and culturally to some of the world's most significant architectural and cultural masterpieces. An examination of precedents, site and program culminated in the development of proposals intended to provoke a re-examination of accepted attitudes towards Florence's future development.

Precedents

Two competitions signaled a changing attitude towards the possible role of contemporary architecture in traditional European cities and the framework of the Florence Studio. In London in 1995, the Thames Strategic Study concerned with the future of the city and its historic river, the Thames, inspired an invited competition for the design of an inhabited bridge. The competition challenged a group of internationally recognized architects which included Zaha Hadid, Daniel Libeskind, Steven Holl, Leon Krier and Antoine Grumbach to design a bridge that could serve modern purposes using an architectural typology which had been relegated to history.

A few years later in 1998 a competition was held among six invited architects with international reputations for the design of an exit to the rear of the Uffizi Galleries in Florence, Italy. This event was also significant in that it introduced the prospect of a contemporary addition to a historically revered building in the heart of Florence while addressing the opportunity to improve a moribund part of Florence's historic fabric.

The following quotes from publications devoted to the two competitions puts the significance of a contemporary inhabited bridge for Florence in perspective. In the preface to the book, *The New Exit for the Uffizi*, Ghetti and Paolucci introduce the problem of contemporary building that has faced Florence over the last century.

> Perhaps this is the right occasion and most opportune moment for highlighting the intention to reopen the discussion on quality contemporary architecture which for years and years in the centre of Florence has been knocking at a stubbornly locked door.

> ...it is fundamental to research the correct rapport between new insertions and the pre-existing historical fabric of the city, rediscovering that continuity in architectural practices, unfortunately interrupted nowadays, which originally permitted Italian historical centres, admirable examples throughout the world, to continue to survive from Roman times up to the modern day, continually changing and being enriched with new architectural testimonies of sublime quality. This hopefully will be the right occasion for denying what some maintain to be an incompatibility between modern technology, current design methods, and the antique, and also for expressing the new role of promotion for the culture of contemporary architecture. [1]

Peter Murray and Mary Anne Stevens strike a similar chord in their comments for the book and exhibition catalogue, "The Inhabited Bridge, Past, Present and Future." They are, however, careful to warn us against the modernist manifesto towards a fragmented urbanism and instead favor a more complex urban program of which the inhabited bridge might be a part. The following is from their interview with Jean Dethier:

> Town planning of the kind largely practiced in twentieth-century Europe has created major distinctions in our cities, engendered deep dissatisfaction in their inhabitants, ravaged innumerable urban sites and squandered resources on a vast scale. Ever since the 1920's and 1930's, functionalism has dominated all other modes of thought. Enforced and excessive rationalization was the guiding principle. The Athens Charter, drawn up in 1933, reduces the complexity inherent in any city to an oversimplified concept that assigns precedence to four functions ('live, work, circulate, recreate') and leads the planner to believe that he/she is instilling order into, and mastering the problems of urbanization. In the name of this essentially schematic dogmatism, the principles governing the segregation of urban functions and inhabitants have been applied wholesale. The creation of isolated institutional and functional ghettoes has established and generalized the urban and social fragmentation that threatens the cohesion of our cities. One of the new priorities of all planners should be

to re-establish an organic link between the various arbitrarily separated urban entities: to revalidate the vital notion of urban complexity; to attempt to reconcile diverse and complementary activities in one and the same place; and to create space favorable to social interaction and places symbolically expressive of a desire to unite a city's inhabitants and their various occupations. We have lost the ability to conceive of, generate and manage the urban complexity that is so essential, and our cities are likely to die in consequence. This is precisely why the history lesson taught us by the history of inhabited bridges is important; for they created that very urban complexity so lacking in contemporary cities by super imposing several functions and concentrating them in the same spot. [2]

Site

Florence is no typical city. It is the birth place of the Renaissance. With its many architectural and artistic attractions, Florence is a home to tourists from around the world as well as both new and traditional Florentine families. Like so many other Italian cities of historic merit, Florence's present and future have become trapped in its historic past. If Florence is to flourish can it be a slave to its past? What can we make of the future of the city of Florence and its love/hate relation with the Arno River that has brought both beauty and destructive forces to the heart of the city?

Some may find our proposed intrusions on Florence's urban structure a sacrilege. Florence, along with many other European cities has resisted modifications to its historic infrastructure. Many applaud this tendency, which has indeed preserved the historic character of the center of many cities. Others fear that a lack of change is subjecting cities like Florence to stagnation. The inhabited bridge, perhaps, provides a way to satisfy both camps, allowing historic cities, most often built along rivers, to judiciously invest in new development without disturbing the historic center. The river has the potential to accommodate a building site without disturbing either the river or the city's historic fabric.

The guidelines for the studio project allowed each student to select any site along the Arno within the city limits. Students were encouraged to choose sites that would creatively engage the historic fabric of the city. Some preliminary research established general criteria for picking a site based on site typologies.

Program

The word "inhabited" was left somewhat vague in terms of just what type of program that meant. Preliminary research into precedents revealed that inhabited bridges of the past supported much more than residences. Commercial, artisan and industrial uses were among the more common possibilities. Other inhabited bridges had religious functions and some were used as museums. Some uses were more integrated with the structure and function of the bridge as a conveyor of people, others were somewhat at odds with the very nature of a bridge. Overall, there was clearly a wide variety of possible uses and combinations of uses that could define the inhabited bridge, its interface with the river and the city.
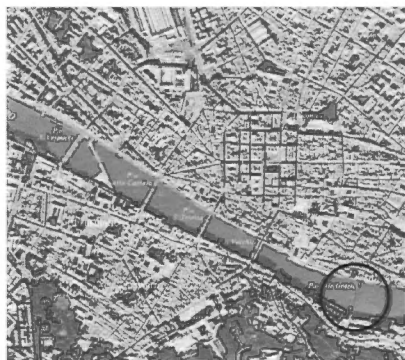
Student Projects

Ponte alle Grazie
Scott Hansen II

This project involves rebuilding the Ponte alle Grazie, the next bridge upstream from the Ponte Vecchio. The Ponte alle Grazie was originally an inhabited bridge, supporting at times as many as eight separate chapels. Some of the chapels were accompanied by living quarters for caretakers and clergy associated with the chapels. Floods destroyed the last of these structures more than a hundred years ago. The present concrete bridge was built after World War Two.
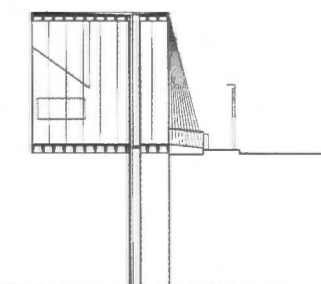
The alterations proposed for the Ponte alle Grazie as a part of this project are closely related to the chapels that the bridge originally supported. New cubic structures would be erected at each of the existing bridge's piers, one on each side of the roadway. These rooms would be the setting for art exhibitions and installations. The new structures are self-supporting and do not touch the existing structure. Each is supported by a steel column rising from the river. There would also be one new structure at each end of the bridge: a small auditorium at the north end and a café and bookshop near the south end.

The cubes are constructed out of concrete and glass of varying opacity. Opening sizes, shapes and orientations were rigorously determined by views from the center of each space towards important landmarks in the surrounding city. The theme of memory is important to the project as a whole. The original purpose and spatial organization of the Ponte alle Grazie was carefully investigated and reinterpreted and the bridge's relationship to the city of Florence was thoughtfully restored.
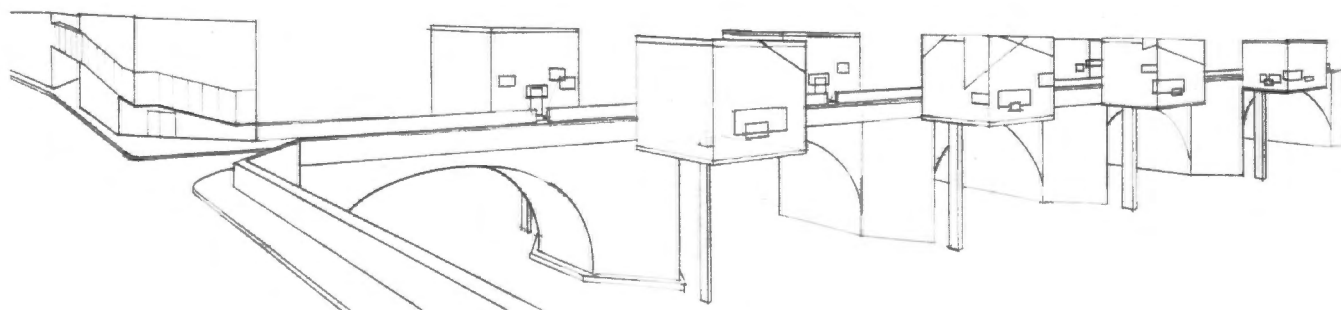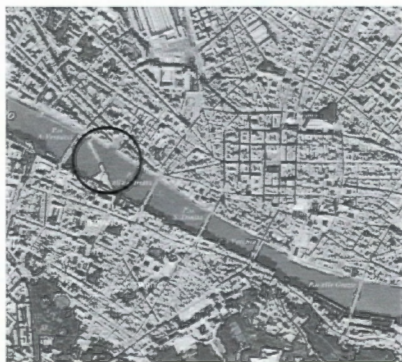
Ponte San Frediano
John Krieger

This bridge links two currently under-used piazzas opposite each other across the Arno near the western edge of the historic city center. The church of San Frediano dominates the piazza on the south side of the river. This location for a bridge is particularly interesting because it intersects a dam across the shallow river that marks the former location of the Renaissance walls. The proposed bridge consists of two major sections. The upstream portion is a pedestrian link between the two piazzas. The downstream portion is wider and supports two separate double-story structures for stores and workshops. The piazza on the north side of the river is extended out over the water onto the new bridge, nearly doubling its size and making it quite prominent.
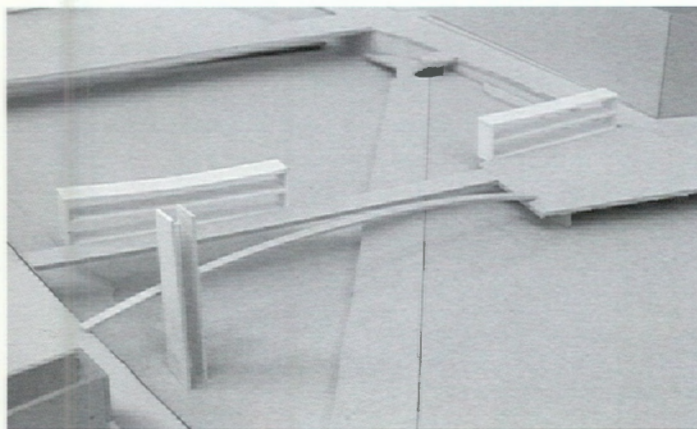
One problem many medieval and Renaissance European cities are facing is a lack of space for modern automobiles. In Florence, as in many other cities, piazzas have become crowded parking lots, losing their significance as urban pedestrian spaces. Currently both piazzas the proposed bridge would link are used for parking. A major part of this proposal is to create underground parking areas below the present piazzas. This strategy would allow the piazzas to once again be important urban spaces, even more prominently linked to the river and the city by the bridge.
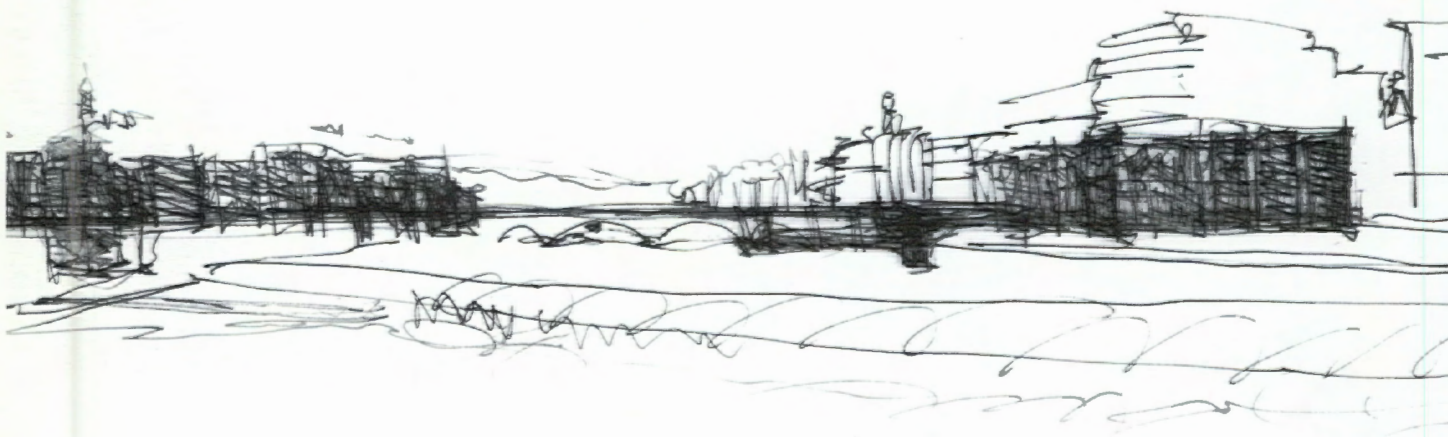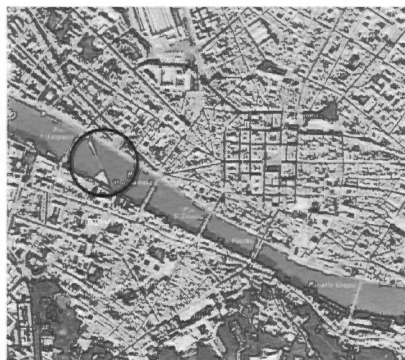
Artist's Bridge
Laura Leenhouts

Florence is known throughout the world as a center for art and artists. However, while the city and region receive international attention for collections of medieval and Renaissance art, the area also has a thriving community of virtually unrecognized contemporary artists. This project focuses on Florence's continuing role as a leading center of the art world. The bridge would support a number of studios and workshops of various sizes, to be used as work and exhibition areas by contemporary artists and artisans. The spaces are open, airy and flexible in nature and are designed with an emphasis on natural light.

The bridge is located in between the Ponte Vespucci and the Ponte alla Carraia, near the western edge of the city's center and follows the line of a dam which runs diagonally across the Arno. The bridge's expressed structure and undulating curves gently contrast with its medieval Renaissance surroundings, suggesting the more contemporary nature of the artists who inhabit it.
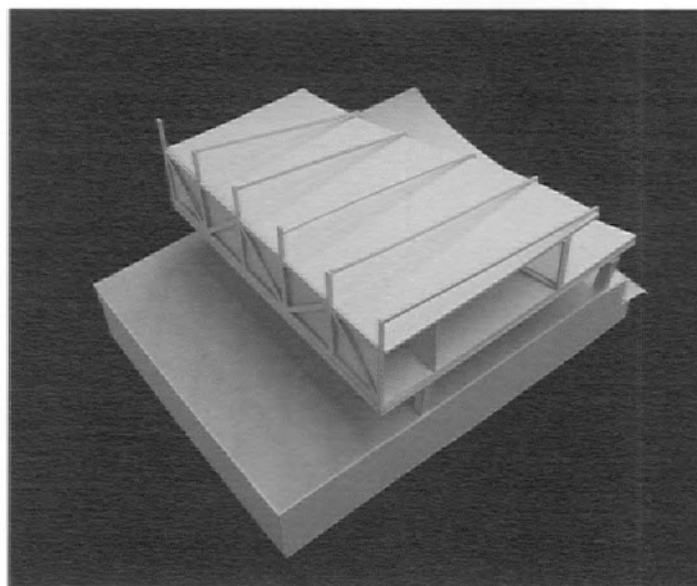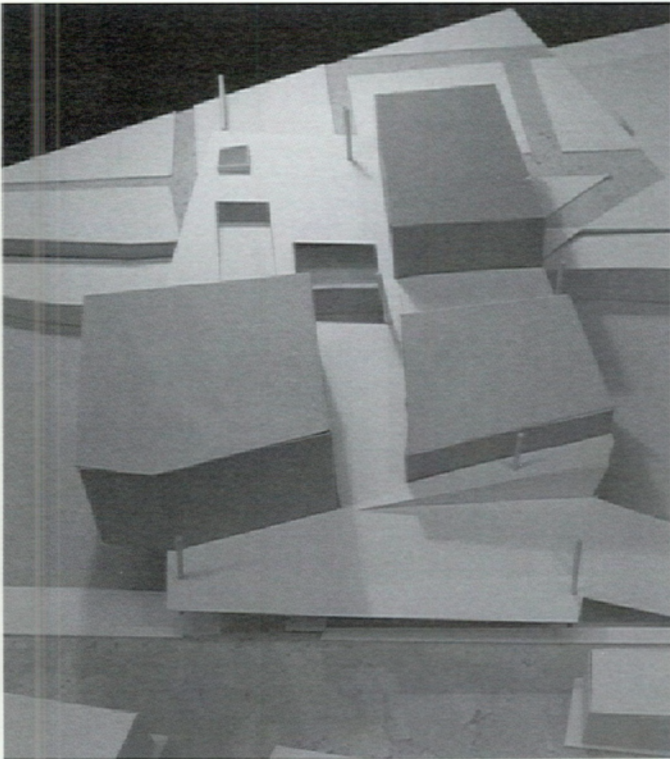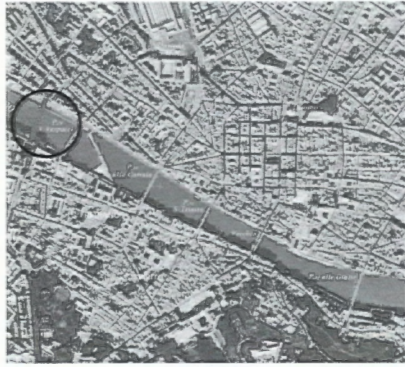
Ponte Fiorentina: Engaging a Culture
Tonino Vicari

With the influx of tourists, the cultural heart of Florence is threatened as a viable dwelling for Italians. Lack of services and resources needed to live is causing residential displacement. Florence is seeing a continual flock to the *periferia* or peripheral residential zones that have adapted to the use of the auto. There is a need to retrofit the city with the necessary services to continue to support the requirements of daily life for city dwellers. This bridge proposes a mixed-use scenario that incorporates the services and conveniences found in the *periferia*, a grocery store, laundromat, underground parking as well as typical urban typological elements and programs like housing, office space, open air markets, café and dance club that have been architecturally translated in a new way.

This scheme utilizes the ideas of open air as site and so the architectural form reflects this autonomy in its geometrical configuration. Suspended on a three-dimensional structural frame and pierced with circulatory slabs, the programmatic "volumes" both establish new views to the historical city center as well as frame views from a westward approach.

The bridge accommodates underground parking with access through stairs, elevators and ramps to upper levels of the bridge. Ground level accommodates vehicular access to traverse the Arno. Access to both the multi-level grocery store and office spaces is on the first level. A series of ramps connect to the dance club, cafés, open-air markets and housing on the upper levels.

The scheme not only respects the fabric of Florence through its use of historic typologies but enhances city life by providing new services and views to Florentine urban life.
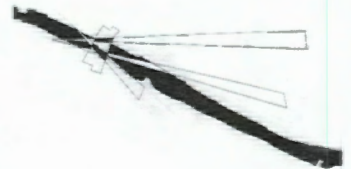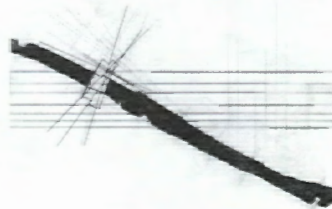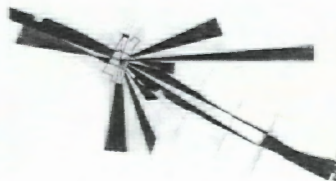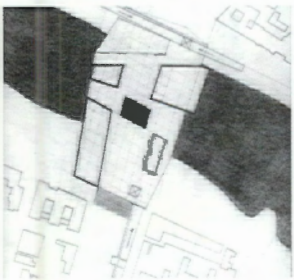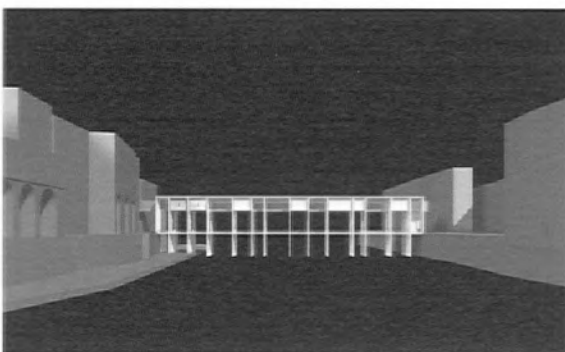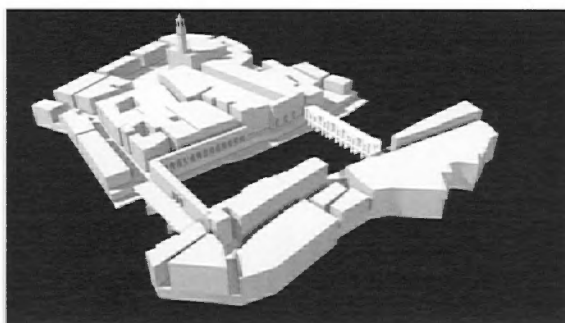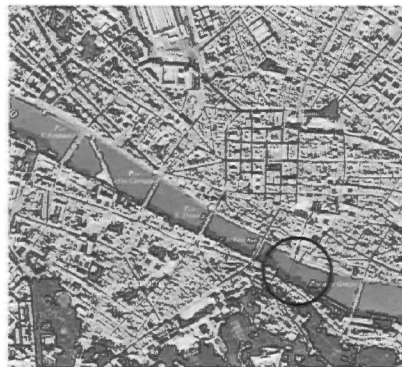
Ponte agli Uffizi
Ryan von Drehle

The axis created by the Uffizi Palace is one of the most important in Florence. It originates at the foot of the Palazzo Vecchio's tower, Michelangelo's *David* and, powerfully reinforced by the long, linear façades of the Uffizi Palace, spills out into the Arno underneath the arches of the Uffizi's imposing river front façade.

This proposed bridge gently sidesteps the Uffizi's river front façade and its axis by extending an interstitial alley between the Uffizi and a neighboring museum across the river. The bridge tapers towards a new fountain in a reconfigured piazza on the far side of the Arno which would terminate the Uffizi's unresolved axis.

The proposed bridge is open at ground level to encourage visual interaction with the river and the urban spaces surrounding it. The thin vertical supports of the bridge preserve and direct views up and down the river from off the bridge while focusing views along the bridge's axis while on it. The open spaces between these supports accomodate market stalls and a variety of temporary installations. The enclosed upper level of the bridge is part of a new museum of the history of the city of Florence which also inhabits part of the alleyway from which the bridge extends.

The new bridge combines with the Ponte Vecchio, Vasari's Walk and other existing river front buildings to create an integrated urban space focused on the river. A walkway incised into the post-W.W.II buildings opposite Vasari's Walk completes pedestrian access around the enclosed space of the Arno.

1. Mario A. Lolli Ghetti and Antonia Paolucci, Preface: "The Uffizi: A Message for Architecture"; Antonio Bodoli, *The New Exit of Uffizi* (Livorno: Sillabe, 1998), p. 19
2. Peter Murray and Mary Anne Stevens, Interview with Jean Dethier in *The Inhabited Bridge, Past, Present, and Future* (London: Royal Academy of Arts and Prestel, 1996), p. 33

LINES, LIMITS, HORIZONS, DEPARTURES   Xavier Vendrell

limit (lim´it) *n.* 1. The point, edge, or line beyond which something cannot or may not proceed. *v.* 1. To confine or restrict, within a boundary or bounds.[1]

horizon (ha-ri´zen) *n.* 1. The apparent intersection of the earth and sky as seen by an observer.[2]

.......a **horizon line** is an imaginary line in a picture on which is projected the point of sight or station point of the spectator and which in a landscape replaces the natural horizon.

> The Departure is not the ship's going away from her port... The Departure is distinctly a ceremony of navigation. A ship may have left her port some time before; she may have been at the sea, in the fullest sense of the phrase, for days; but, for all that, as long as the coast she was about to leave remained in sight, a southern-going ship of yesterday had not in the sailor's sense begun the enterprise of a passage. The taking of Departure, if not the last sight of the land, is, perhaps, the last professional recognition of the land on part of the sailor. It is the technical, as distinguished from the sentimental, "good-bye." Henceforth he has done with the coast astern of his ship. It is a matter personal to the man. It is not the ship that takes her Departure; the seaman takes his Departure...
> Joseph Conrad, *The Mirror of the Sea.*

At first glance, the words line, limit, horizon and departure seem to have something in common. When you look more closely at each, one discovers that the concepts they embody share something in common. They share the ability to vary from something very specific to something more encompassing. Each word becomes proportionally richer in qualities the less precisely it is defined. When their definition is the result of a personal perception, interpretation or decision, it gains in richness and in meaning.

The Spanish word *penumbra* cannot be directly translated into English. The translation that is offered by the dictionary is semi-darkness. However, this does not explain the richness and quality of this moment of the day. *Penumbra* defines a quality of light between daylight, shade, shadow and darkness that dilutes the precise definition of visible objects. It is possible to see during the *penumbra*, but what you can see must be aided by your imagination. Objects appear subtly which allows for their varying interpretations. Limits are less clearly defined and things become richer and more interesting.

In architecture, the concept of a limit takes on many forms...limits between materials, limits between spaces, limits between the interior and the exterior, limits between projects, property lines, boundaries, borders, peripheries and so on. Limits engage architecture at all scales and in very specific ways such as the limit of a joint, curb, edge, partition, fence, railing, step, enclosure, cornice or a finish.

Is architecture about limits?

Architecture is about relationships between materials, spaces and buildings. Architecture is also about in-between spaces, juxtapositions, intersections, tangencies, adjacencies, interstices, thresholds, gaps, connections, transitions, views towards the infinite, transparency, translucency, reflection, shade, shadows, experiences, perception, sensations, surprises, *horizons, departures...*

MARBELLA SPORTS PAVILION
Barcelona, Spain, 1992

The Pavilion permits a degree of transparency in its supposedly opaque container. One is able to perceive the surrounding landscape from within the building and relate its position back to the nearby urban context.
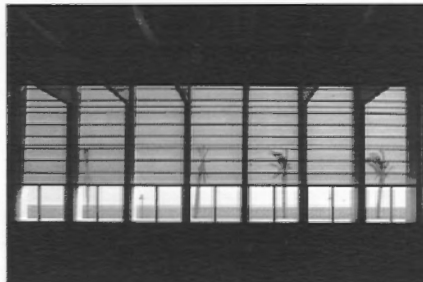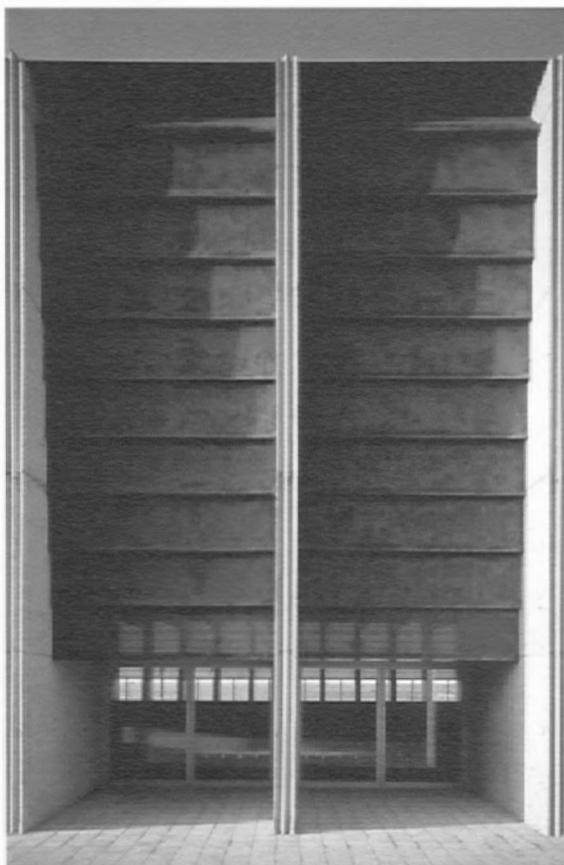
Architects: X. Vendrell, M. Ruisanchez
Photographs: M. Rosello

RIUMAR SCHOOL
Deltebre, Tarragona, Spain, 1996

The buildings are laid out amongst patios and interstitial spaces that generally face south and southeast, avoiding west orientations due to the strong sun and northwest alignments due to the prevailing winds.
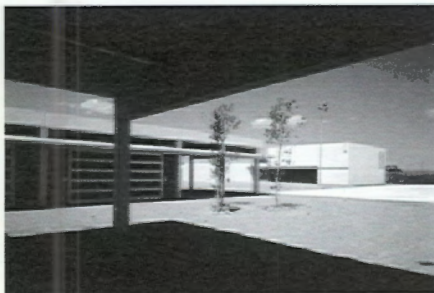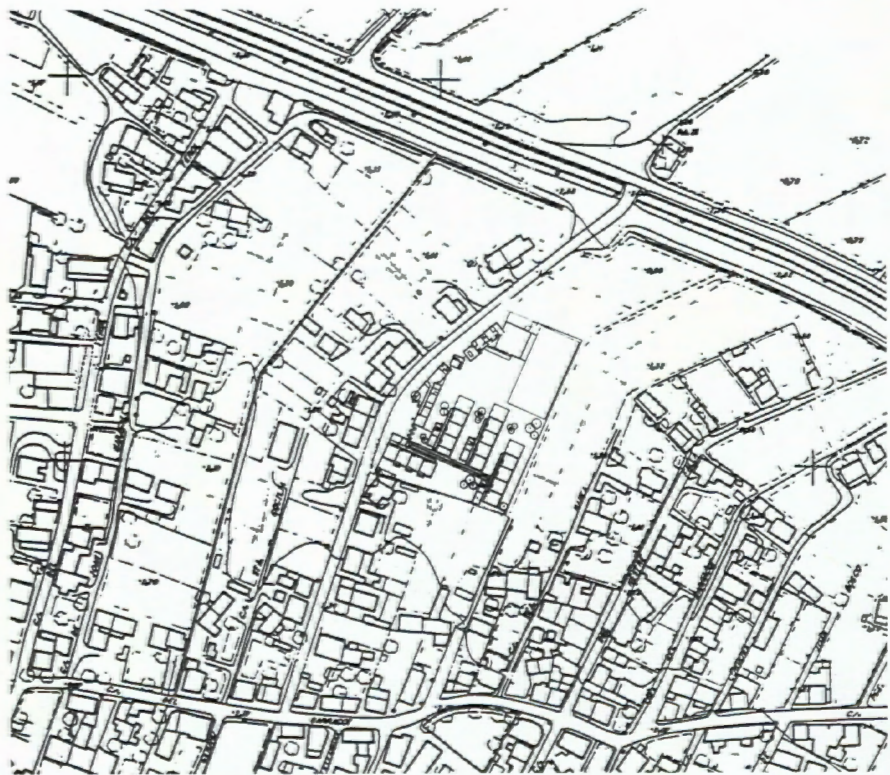
Architects: X. Vendrell, M. Ruisanchez
Photographs: M. Rosello

ST. ISCLE DE VALLALTA TOWN HALL
St. Iscle de Vallalta, Maresme, Barcelona, Spain, 1997

From the public reception area, which is illuminated by a skylight, the eye follows through the council chamber via a series of glass screens. The large openings and the glass panels in the main façade are related to the idea of transparency of the public political process. The opaque facades of the adjacent buildings become the enclosure of its interior space.
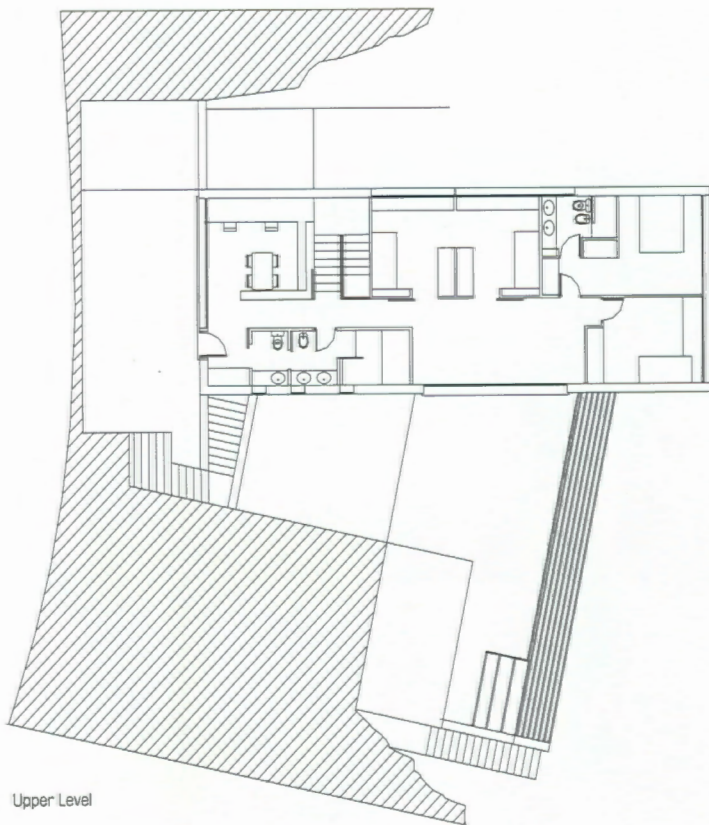
Upper Level
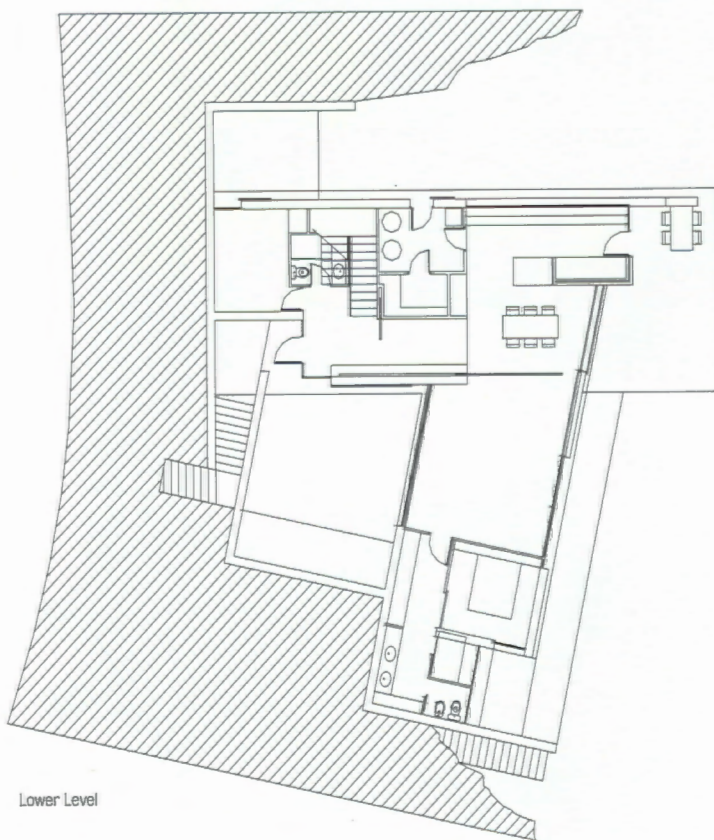
Lower Level

ABELLO HOUSE
Cala de la Mora, Tarragona, Spain, 2001

The site has become the dwelling. Some rooms of the house are defined by walls, floors and ceilings. Others are defined by walls and floors, but no ceilings, others with floors and ceiling but no walls, and still others sometimes only by walls, or only by a ceiling, or only by pavement and the canopy of the pine trees as a ceiling, filtering the sunlight of the Mediterranean coast.

1. Robert B. Costello, et al., *The American Heritage College Dictionary, Third Edition* (Boston: Houghton Mifflin Company, 1997) p. 787
2. Ibid., p. 655

DISTRIBUTED HOUSE, OR, SUN MOON TIDE HOUSE Chuihua Judy Chung & Sze Tsung Leong

moon

tide

sun

15 +8ft
14 +7ft
13 +6ft
12 +5ft
11 +4ft
10 +3ft
09 +2ft
08 +1ft
00 0ft

time of day

08
09
10
11
12
13
14
15

tide height

sun visible hours

moon visible hours

day of the year   60   61   62   63   64   65   66   67   68   69   70   71   72   73

o◄ full moon, 1st quarter moon, on path of moon
o path of sun
~ tide cycle

two weeks

The Distributed House is a house for inhabiting time. In the Distributed House, each function of living is assigned its own structure. The structures are spread out over a large area such that they are connected by the empty landscape. The landscape is constantly transformed by the movements of and the changing relationships between the sun, moon and tide. At high tide, water fills the entire site and the structures appear to float in a vast expanse of water. At low tide, water recedes to reveal a network of pathways linking the structures that are embedded in a rolling topography. The topography is no longer merely a landscape characterized by contours of height. More importantly, the topography is a marker of time and an indicator of natural cycles that fluctuate in response to the cycles of the sun, moon and tide.

March 1999
This project was commissioned by Het Observatorium in Rotterdam and Friederiecke Taylor/TZ Art Gallery, NY.
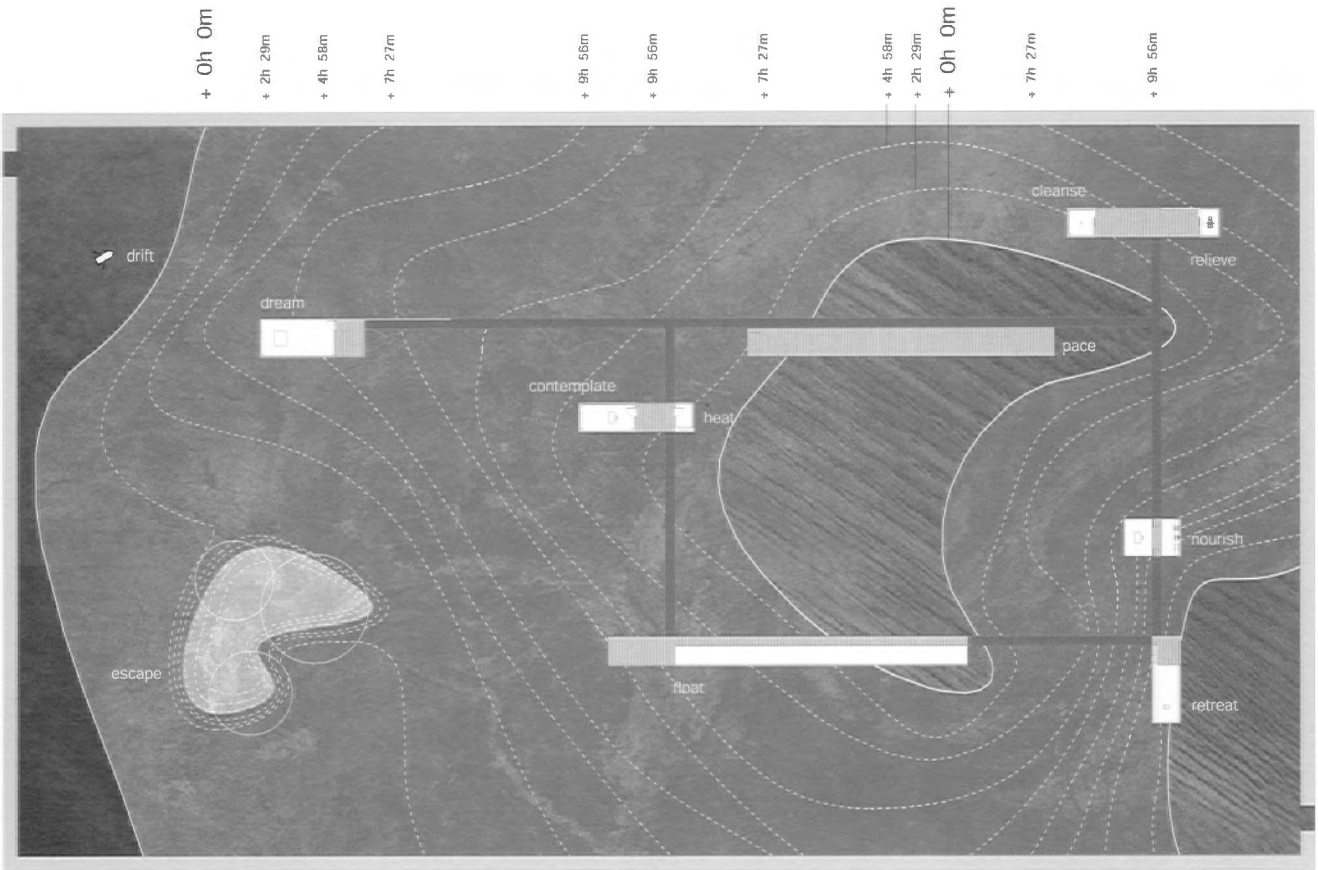
0   10   50   100 ft

+ 0h 0m
+ 2h 29m
+ 4h 58m
+ 7h 27m
+ 9h 56m
+ 9h 56m
+ 7h 27m
+ 4h 58m
+ 2h 29m
+ 0h 0m
+ 7h 27m
+ 9h 56m

drift

dream

contemplate

heat

escape

float

cleanse

relieve

pace

nourish

retreat

0   10   50   100 ft

Low tide

+ 9h 56m
+ 7h 27m
+ 4h 58m
+ 2h 29m
+ 0h 0m

+ 12h 25m

drift

dream

contemplate

heat

escape

float

cleanse

relieve

pace

nourish

retreat

0   10   80   100 ft

High tide
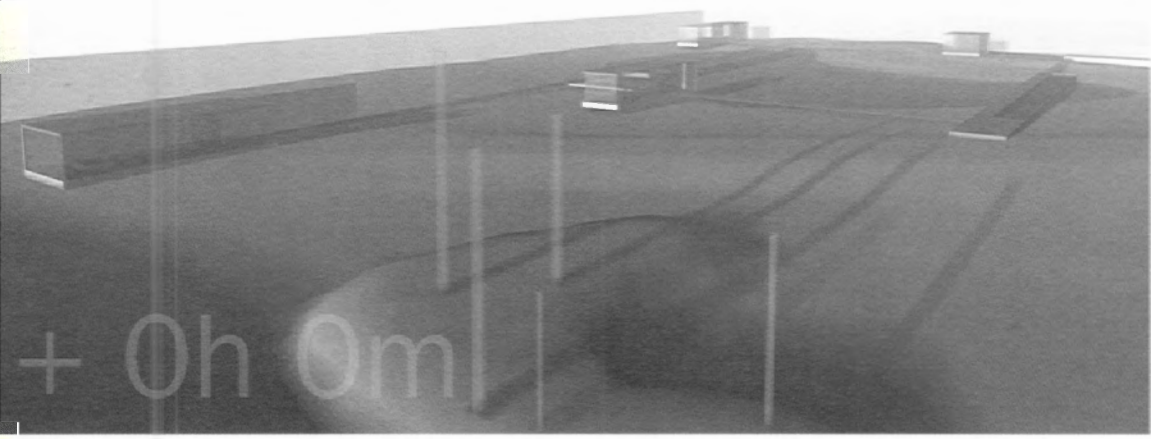
+ 0h 0m   + 6h 10
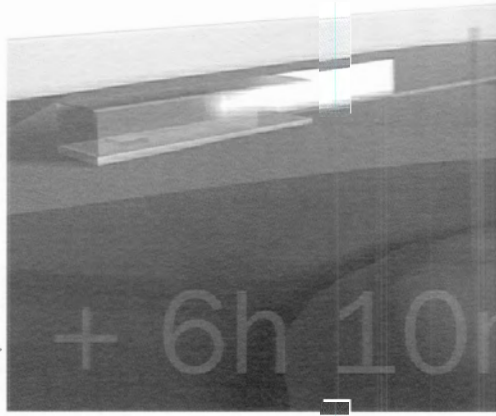
+ 12h 25m
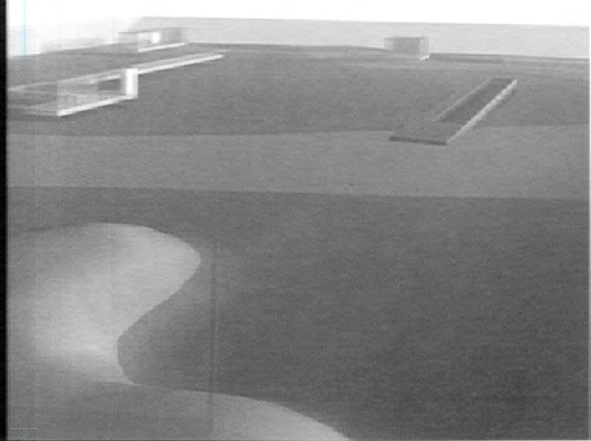
BEYOND THE LIMITS   Henk Döll

As professionals, architects rather than protecting the status quo, should become agents of change. By making a thorough analysis of and distinction between problems, wishes, demands and possible solutions, we engage in critical practice, that is, reformulating the problem not merely solving it. The way architects are able to take up this role as agents of change has the potential to redefine the limits of the profession. Architects who mainly concentrate on creative expertise will become more and more the Don Quixotes of today's society. Those who focus on technical skills will, in the end, be considered as nothing but technicians who can easily be replaced by other specialists. Ironically, the most powerful traditional role of the architect is that of the generalist who brings together and synthesizes the work of many specialists in the field.

Architects are trained to think and operate at different levels of abstraction and at different scales. Experienced architects are able to shift very easily between these levels of abstraction. For the architectural profession, these skills provide enormous advantages, offering possibilities to balance interests and direct processes, to oversee many aspects of a problem at an early stage, to help to develop new concepts of uses and to guide organizational changes. For me, this process is central to the development of more open and influential modes of architectural practice.
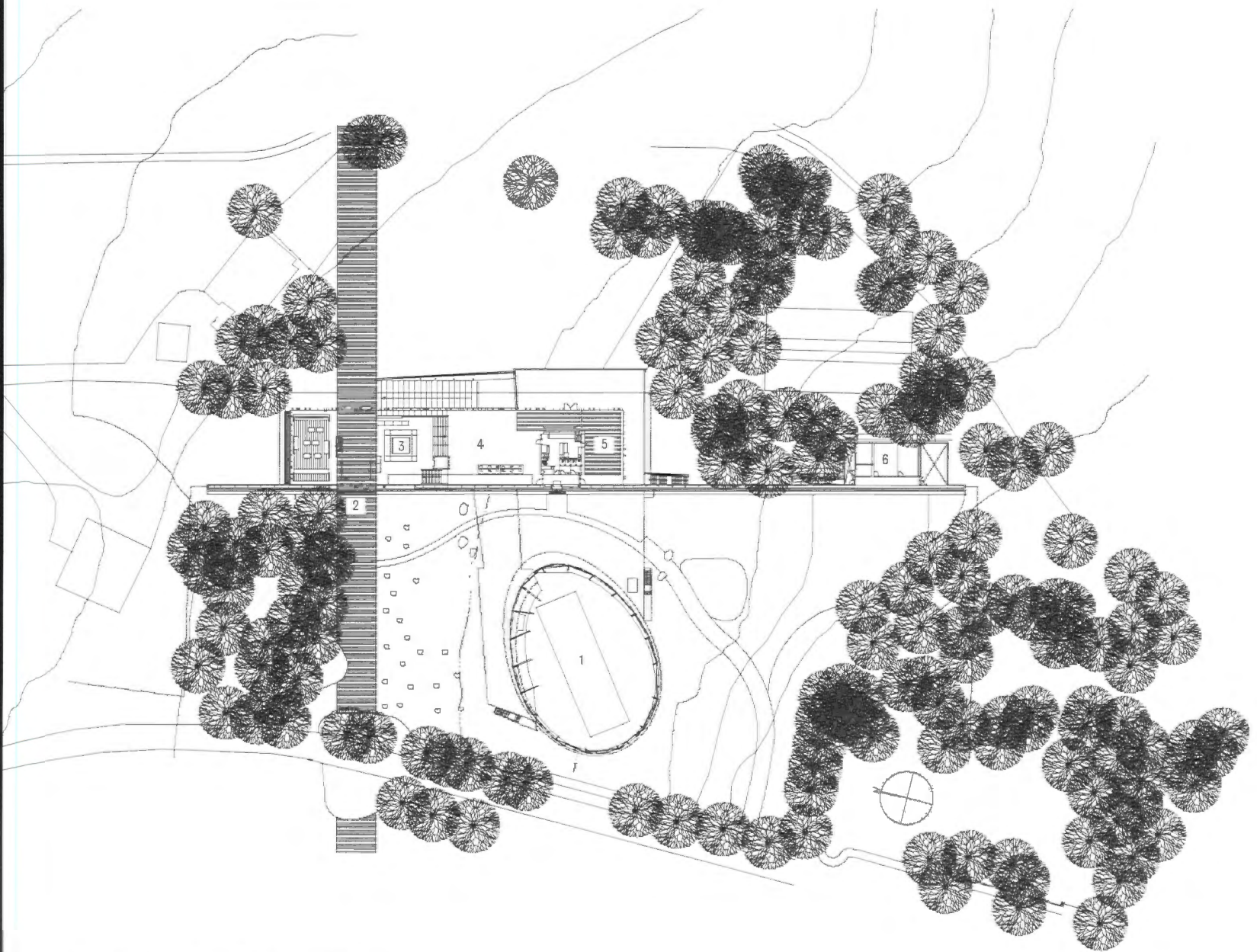
Dutch National Heritage Museum (Open Air Museum), Arnhem
Site Plan
1. HollandRama
2. Main entrance
3. Education center
4. Information
5. Auditorium
6. Support space

At Mecanoo, we begin working on a project by listening and reflecting. For us, the goal of the design process is to create programmatic and architectural added value. We do not aim for average outcomes but instead utilize the design process to seek innovative solutions. Rather than solving the design problem only with technical expertise, a cyclical process of interaction between architect and client revises, reshapes and reframes the problem. In this iterative process of reflection-in-action, the original program and demands of the client often change. For Mecanoo, the involvement of the client and future users provides essential feedback and strengthens the commitment of all parties to the project. The buildings produced are more grounded, more humane and more innovative. Yet at the same time, we like to be in charge of the process and shape the final design solutions like movie directors.

The project for the new entrance pavilion of the Dutch National Heritage Museum (Open Air Museum) in the city of Arnhem, a project by Francine Houben of Mecanoo, is the result of a ten year conversation between client and architect. The inspiring and stimulating debate was about finding the right site for the building, defining the program and thinking about new ways to attract visitors to the museum. As a result of these critical reflections, a multimedia panorama theater was developed, the HollandRama. This theater has a distinct form and is clearly visible along the approach to the museum entrance pavilion. This is a good example of a project in which the architect, by being a critical partner in the debate with the client, finds the architectural form for a new phenomenon.

Floor Plan
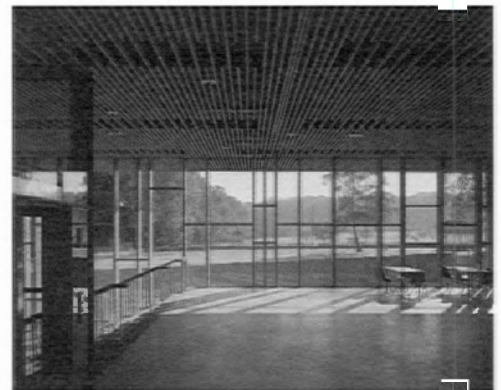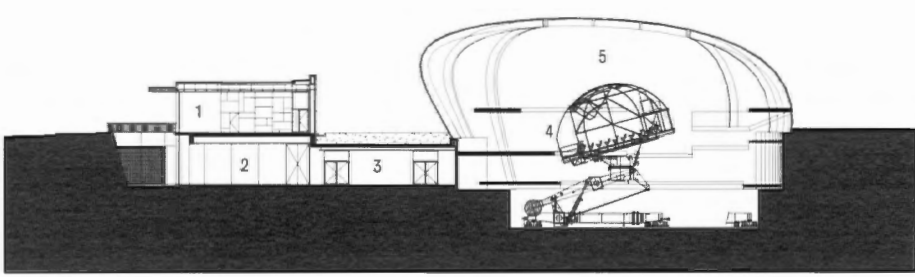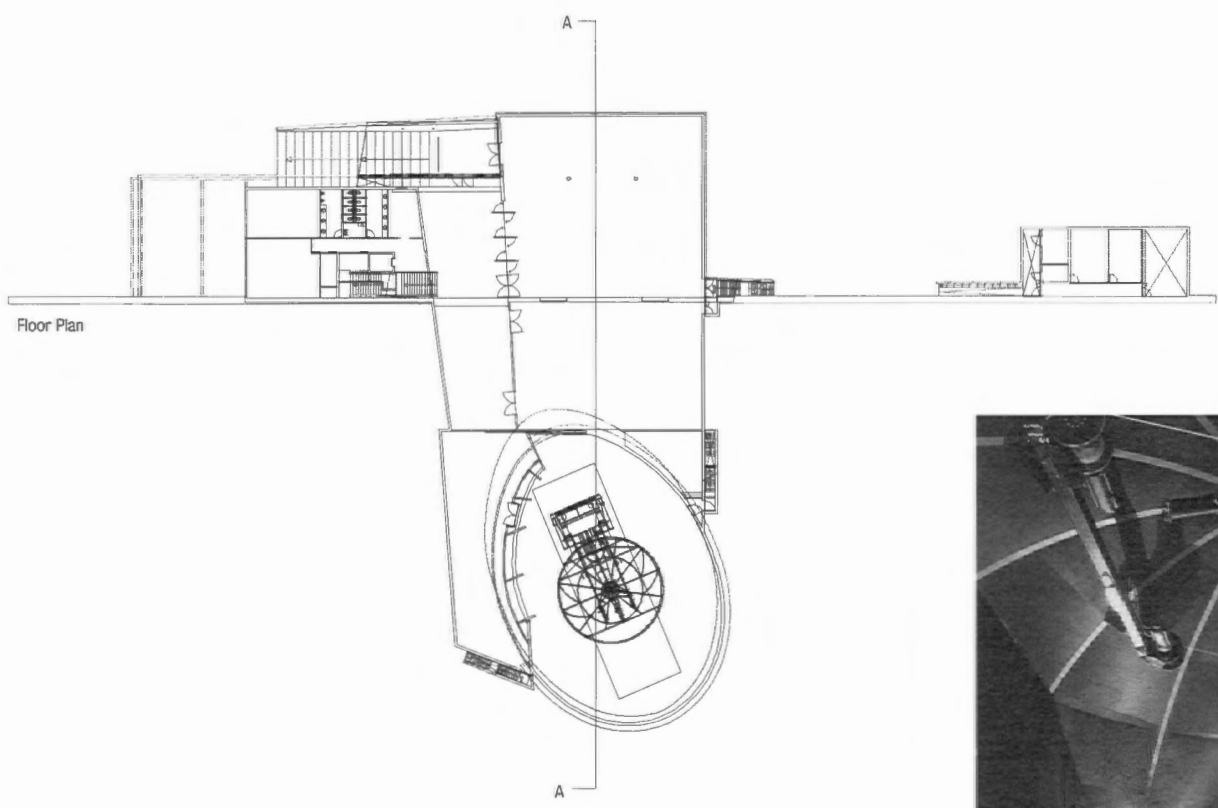
Section AA
1. Auditorium
2. Temporary exhibitions
3. Permanent collections
4. Hydraulic stage platform
5. HollandRama

In the scheme for a new Cultural Center in the Dutch city of Alkmaar, designed by Henk Döll and Michel Tombal, the central problem was how to organize three different functions into one building. The new building on a historic site accommodates a shared auditorium, the Public Library, the City Museum and the City Music School. Each function has its own organization and staff. The renovation of the adjacent theatre was also added to the original program. The main design problem, as we saw it, was how to combine the various functions into one building complex while at the same time creating distinct environments for the serene atmosphere of the museum, the informal and creative working climate of the music school and the public ambience of the library and theatre. For this project, our role as architects was not only to deal with a hybrid program, but also to address the specific demands of each client. We had to lead and manage a complex design process in which we often found ourselves in the position of a referee of conflicting interests, both practical and ideological.
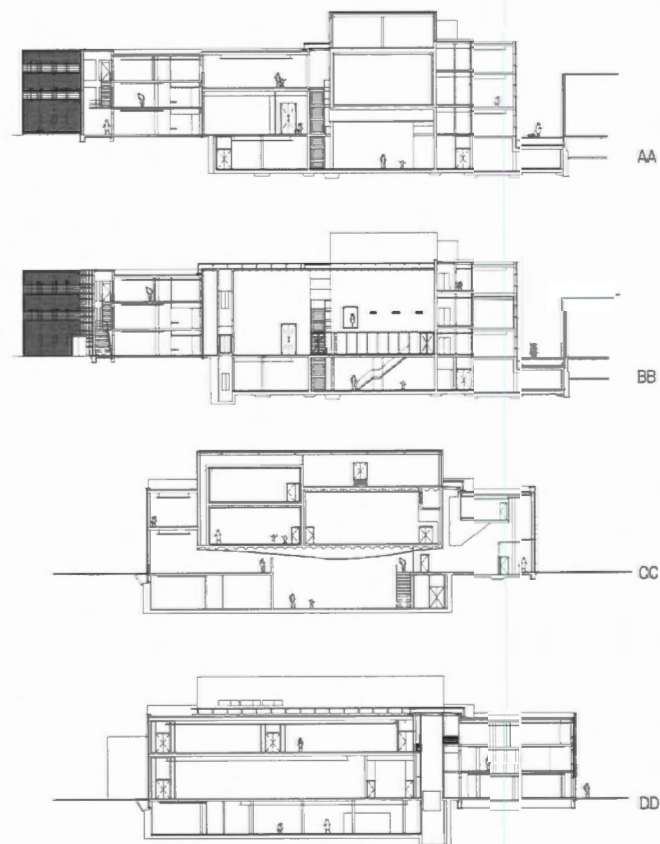
Cultural Center, Alkmaar

Lobby/Reception

AA

BB

CC

DD
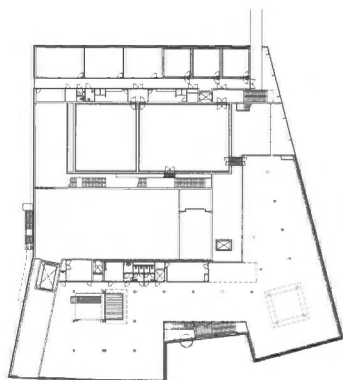
First Floor Plan
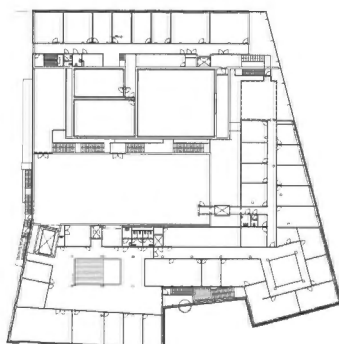
Second Floor Plan
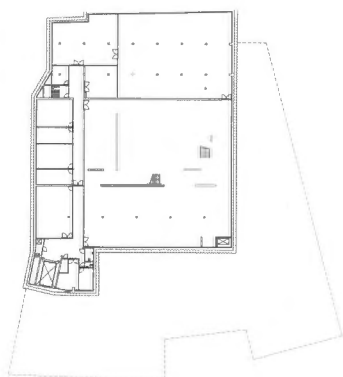
Basement Plan

Ground Floor Plan

CC

DD

AA BB

59
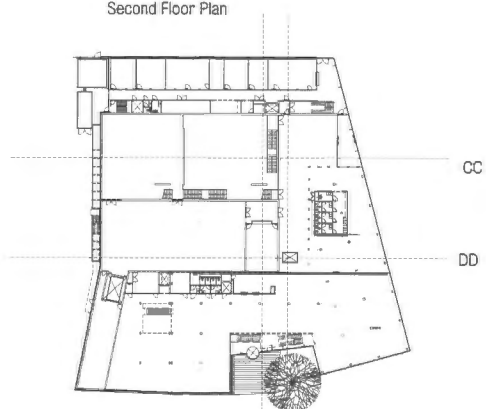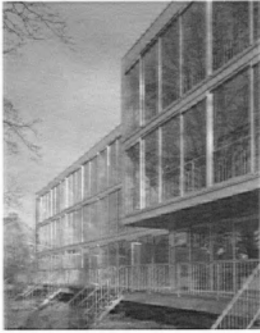
For the project to design a multi-functional building in the OudeTorenstraat in the Dutch city of Hilversum, a scheme developed by the same design team of the Cultural Center in Alkmaar, we also had to find a resolution of divergent interests. The program consists of apartments, office spaces and a parking garage on a very small site near the historic center of the city. The needs of the municipality, local citizens, various investors, a project developer and the contractor who owned the site were conflicting from the very beginning. Through the process of reflection-in-action, a building was realized that resolves the needs and desires of all parties.

Multi-functional Building, Hilversum

The new Public High School in the Dutch city of Hengelo was completed in January 2001. This project was commissioned as one of the first buildings designed to accommodate a new national school system based on a study-house model. When Mecanoo started the design, the school director and the teachers could not tell us precisely what this new system might mean in terms of the school building and no examples existed. After studying school systems and talking at length with the staff in order to find an adequate solution, we visited other schools that were of interest either from an operational or design point of view. These visits provoked reflection, conversation and critical assessment both of what we had seen and what the client wanted. The purpose of both the study and the visits was to understand the ideas behind the program of this new philosophy of education. With this mutual understanding in place, design proceeded quickly. We proposed a compact scheme incorporating the mediatheque, study places and computer terminals — the symbols of the new system — as a special "house" in the heart of the building. We maintained a very close dialogue with the client on operational details and, as a consequence, they gave us great architectural freedom — the freedom of our professional expertise. Working on the design of the school stimulated us, together with the school administrators and teachers, to think more concretely about finding an architectural response to this educational concept.

As architects, we find ourselves increasingly in a role in which we have to do more than "just" design buildings. "Reflection-in-action" always enriches the projects. The final result is neither predictable nor predetermined. The design process is opened up to include uncertainty, instability, uniqueness and conflict. Decisions are based not only on rational grounds, but also on common sense and intuition. It is essential for architects to thrive on this uncertainty and to develop social and communication skills in order to extend and transcend the limits of our professional expertise.

All images courtesy of Mecanoo

Public High School, Hengelo

WORKING LINES

Martha Skinner
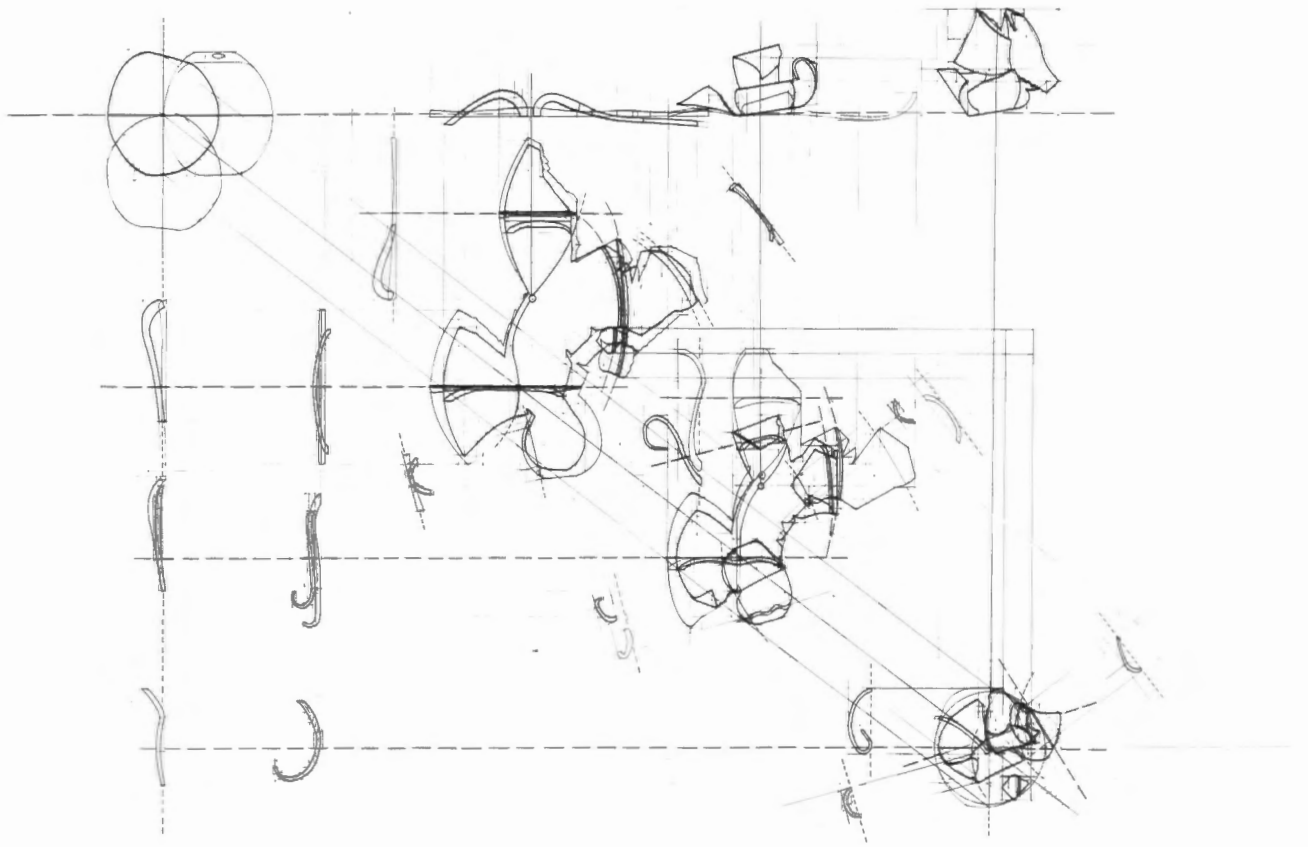
Austin Dingwall

In learning and practicing drawing, one is involved in the understanding of the limitations yet possibilities of the conventions involved. These range from the techniques and methods to the proper line quality and weight used. However, in learning how to draw, it is important not to take these conventions for granted but rather to develop a sensibility for using them as tools in specific ways as guided by the particularities of the study. The challenge in learning how to draw is as conceptual as it is practical. Conventions are rediscovered or altered through ideas of specific intentions. Drawing is a process of searching and of seeing. Drawing is a way of thinking and communicating not only to others but also to oneself in the process of developing a study. Lines, how they are drawn and where they are placed result from very specific intentions, yet the evolving drawing also speaks about where the next line should go. Construction lines, like scaffolds carefully and tentatively placed, are the first marks that prepare the initially seemingly vast surface for the construction with lines. The thoughtful observer builds with each line by taking apart the object or space under investigation. The analysis develops. Lines appear and disappear through the process of looking, measuring and organizing. Lines become definite as their existence materializes and their location and relevance is confirmed. They become bolder as they reveal density or forces at work in the space or object under investigation. Other lines fade away into the surface of the paper. The completed investigations are revelations of hidden qualities that describe the object or space under study beyond their physicality.

The student works presented here are drawings developed from the following two exercises given to a pre-architecture graphic communications class at the University of Michigan. The course was taught by Lecturer Martha Skinner and Graduate Student Assistant Jule Tsai.

Surveying the Skin of the Tangerine

given: a tangerine

The object under study was the skin of a tangerine. Transformations, documented through drawing, took place from observing the skin as a protective surface enclosing the fruit to a flattened, peeled-off surface and to the ongoing movements that the skin experiences by its drying out process after it has been peeled away from the fruit. Horizontal and vertical cuts of the moving object under study were drawn over time. Working lines became active participants in the inscription of movement that took place through the passing of time.

process: Draw on the unpeeled tangerine two lines - a continuous vertical line passing and connecting the stem of the fruit at top and bottom and a continuous horizontal line through the middle of the fruit crossing the previously drawn line. Use two different color inks for each line.

Construct the vertical section drawing of the fruit at the location of this line. Don't worry about its contents, for this exercise we are just concerned with the skin.

Remove the skin of the tangerine by ripping, being careful to keep it in one piece.

Plan out the construction of your drawing in relationship to the original section cut and the section cuts to follow (both vertical and horizontal) with the transformation of the skin. How does the location and relationship of these drawings refer to the initial drawing of the intact fruit? The reference lines that you have drawn on the fruit itself should also appear in your drawing and guide you in the development of your study.

Nicole Bober
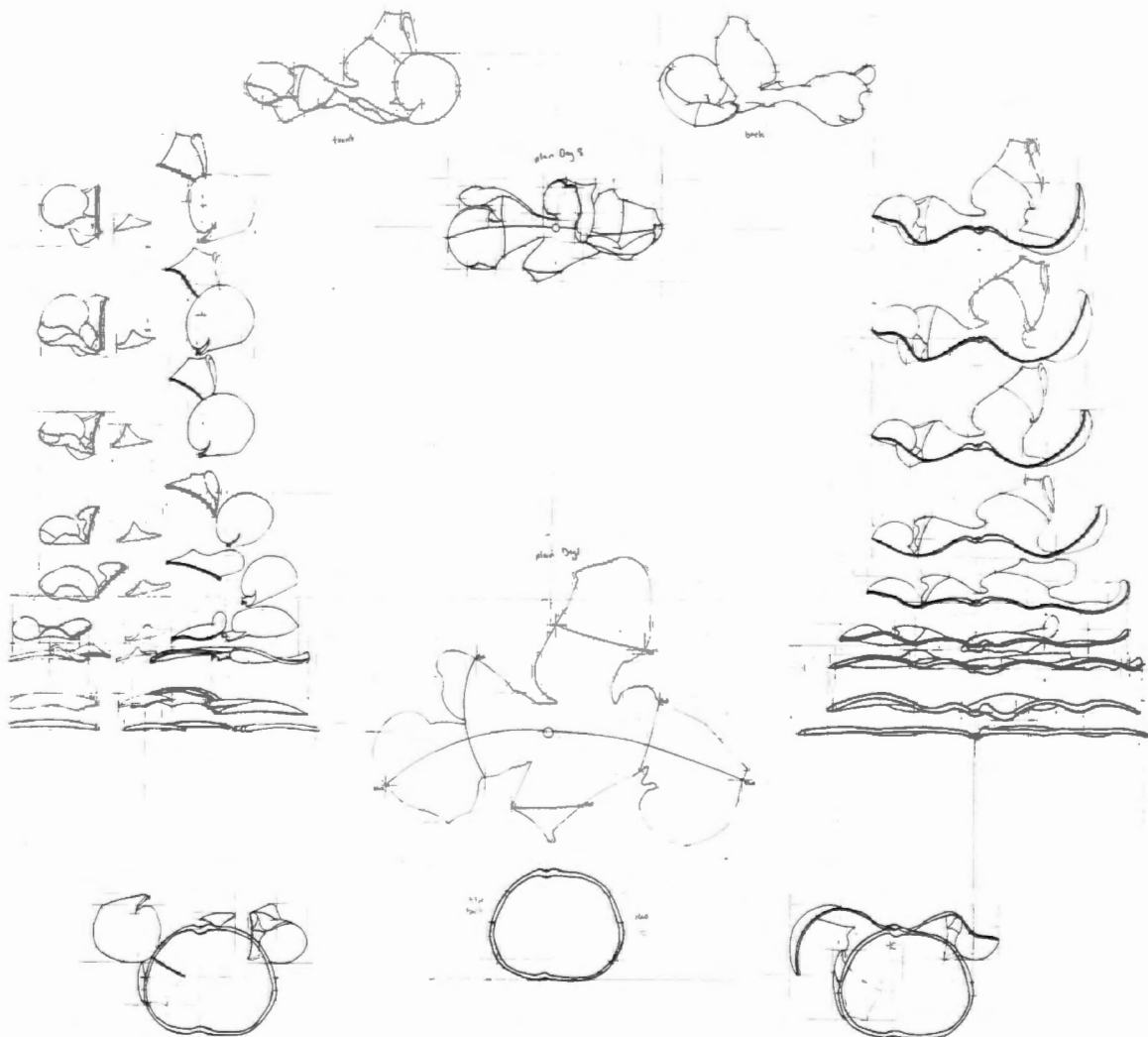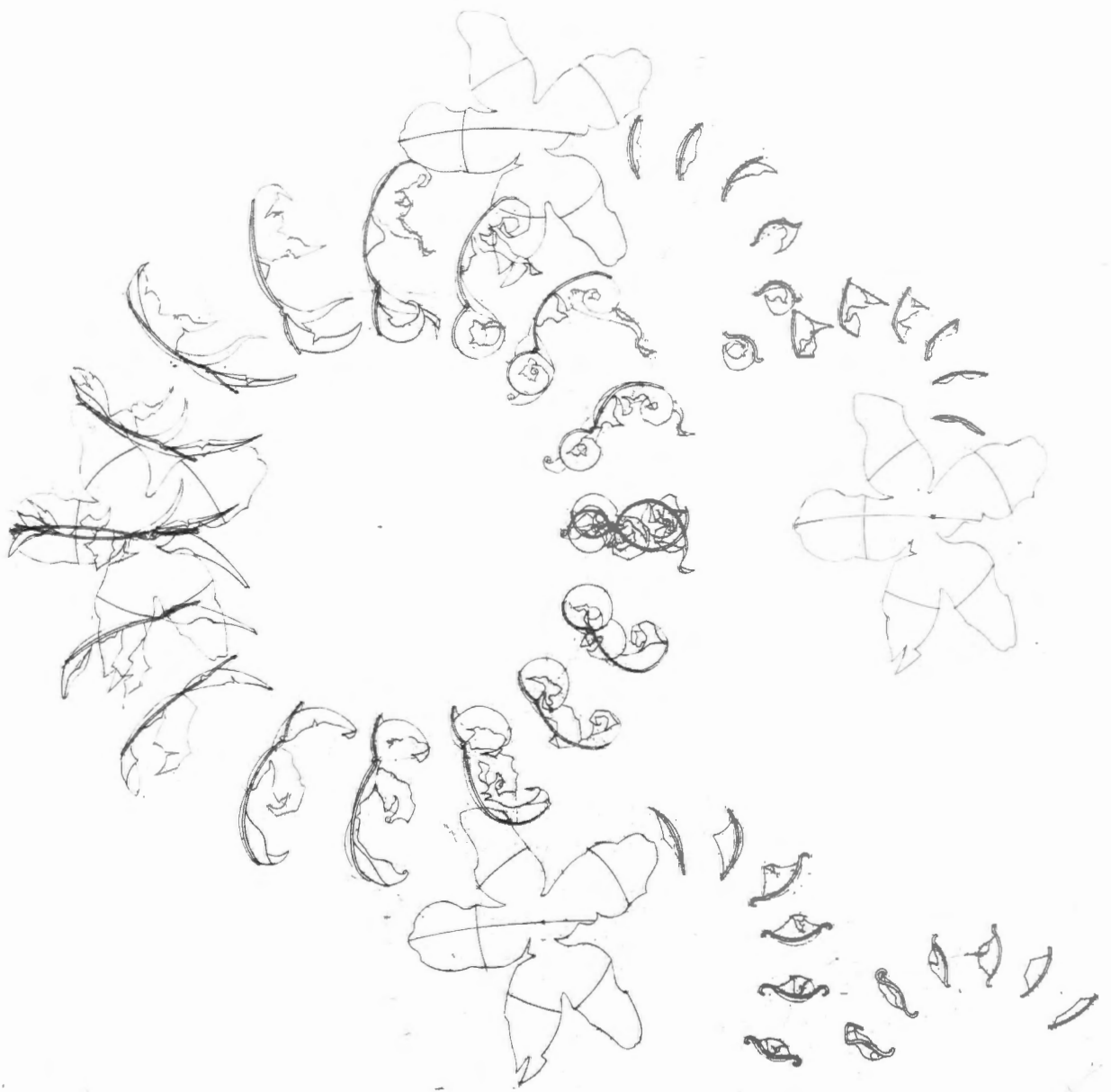
Danielle Char

Analyzing the Space and Form of a Wind Instrument

given: a trumpet, a clarinet, a French horn, a saxophone

Wind is the occupant of the interior space of the instrument. The space is contained and defined by the form of the trumpet, the clarinet, the French horn or the saxophone. The encasing that defines this space is particular to the instrument and defines a specific path. The wind moves from one end of the instrument through tunnels, joints, turns, flips or a straight path. With expansions and contractions of space and even pauses within the pathway, the wind travels out of this interior to make a sound. The pathway is dynamic, interactive and changing, as moving parts (tapped keys) affect the space and movement of the wind. From the outside, the instrument is an extension of the human body, augmenting air through intricate movements of fingers into encompassing sounds. Its form has a direct and specific relationship to the position of the player: keys to fingers, mouthpiece to mouth and the funnel, with its specific function to amplify, projects outward away from body.

Instruments loaned by Carty's Music, Ypsilanti, Michigan
All images courtesy of the author

Trumpet
Wendy Etue

Saxophone
Carolyn Telgard
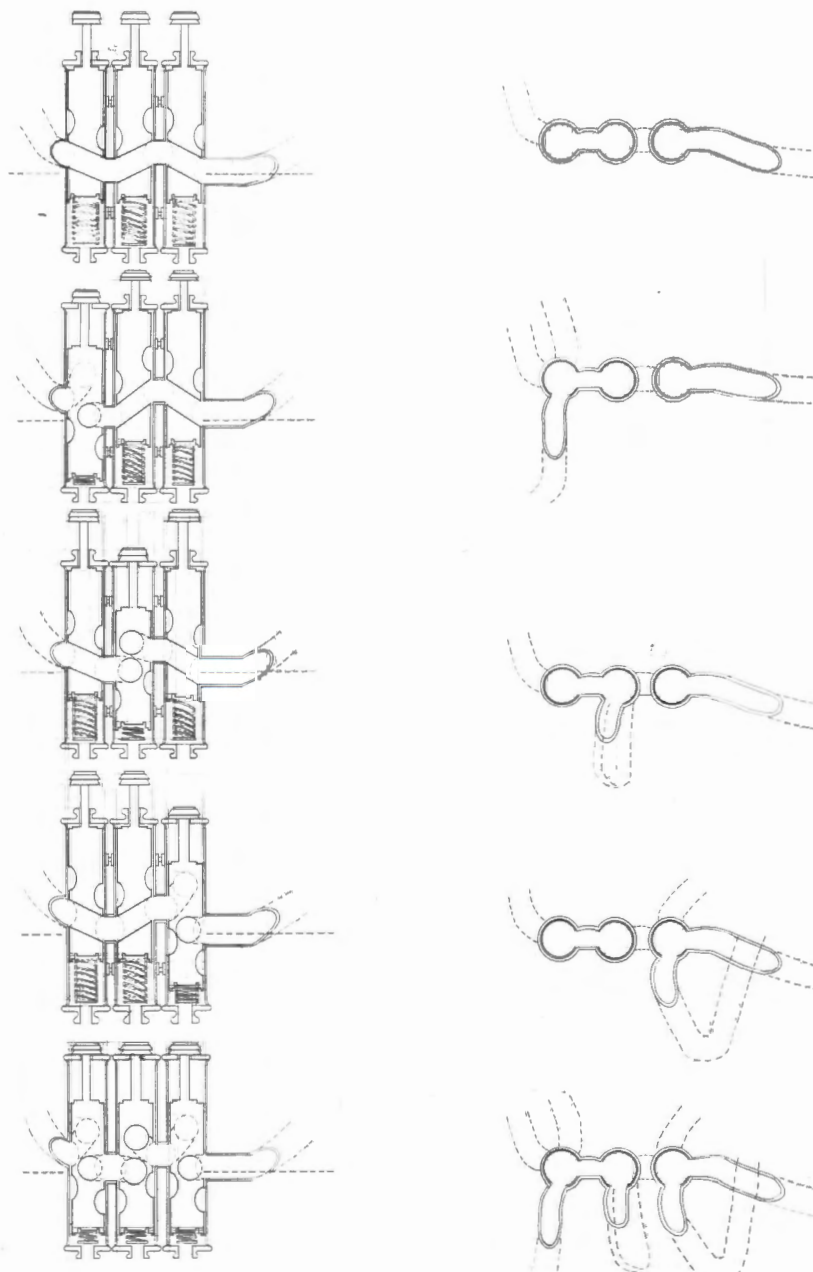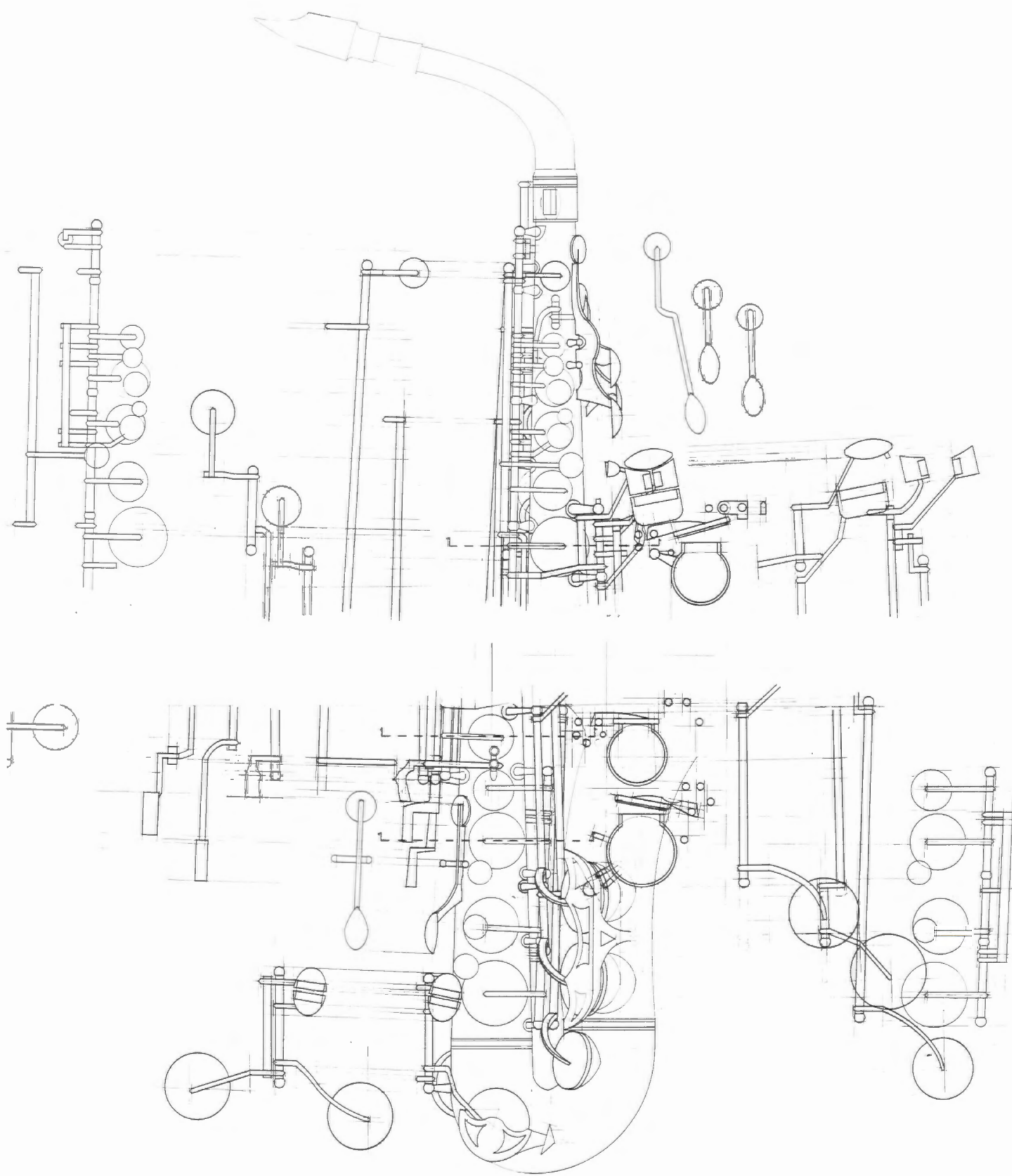
AN ATTITUDE TOWARDS CONSERVATION Rahul Mehrotra & William Glover

Will: It seems to me that your work has transgressed some limits that normally tend to define architects who focus on the design of new buildings and people who specialize in historic conservation. Is that a product of the context in which you practice in Bombay, or a model that architects are going to be confronting everywhere?

Rahul: It comes out of practicing in the urban context of South Asia. This means accepting the simultaneous validity of the dualities that exist in our urban context and the necessity to blur the boundaries or 'limits' of these rather bounded disciplines. While practicing in Bombay, I was confronted with these issues right from the outset. It's important to recognize that architecture is no longer the spectacle of the city in South Asia and that's why architects don't play a very significant role in society. The architect has been marginalized in South Asia. In the urban context of South Asia there exists a physical duality of what I call the static city and the kinetic city. The static city is represented through architecture and is monumental, static and built in permanent materials. Its high point was after the sixties when corporate architecture arose in the commercial districts of Bombay. Similarly, during colonial times, the restructuring of the historic fort area signaled a change in the direction the city was going to take. The British represented their power through the great neo-Gothic buildings. These were moments where architecture was the spectacle of the city. In the kinetic city, which is the city of motion, the *kuttcha* city built of temporary materials, processions and festivals form the spectacle and the memory of the city. The final act of immersing the Ganesh idol is a wonderful metaphor where through immersion, the idea disappears like mud dissolving into water. So the issues architects have to grapple with go beyond what is conventionally the role of the architect. We have to read these varied realities and this becomes the generator of practice, its inspiration and nourishment. The conventional tools of the architect cannot grapple with these problems and you have to break with the limitations of your education by connecting the many disciplines and moving easily from issues that relate to urban planning and policy to those of design and architecture.

Will: Perhaps there are two kinds, many kinds really, of public memory that you are dealing with. One would be public memory that is enacted as a process, like the Ganapati festival or Muharram, for example. Another is this body of colonial buildings in the fort area which hold a kind of memory that is carried or held in a different way publicly. In part, what conservation practice requires of an architect under those conditions is that they become something of an archivist. In some of your projects, simply documenting a historical structure was an important part of the intervention. Where does that archive end up and does it ever get recycled back into other networks of discourse?

Rahul: In the past couple of years, we have quite seriously asked ourselves what conservation is in the context of the static and kinetic city — in this context charged with duality. The conservation work we have been engaging in attempts to address this issue and does so through its emphasis on recycling, not only of buildings but of urban public spaces. The first phase of my engagement with conservation was to look at it in conventional terms and approach it through the implementation of legislation but we soon realized that we were not connecting to a constituency or engaging the public in the process. The questions we asked at that point were how do you identify the contemporary engines which drive this process? How do you read cultural significance and the

validity or necessity to sometimes invent cultural significance to drive the process of conservation? When engaging issues in this manner, buildings are viewed more as incredible resources — drained of their iconography or symbolic content! They are part of an urban ensemble and to disturb that leads you into chaos. For my generation, they are important bits of our cultural memory and I think that the generation that preceded ours had a very uncomfortable relationship with British icons because they lived through the transitory periods of independence and perceived oppression. We have tried to address these issues simultaneously and not focus on pure cultural memory in a historical sense. I address these issues through looking at buildings in economies like ours where the act of building is difficult. So, you begin to accept these dualities or seemingly conflicting issues as being simultaneously valid. As an architect, you have to slip back and forth between the role of a planner, the role of a conservationist in the pure sense and of a designer who can see the possibilities in the way spaces can be used and therefore reinterpreted. The work that we have been doing in the Fort Area (Bombay's Historic District) promoting the Art District is a way of driving the process of its restoration. It was never an art district but it is a new significance the area is gaining as a result of the resources that exist there. Those resources have strength both in financial terms as well as in their vested interest to drive the conservation process. Maybe it will take on a new significance and become an art district, which will drive the process to a point where it will dissipate into something else.

Ganesh immersion and Bombay's coporate district

Pucca & Kuccha Cities

Will: In a sense you are acting as a cultural critic even though you are not emphasizing the symbolic meanings of the British past that may, or may not, inhere in these buildings. Adapting those buildings for their "use value" and attempting to belie their "symbolic value" is a kind of cultural criticism. The Arts District project seems to be a case of inventing a past for an area.

In New Delhi, Lutyen's main ceremonial axis used to be anchored by a canopy on one end. A statue of King George was placed under the canopy. At independence, that statue was removed and ever since there has been debate about what to do with not only the empty canopy, but with all of Lutyen's New Delhi – should we preserve it? The monumental sculpture that's there is being maintained by the archeology department but it's a very contentious landscape because the meanings assigned to those monuments are multiple. Some people have suggested putting a statue of Gandhi under the canopy, facing him away from Lutyen's building rather than towards it. Other people have argued that the last thing Gandhi would have wanted would be to have been part of an imperial monument. So I think limits come out in another way when we are thinking about the colonial past.

In Lahore, unlike Bombay, the core is a very old city. It has been called a Mughal city, which is a stereotype. There are two different preservationist instincts now amongst professional architects and archeologists in Lahore; one is to do a precise archeological documentation of the Mughal (but rarely Hindu or Sikh) monuments and the other is interested in commemorating part of the colonial past as well, however, the two groups have different ways of authenticating the past they are interested in. The archeologists use science, standard dating techniques, stylistic analyses, historical records, etc. The other less formally organized set of people, look at novels written in the early decades of this century. They look at local histories written in local languages by city residents and through that set of resources they have identified what they consider part of that city's important heritage. Many of the objects they have identified are colonial-era bungalows. In other words, they have not been very parochial about which community owned the building. Sikh *gurudwaras* and houses of well-known Hindu nationalists are being mentioned. The group is putting up little round blue plaques on these buildings like you see all over London. It is a practice the British initiated in the late 19th century in Lahore. I think the colonial past throws up the question of historical limits in terms of what is considered to be a legitimate past in Delhi and Lahore, which were both imperial capital cities quite different from Bombay.

Rahul: Actually, when you debate about historical significance in a country like India, which is a highly pluralistic society with many narratives, how we view its larger constructed history becomes a very complex task. Remaining objective becomes highly problematic. Bombay has been quite unique in the sense that the conservation movement has grown out of an environmental movement and out of our response to the terrible physical state of the city. Also, Bombay has had a tradition of citizens' groups movements that organize citizens to act on these issues. The conservation movement started off on a highly nostalgic tone because people were seeing an erasure of the past but this was only the manner in which it was being articulated. These were the words or tools of people who were responding to the decimation of their environment. They looked to the British for conservation clues! So there was a nostalgic overtone that was automatically attached to

it but I think the truth of the matter was that it had nothing to do with historicity. It was a reaction to the environment and that's why in Bombay we could move very quickly into legislation and then into actual implementation. Recycling colonial remnants — a process of preserving cultural memory while simultaneously draining them of their iconography or symbolic content is, I think, a valid approach. This is a way of reintegrating and engaging them in the contemporary production of city life and using them to compensate for the deficiencies that exist in an urban system. I think as a community, we have a better chance of ensuring the survival of some of those icons through gently balancing these dual aspects or agendas. Like in any city, it is the negotiation which occurs between different constituencies, vested interests and points of view that hopefully results in a healthy equilibrium. Essentially, conservation around the world, however it might be disguised, is about making our transition into the future more gentle. It is really about that, a change is inevitable. I think most conservation movements articulate this position differently but at the heart of it its about making that transition into the future more gentle.

Essentially, it has to do with compatibility. I think that it is important that architects engage with this aspect because our training is about seeing the possibilities in spatial organization. When you are looking at recycling a building with compatibility in mind, how you navigate or negotiate between the new proposed use or uses and the old carcass of the building and its architectural integrity is critical. If architects are sensitized to conservation, issues of cultural memory, what the integrity of the building means or how much you can extend the limits of that interpretation, it makes it much easier to engage with these issues. Architects who are not looking at spatial interpretations and re-use possibilities are mostly looking at actual

Sign, Mall Road, Lahore

Kipllay's Museum, Mall Road, Lahore

authenticity with little understanding of the cultural memory or what symbolic aspects and features of that building are critical for that memory and its integrity. I am really making a case that we blur those boundaries. As the world and South Asia are becoming incredibly urban, architects will have to deal with these issues within high-density situations. In this context, I think our definition of historic buildings is very limited. There are more complex ways of defining what makes the fabric of our cultural memory and I think architects would have to engage with these issues more vigorously before it becomes a more complex debate. It will offer more possibilities in terms of how architecture can be informed and nourished.

Will: I think that in the United States the most successful kind of practitioners are people who understand a little about the business, a little about the client's business and aren't shy of suggesting uses for structures or of imagining possibilities for re-using things in ways that hadn't been imagined by the client. I think that's a valid point here too.

Rahul: South Asia can inform the larger debate of architecture precisely through this model of pluralism. The attitude I described earlier of seeing many dualities as being simultaneously valid could apply when you're looking at conservation, city planning, when you are talking in terms of the kinetic and the static city or when you are talking about reuse in the city. In architecture and design, when you are freed of the "limits" that a formal vocabulary places on your approach and articulation of space and form, you start integrating elements and spatial arrangements which within a purist idiom would seem contradictory. The moment you see those various elements as simultaneously valid you begin to engage with the challenge of how you can make them work together. In the way that you can make the kinetic and the static city work together you can make the poor and rich live together, and how you juxtapose all these dualities can start engaging architecture more meaningfully. I think that opens up a whole gamut of stylistic possibilities too.

Will: At this point I worry about a pastiche emerging, a postmodern "everything goes" attitude.

Rahul: Yes but that's the challenge. I think it cannot be anything and everything. Our modernist training equips us to confront precisely that challenge. It allows us to abstract those lessons to an extent where we can combine them so it doesn't become a literal translation which is what the postmoderns do – attaching elements from all over onto the building. I don't mean it in that way at all. I mean it in terms of abstraction, in the way the bungalow abstracts buffer space and modulates climate through that mechanism. The possibilities of inventing a whole vocabulary in the process is what is exciting.

Will: While I agree with you that our modernist training has equipped us with certain powers of abstraction, I am not sure that it has done a very good job of helping us understand concrete objects, particular places, the idiosyncratic spaces that people in the kinetic city practice their lives within and how those things become meaningful. All architects face the reality that they may be interpreted in a way they hadn't intended, of course. If we go back to the case of Delhi and the empty canopy where King George's statue was, that monument means different things to different people in part because of the conventions it employs.

These conventions are relatively few, but well understood: it is a commemorative statue on an elevated base, there is Mughal iconography in the chatri that covers it, there is an inscription, etc. Those elements of the structure that are conventional make the monument instantly meaningful in more than one cultural register, even if your average urban dweller in Bombay or Lahore isn't very good at telling you how old a particular building may be or what it precisely means. For some people, the Punjab Court building in Lahore may invoke a colonial past, the inequitable rules of law which supported it, and the kinds of violence that went into enforcing those laws. It is also a place where farmers from the area have come for years to seek legal redress on such issues as land rights, tenancy and protection from usury. The court sometimes preserved their rights more fairly than the *zamindar* (landlord) often did. The meanings people will assign to those buildings will always exceed the conventional symbolic meanings that we have come to describe them through, and unfortunately I don't think modernism has done a very good job of helping us learn that. I think we have to fight against our training, in that regard, all the time.

Rahul: I think modernism has not taught us a way to view the past and integrate it into the future and the present. This is done through conservation in the ways we've discussed. It also hasn't taught us the differences that exist in a city versus looking at it as a singular ideological stance. I think one of its strengths is this aspect of abstraction. It's a process of re-education and of opening your mind to integrate those lessons. When one engages the urban context in that manner, it begins to generate an architecture beyond the pastiche. Abstraction allows you to get into spatial arrangements and if you work architecture through spatial arrangements versus stylistic gestures I think you get a much richer synthesis of these seemingly polarized entities, I think that is the challenge.

Defence Colony, Lahore

Colonial Bungalow, Lahore

Will: You're right to point out that clients increasingly have aspirations to acquire the best international standard for themselves. One anecdote I could relate in this regard is about a housing area in Lahore called Defence. There are new "American plan" homes being built there and that's how they are advertised in the paper for rent and for sale. "American plan" means that the house has an American kitchen and an open floor plan. Oddly, however, as stylistic differences diminish between, let's say, an "American house" in Connecticut and an "American house" in Defence, other differences between those houses paradoxically become more striking. If you consider the way both are financed, you will see a complete difference. In Pakistan, you have to pay for everything up front and usually the owner does so without a bank loan. Additionally, the materials of construction, labor processes, organization of the construction site, etc. are all quite different. These are important differences that you don't necessarily see at first glance. The Defence house may have an American kitchen, but it will have a separate kitchen next to that one where the real cooking gets done. The American kitchen in Defence is kind of a showpiece for the householder, or a place to have breakfast. The floor plan and organization of rooms is also different. It is common for these houses in Defence to have two complete houses stacked one on top of another, rather than placing the kitchen, living room, etc. on the ground floor and bedrooms above, as would be more common in Connecticut. This speaks to the different ways people inhabit those houses, especially the practice of joint families living together. You have to be careful about thinking that things are growing more alike just because they begin to look more alike. When you interrogate these things closely, the differences emerge more strikingly than before, when difference was assumed. Maybe one thing about globalization that we can look forward to is that differences will be thought of not so much as "civilizational" between incompatible kinds of people but as a range of ways different people do things, none of which has to necessarily take precedence over any other.

Rahul: Actually that is fashion in a sense — it's style! Fashion was the first wave in the globalization process. People started dressing similarly. In Bombay, the *Dabbawala* or tiffin box delivery system brings home cooked food to you in the office and it's interesting how that service dissipates uniformity when you're having lunch together. Although you're wearing the same clothes you start seeing each other's food and ethnic differences get established. Depending on the menu, you start to read whether someone is a vegetarian, whether they are from a Gujarati, Goan or a Parsi family, just by looking at the food.

There is the potential to have a much richer fabric which holds together where language, codes of dressing and style begin to unify people. This allows differences to nestle more comfortably and to be enjoyed at a different level.

Will: New kinds of typologies will come out of globalization as well, because people's lifestyles are changing. I have read that in Himachal Pradesh retirement communities are a big investment item now. These houses are designed for retired older couples without their children. There is a range of institutions in these complexes that have to serve some of the same social functions that an ordinary neighborhood would elsewhere. This is a good example of a new typology coming about through the phenomena of people living multinational lives, having careers in one country,

retiring and coming back to India. It did not exist in India prior to about twenty years ago. I think there is an opportunity here for the architectural profession in South Asia to look at some of the models and their problems and successes in the places where they started and think through that in the Indian context.

Rahul: So, to connect it to this wider world of ideas, we have tried to demonstrate the validity of these dualities and how architecture can be used to resolve them. It's farm houses in rural landscapes for wealthy urban people, the question is how do you apply this attitude within a rural context and attempt to dissipate any divisions or limits that architecture might create, in terms of polarizing society in that landscape?

Will: Can architecture really do that?

Rahul: Well, it can try — it can attempt to.

Will: That is certainly a modernist assumption.

Rahul: These are aspects of Modernism that I feel are still valid and relevant. A strong aspect of modernism was the social agenda.

Will: I think a lot of the social engineering aspects of modernism were worked out in colonies earlier than they were in the West.

Rahul: Yes, but that is one aspect of its social agenda.

Will: There was a tie to socialist ideas early on, but unfortunately the stylistic modernism that is being reproduced now is more corporate.

Rahul: In the world of advanced capitalism — modernism has become a style. Through the idealistic notion of engaging in social issues through architecture one could find a new interpretation for modernism without going backwards.

Laxmi Machine Works, Coimbatore
Rahul Mehrotra Associates

Laxmi Machine Works Screen

Will: I certainly share your convictions that architecture matters, but what has been problematic in modernism is its tendency to link particular forms to particular kinds of behavior. The materialist assumption that architecture can shape and mold behavior.

Rahul: Actually, I mean it in the sense that architecture can polarize a society. For example, the farm houses outside Delhi or outside Bombay built in the images of the "White House" — like Palladian villas sitting in a compound with a big fence and a high gate, creating its own island. Architecture is playing a significant role in doing that. Architecture can do things by the way in which it sits in the landscape, the way it engages the people that live around it, the mode of its production, the use of materials and spatial arrangements. Often these farmhouses are for sophisticated urban clients. When designing them, I imagine a villager from the area negotiating the house and seeing what would make him or her feel comfortable and how the person living in the house might welcome him to it, the kind of spatial experience he or she might have. We attempt to take those experiences to the design of the house.

Will: I think that is too optimistic. I think that a person plowing and finding stones is still going to resent someone from the outside.

Rahul: They would resent it more if he had to ring a bell, open a big cast iron gate, walk down a compound with trees on either side, enter a veranda and then not go beyond the veranda. You can design a house that doesn't establish that sense of discomfort. Architecture plays a role and in our societies, which are highly polarized and within which exist incredible disparities, any step towards dissolving some of that is important.

For example, in one of the farmhouses that we have designed — the house is arranged around a court. You enter the heart of the house through a courtyard and the space of the verandas lie on either side. So, by standing in this court which is off the entrance, you have penetrated the house visually versus waiting on the veranda and then entering a hall which has a spiral or grand staircase and suggests privacy in some other location. I think the ambiguity of definition between the outside and the inside spaces makes many things happen in this courtyard. An activity like sorting and arranging the mangos that are grown in the orchard engages everyone including the people who work there. People who work in the house or on the farm traverse and penetrate the house as much as the owners do. I think it does contribute, even if it is an optimistic view, to the rapport that is created between them. People of that area are somehow affected by this intervention on the landscape.

Will: I think it is the effect and not that they have actually gone and changed things. I don't know if they have...

Rahul: No they haven't. But even the "Mariwala House" works like that. There is a strawberry field that surrounds it. Each room is like a cottage in itself which makes for easy penetration. The floor is made out of cement not marble so you don't feel that you can't step on it. Our training teaches us to see the possible arrangements of space, its impact on the landscape, the way it might engage people and the messages that architecture sends out. If clients begin to see architecture as made up of those signs and symbols, then together you can negotiate the expression of their aspirations. So, for us the challenge lies in how you represent these simultaneous realities.

These are the issues we engage with and I think it all has to do with accepting these dualities on their own terms. Somehow our training doesn't allow us to do that because the discourse in studio is often about consistency of attitude or carrying through a parti. The question is, can that itself be a parti — seeing dualities as simultaneously valid and considering how you bring them together and resolve their differences. It will be a challenge when you are talking about globalization and local responses. South Asia has many lessons that it can offer the world from that point of view, because it's full of these contradictions that float around in a kind of equilibrium.

Will: There is a word used there quite often, *chelega*, which means "it will work out," or "good enough!" but it reveals a basic level of optimism and a capacity to do things that is a real strength.
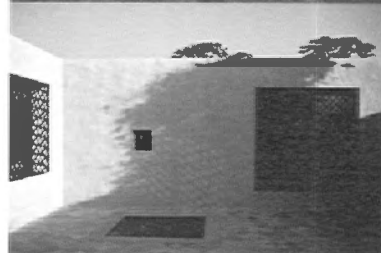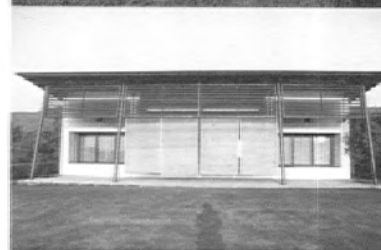
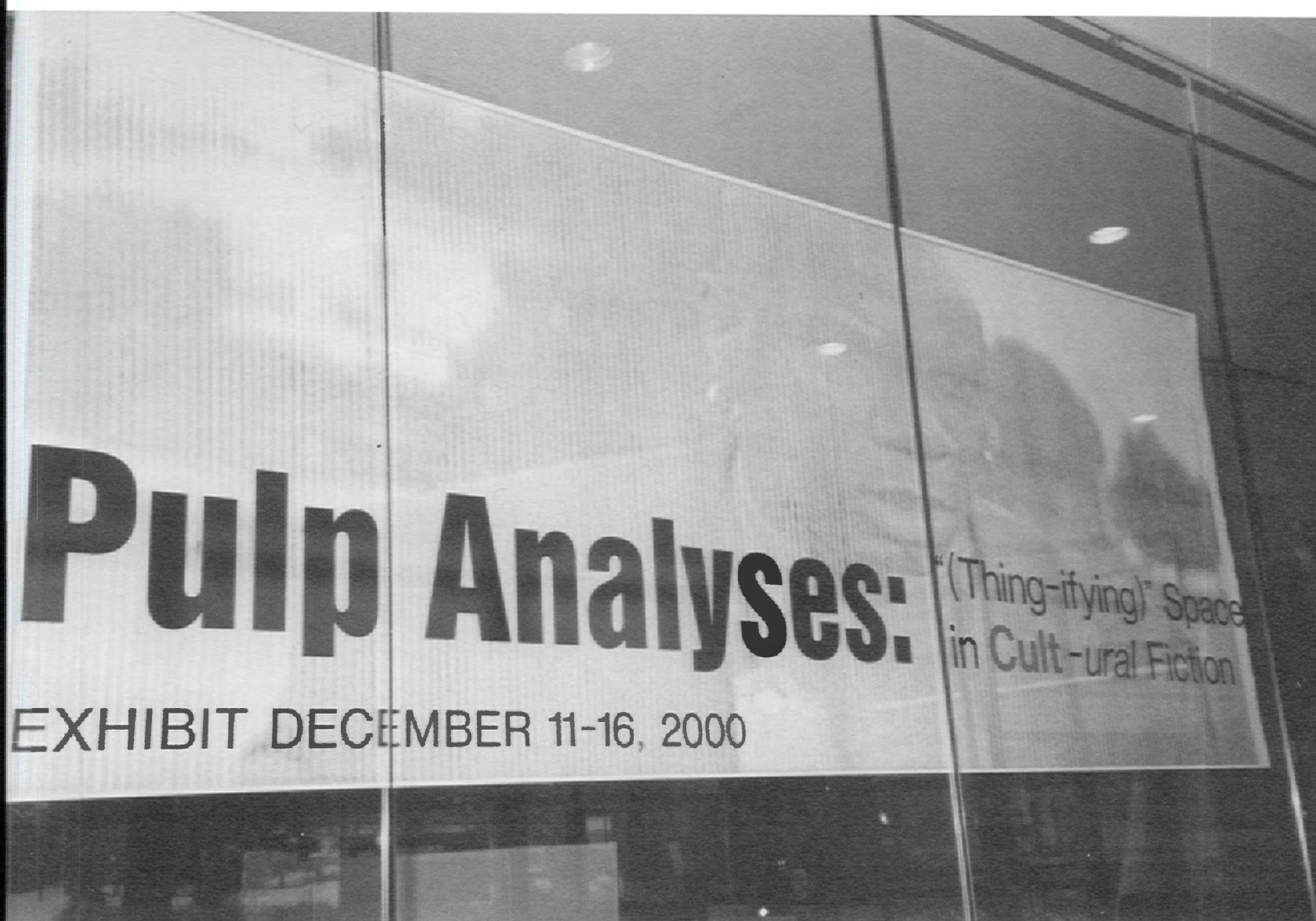Shanti, A farm house, Bombay
Rahul Mehrotra Associates

Mariwala House, Mahabaleshwar
Rahul Mehrotra Associates

UNLEASHED STUDIO!
The "Outer Limits" of Pulp, Fiction(ed)
Coleman Jordan

PULP (pulp) *n.* **1.** A soft, moist, shapeless mass of matter.[1]
2. A magazine or book containing lurid subject matter and being characteristically printed on rough, unfinished paper.

Pulp Analyses: "(Thing-ifying)" Space in Cult-ural Fiction

EXHIBIT DECEMBER 11-16, 2000

Architecture may not appear to contain lurid subject matter but it could be said that it is constructed of rough material and we can probably agree that it is always, to a certain degree, unfinished. Thus, architecture and "pulp" have something in common. In fact, there are lurid subjects contained within architecture. Subjects of a social and economic nature reductively affect space. The diminished presence of the discipline of architecture on the larger cultural spectrum parallels its decreasing impact within the realm of construction. The true "architect" today can be said to be the client, the developer and the contractor. Corporate capital and the hegemony of convenience over aesthetics have nearly driven the "passionate" or socially conscious designer/architect out of the equation, or rather, into "academe." The designer must find her or his place and redefine their position in a field that has made or been forced to make too great a compromise.

Leslie Kanes Weisman states that "...space like language, is socially constructed... architecture is thus a record of deeds done by those who have the power to build. It is shaped by the social, political and economic forces and values embodied in the forms themselves."[2] Pedagogically speaking, socially responsible and responsive design is as much an exercise in critical thinking about larger cultural contexts of architecture as it is in acquiring and exercising the craft and skills it requires as a discipline. Resulting projects enable a dialogue between materials and an argument. They construct architectural manifestations of social consciousness and activism. Design/build studios which consciously engage issues of race, class, gender and sexuality assist students in communicating these issues through tectonics and materiality. It also provides them with critical skills to avoid contributing to, in Weisman's words, "the power of some groups over others and the maintenance of human inequality."[3]

THE PROJECT
The site for analyses and the spring board for this studio's "pulp" productions was the film *Pulp Fiction*. The students' projects arose from spaces that were identified by each of them in the film. They were then critically analyzed based on social and theoretical issues surrounding topics such as gender, race, religion, addiction, violence, power, chaos and order. Cinematic spaces were transformed and reconstructed to spatially capture the issues they addressed. The studio reified/ "thing-ified" these cinematic spaces, making occupiable space using interdisciplinary and multi-media forms of representation to create an object that we called a machine. This "machine" was later rendered as a spectacle within an individually defined space.

"Thing-ifying" is a process wherein elements acquire significance or meaning only in relation to their functions over time.

TEMPTATION VIOLENCE REDEMPTION

...only partially represent this cult classic that borders on:
realism and escapism
alienation and prurience
artifact and metaphor
camp and kitsch
"quality" and "trash"

The film is layered with irony, paranoia and imagery that satirically hold the story "line" together. Non-linear in its design, the story's absurd details and characters, or its strip mall-ish "pulp fiction," tie it to a notion of an "American" spatial psyche. The film exposes the schizophrenic nature of this psyche as normative and as an organizing principle. The violence becomes slapstick humor in the most graphic scenes, as when Vincent, the hit man gangster, accidentally shoots Marvin, the meek, "Black" male, in the face while they are riding in the car. Although this sounds horrific, the movie audience roars with laughter, having by then been totally desensitized to the spectacle of Vincent blowing someone's head off. The following is an excerpt from the screenplay after the shooting of Marvin:

> JULES
>
> Look at this mess! We're drivin' around on a city street in broad daylight-
>
> VINCENT
>
> I know, I know, I wasn't thinkin' about the splatter.
>
> JULES
>
> Well, you better be thinkin' about it now, motherfucker! We gotta get this car off the
> road. Cops tend to notice shit like you're driving a car drenched in fuckin' blood.[4]

Tarantino's exhibition of stereotypes (women as possessions, blacks as criminals, foreigners bewildered by America) and his use of scenes such as the one in which a "BIG" black male is being sodomized by a police officer (dare I say the justice system), make for a complex "American" social statement. Lurid text, stereotypes and fragmented tales, more stereotypes than Archie Bunker and Super Fly shared between them, became the source for multiple analyses in this studio.

GOALS
The studio was also designed to test the limits (or outer-limits) of the social contexts of this cult film classic and develop a critically based thesis/written argument surrounding these issues. Other immediate architectonic goals were to have a greater understanding of the following: communication, critical thinking, tectonics/materiality, scale, space and reactionary versus pro-active response.

THE OBJECT/**MACHINE**
Influenced by the work of Professor Robert Miller at Clemson University's Department of Architecture, I embraced the idea of designing a machine within a defined space to create a spectacle. By taking the students away from the familiarity of "architecture" as habitable space, the "machine" allowed them to focus on their theses and arguments addressing the film's social context. Every connection and detail had to be supportive of the other in order to work, just as every detail in their argument had to be supported to work as a thesis. I find this approach challenging and refreshing. By using the socially and culturally contextualized "language" of architecture and space, the students had to embrace details and process thematically. Their productions gave the issues raised by the film spatial presence, leading them to experience, through their constructions, that architecture is inscribed and constructed by its social underpinnings.

PULP ANALYSES: "(Thing-ifying)" Space in Cult-ural Fiction
The Exhibit

Andre Sandifer
Susan Millman
Christina Heximer
Jay Gorman
Joe Datema
Felichism Kabo
Huey-Ru Chang
Al Weisz
David Connally
Alan Thornsberry
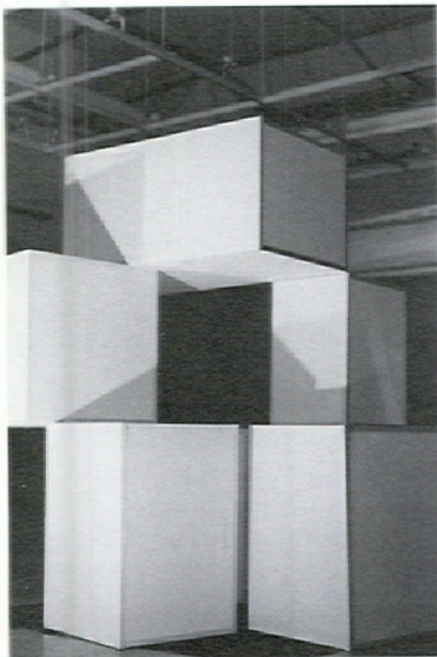
Untitled
Huey-Ru

Uncomfortable silences are often the source of awkward attempts at communication. This machine permits two people to continuously communicate and cooperate together in silence. A miscommunication could cause the box to collapse.
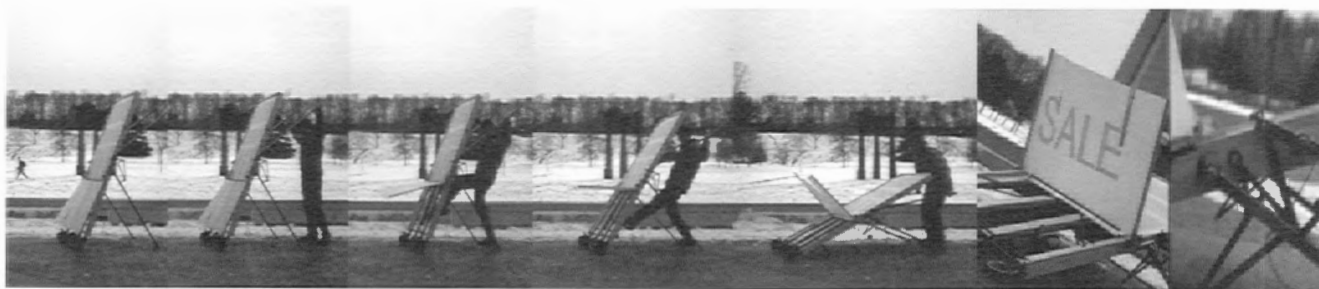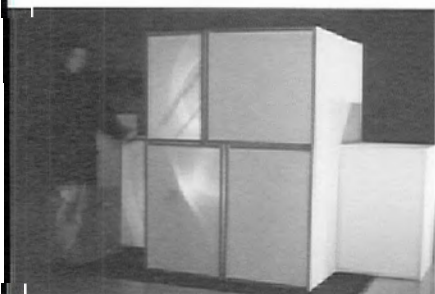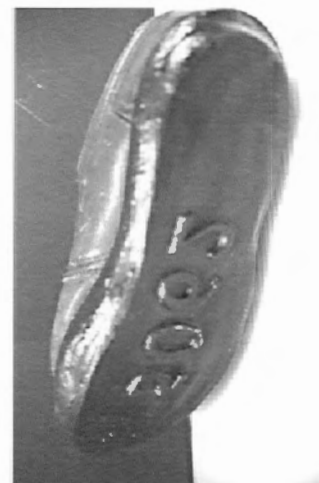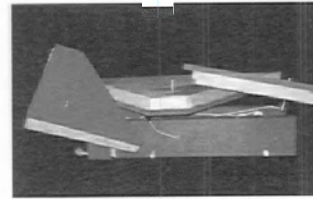
P-e-r-i-p-h-e-r-a-l Performances
Jay Gorman

Tarantino injects an eccentric culture into the so-called emptiness of the urban periphery. He accomplishes this by playing the deviant off the normal, nuances off the vernacular and the peculiar off the ordinary.
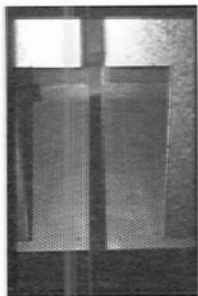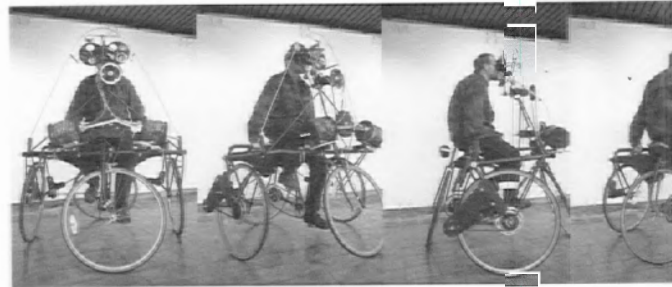
THE SITUATED: Transforming Re-Formations
Alan Thornsberry

One who accepts the social role they are given will never break free
to live the life they choose. Are your perceptions your own, or have
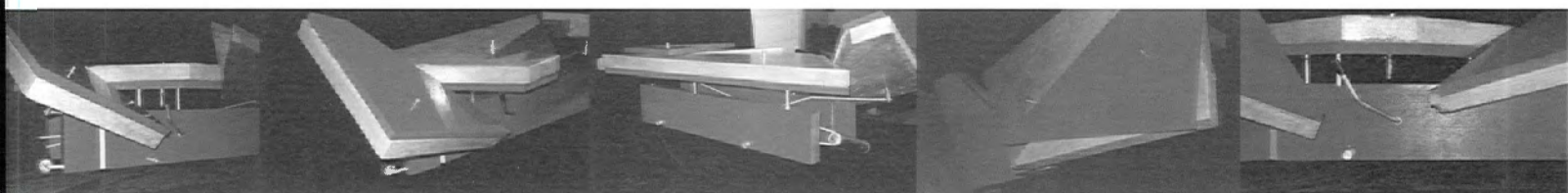they been thrust upon you?

jc 2k
Al Weisz

jesus christ MM is a drug dealer in Southern California. He distills the truth to
all that wish to see the light. The crucifix has been superceded by the needle
and the martyr is no longer splayed to the cross. The cross is now (with)in you.

"give up your worldly possessions and see unto him"

Celebrating the Possibilities of an Event
Andre Sandifer

The notion of a standard exists largely within a climate of stagnant thoughts that consume themselves with generic expressions of an architectural language. *Pulp Fiction* exposed a conventional/standard "American" culture through unconventional means, such as the non-linear approach to the script. The premise of my project is to question the process and the object behind the creation of standards within the architectural profession. We are limited by our obsession with standards.
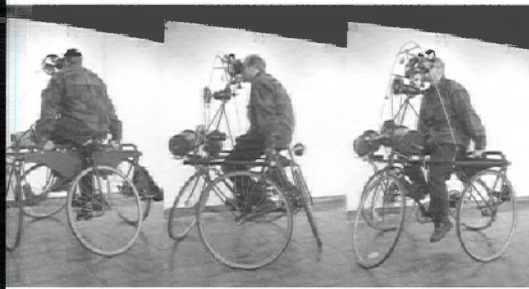
"POSSESSION"
Susan Millman

The act of accumulation and possession is the search for and the preservation of one's identity. It is a place of quasi-eternity; a place that does not exist in reality yet is put on display for ourselves and others, sometimes to the point of un-usability.

(TRANS)Gendered-ed Dichotomy
Christina Heximer

This machine consists of an assemblage of parts that are usually solid bodies, but include in some cases fluid bodies that transmit energy to one another.

Masculine Machine:
A device consisting of fixed and moving parts that modifies mechanical energy and transmits into a more useful form.

Feminine Machine:
An intricate natural system or organism such as the human body.
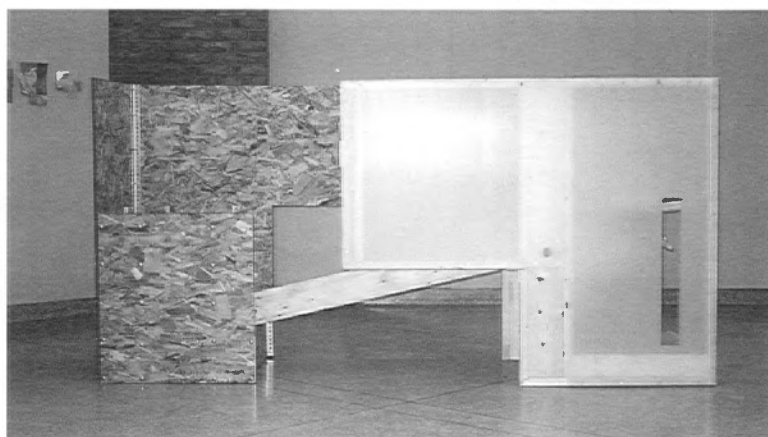
1. Robert B. Costello, et al., *The American Heritage Dictionary, Third Edition* (Boston: Houghton Mifflin Company, 1997) p. 1108
2. Leslie Kanes Weisman, *Discrimination by Design: A Feminist Critique of the Man-Made Environment,* (Chicago, University of Illinois Press, 1994), p. 2
3. Ibid, p. 2
4. Quentin Tarantino, *Pulp Fiction,* (New York: Miramax Books/Hyperion, 1994), p. 30

This essay was prepared in association with the exhibition, "Pulp Analysis: '(Thing-ifying)' Space in Cultural Fiction" which displayed the work of the students in Coleman Jordan's Fall 2000 studio. The work was exhibited from December 11-16, 2000 in the Media Union Gallery of the University of Michigan.

THANKS FOR NOTHING: A Collection of Footnotes [1]

Michael Meredith

1   this is the footnote to the footnotes of thoughts that have occupied me over the past year and it is a record of my confusion with the current situation. After many unsuccessful attempts trying to weld these into one comprehensive text, I decided to give up and leave them as they are putting them into an album format. A greatest hits album without the hits.

0

Once being a second generation so-called minimalist© in New York City at the turn of the millennium I feel like I can speak with authority about what real emptiness is.

1   a short manifesto of self-denial... I would rather be someone else

The hardcore emptiness, the modernist brand, prescription strength empty with new and improved flatteners® is marketed as a breakfast of champions, but tastes like corn flakes. Soon after, an even newer and even more improved post-modernist brand comes out to dominate the market. I've bought both. A strange sense of purpose, importance and difference comes with buying brand name things. It becomes a visible form of knowledge or intelligence. It becomes a substitution for literary knowledge, historical discourse and fact. I know what is cool therefore I am cool, it's the inverse of Cartesian logic, where you only doubt yourself. It's body over mind. Turned inside out, emptied to the core, the complete opposite of solipsism can also be lonely.

2   being flat is the only way to fly

My addiction to nothing in particular began before New York. What I learned in schools and in magazines was product packaging, how to express the intent of the contents on the exterior. Clarity© was the slogan/mantra.

Repeat after me.
I am my own fucked up corporation. I am nobody, I am a conglomerate, I am spreading thinner and thinner no longer defined by any constitutive organization but by my states of being (such as on, off). I'm flat. I'm a flat sticky surface garnering as many pleasurable sensations as possible. I am so fat I have my own area code. I am the expanded subject. I hope that if I keep consuming more and more I can get so flat/fat/wide/broad on information that I will become my own context. I am the modernist disembodied subject turned into an airport or an internet server or an ocean. Being flat is the only way to fly. I am my own context, holding together all the fragments. I am an expanding universe. Become your own history, your own institution, your own movie, your own nature. Nothing is outside of you.

The present cultural desire is to become the space you occupy, but first you have to empty yourself out to grasp it all.

3   the meta-critics who vacuum packed it to keep it fresh longer
exp. date 5/68 (Were you in Paris in '68?)

Life imitating art imitating life.
Clement Greenberg's incantation of Kantian purity moves towards the autonomy of the arts. It's a sort of professionalism, a reification of cultural production, a cleansing of all the riff raff. Clement Greenberg liked to think of himself as both stylish bad-ass revolutionary and responsible historian. Although, I remember reading that he rarely used footnotes in his essays, what do you think that means?

Greenberg's search for the particularly metaphysical in painting ended in the specificity of flatness. The canonical 1960 essay *Modernist Painting* says it all, his specific brand of ultra-flat flatness was the logical result of modernism's process of self-criticism. It was a reductive process of things to their "pure" essence. It is the trope that runs throughout his criticism. He has been labeled a formalist, although he was a Heglian conceptualist, conceptualizing form.

When I say Hegelian, I mean it in the "Absolute Spirit" sense, in the dialectical idealist sense, in the sense that we are all moving towards an absolute and culture is moving towards full self-knowledge.

In the canonical essay, *Mathematics of the Ideal Villa*, Colin Rowe puts forth an argument based just upon so-called facts. He utilizes multiple definitions of beauty, which are all based upon mathematics, proportion and nature. Nature is also celebrated for its geometric qualities. He's searching for meta-conditions, for links between his past and his present. Rowe argued anachronistically that Palladio and Le Corbusier both approach the Platonic ideal villa archetype in different ways. The first two-thirds of the essay describes the similarities between Malcontenta and Garches, to each other and an implied third, the ideal© villa type. Then the last third of the *Mathematics of the Ideal Villa* describes their differences to the ideal.

Art© according to Greenberg and Architecture© according to Colin Rowe are systematic and autonomous. They assumed that their value was internal and inherent within their production, but with my sincere apologies to those guys, Art© and design are not autonomous. They are not valued for their internal logic, they are only valued by the external, by us whether logically or illogically. The meta-critics Greenberg and Rowe both try to offer a Hegelian model of art and design, they insist on a linear model of thought and progressive criticism of history from at least the late 1800's until now. If it isn't part of this Hegelian dialect then it's not the good stuff. It is the notion of the canon from the Greek word (kanon), the device for measuring. It is a process of celebrating similarity. Is it the death of emotional social human content? "Viva la Mathematics" just doesn't feel right. Le Corbusier is good because he reverses the classical structure of architecture, while still working within a tradition? Greenberg's favorite painters, Jackson Pollock's and Barnett Newman's work is good because it's flat? Regardless, their invention made a confusing situation much clearer at the time but now it's just aggregated into a new conglomerated federated confusion.

4   milk-fed

We are all conditioned to buy things that have no real purpose being in a box.™

5   the professional expert witness

In this perfunctory world all our hopes rely upon the expert witness, the professional, with all her/his credentials. In our grand confusion only they can at least make complete sense and package the fragments, never giving a complete picture. Professionalism strengthens the fragments until they are not fragments any more, but well formed little nations unto themselves, which people are afraid to leave because as soon as you do there is nothing to talk about, except for what's on TV of course. A thought that always overwhelms me is when I think of all the professionals' offices in the world and then all their file cabinets and then all the files and then all of the papers in the files and then all the information in those papers. Try to think about it, it is an effect similar to the Eames' film "Powers of Ten." If you look at the stills from the Eames's film you can assign a different profession for each power.

Aesthetic production is another form of commodity, recapitulating the commodification within all cultural production. It's this fact that has become the content for art itself, a heightened sense of self-awareness producing self-effacing irony. Commodification is simultaneously totalizing and reifying, producing hermetic language. Similar to all professions, art and design has created its own professional language. All the arts may speak the same language but in different dialects. Art,© that specifically culturally important brand that's in museums has never been completely accessible to those who did not know the language. According to my sources, those who don't understand the language can only understand the surface/image, which would explain why everyone in my family says they don't really get contemporary© Art. It is kind of like trying to read a book in Sanskrit. It just looks weird and almost familiar. Unless the value shift is something like Dada or pop art, representing the familiar everyday (low) image in an unfamiliar and respectable (high) place, a crudely beautiful joke and something equivalent to fart humor, which everybody understands.

Currently, the latest trend in art criticism is the issue of beauty. Artists are only now trying to make art and design beautiful? I'm not sure what they were doing before. A really thick sort of luxury is now a sort of criticism of criticism. Beauty is becoming the end in itself, an anti-intellectualism. (The Swiss lead this initiative in architecture). It used to be the beginning, the physical appeal to draw the subject in. Issues of meaning have imploded through the trajectory of self-doubt and criticism. Following the trajectory of thought from this ever-shrinking academic island that we occupy, the next step should be the end of criticism. It's the end of criticism...

When designing a house for my family, I sent them some magazines and books of contemporary architecture. After looking through them my father said that he thought, "to be a successful architect you just have to make something weird". "Weird" is where language breaks down. As an architect these are your options: to be bilingual, or find clients that speak your language, or work for yourself within that historical and architectural language only spoken by aficionados, or give up on language and the transference of ideas all together.

It seems the world is heading toward hyper intellectual specialization, where every discipline creates its own hermetic language, its own system and syntax, new words, new ideas, internalizing itself such that nobody outside understands. It is an Aristotelian methodology of specification, it is that Western© brand of knowledge. Aristotle's labeling of everything was the work of his biologist father. He thought knowledge should be separated, everything has its own built-in pattern of development and moves towards the ideal of its type.

The advice of parents everywhere when I was growing up was to become a specialist. I think this explains the "slacker" attitude that developed and was eventually marketed back to us. Basically, the goal of professionalism is to know more and more about less and less until you know a lot about nothing. It's a different sort of flattening. Note to Self: Do not become a professional. In the increasingly apparent confusion, those who can navigate disciplines and professions will be less likely to get lost or left alone. My advice to children is to become a generalist or meta-professional, become wide instead of narrow and learn as many languages as possible.

6   a high-performance hello

Art© is what it is to be a human, to create presence, to perform intellectual feats of complex thought, to create new experiences, to make others feel your presence if only for a moment, communicating something, to differentiate yourself, to define yourself and define the other, (is it just me or do u hear violins?). Using Dave Hickey's ultra-democratic capitalist language, art is the desire to win. I like to think of it more as a "Hey, I'm over here" or a high-performance hello.

Anyone born around and since the 70's is a child of mass multimedia, Merlin, Simon, video games, Caterpillar, Pac Man, Asteroids, Apple Computer, the Commodore 64 and the Atari home system. I remember "Trix are for kids, you silly rabbit" and can't remember the entire Declaration of Independence. I studied BASIC, PASCAL, FORTRAN programming languages in the sixth grade. We did not pick post modernism, it was the children of the 40's, 50's and early 60's. These were my teachers, they always talked about the loss of unity or of the ideal, they embrace the dysfunctional, deconstructing earlier models, dismantling the tenets of modernism in an attempt to stick it to the man. I grew up during their dismantling and don't see the difference between the unity and fragmentation anymore.

I never liked The Clash for their radical-ness but because I thought it sounded good. (I remember "Lost in the Supermarket" being my personal anthem at 12. Have you heard those lyrics? Now, listening to them I know it's really desperately hopeless stuff, at the time I just liked to sing along). I didn't realize it was under the radical category until much later. I remember really loving Gil-Scott Heron's "The Revolution Will Not Be Tele-vised." Listen to that one again. What does that mean when you're a middle-class white suburban kid and it's one of the first things you remember really liking and relating to?

Here is a sampling of things I've been told while in institutional training: painting is dead, art has died, the author is on vacation somewhere and turned their mobile phone off, history is over, meaning only exists individu-ally, truth...do I really need to say it? (I feel funny even mentioning the word). Can you believe all this went down before we arrived? I am starting to doubt if I am even here. According to the advice of the post-struc-turalists, I'm not here. Recently I read that photography had just died. The world is becoming emptier in a search for the new and improved aesthetic form, a delirium of production that constantly replaces incomplete models of representation with different but equally incomplete models.

The emptiness I've grown up with is the packaged emptiness of the shopping mall, the emptiness of TV, that beautiful Trojan Horse with nobody on the inside waiting to get out. It is a sort of stomach-level sadness that develops from growing up and being told of all the failures and mistakes but never really understanding what went wrong and not being there when it happened.

Star Wars - Episode 1, is released 22 years later than episode 4? A movie then becomes packaging for Coke, for McDonalds, which in turn becomes the packaging of television. Media is the onion-like wallpaper of our daily experience; meaning that there is no core, it's just layer upon layer. There's no hierarchy other than the immediate. Living from instant to instant our cultural matrix intensifies arbitrary relationships. TV changes daily, news events are fed to me through a straw and then I flip over to a movie, fact mingles with fiction and seemingly arbitrary relationships are intensified. What does it all mean?

Culture as a collective psycho-reality is no longer primarily defined by place or building but by digital media. Has architecture been usurped by the data-structure? Is the World Wide Web the new urban square? It is the completely seductive world of fashionable magazines, of TV and movies, that offer the clearest view, the only caveat is that they have an expiration date of only a few minutes. When they're over they leave me thinking of what was left out and wanting more.

8   culturally induced attention deficit disorder.

Today, everything is designed to be "an experience." I can't imagine what it must have felt like 100 years ago. Can you imagine the silence? Why do they play music in elevators and bathrooms? Why do I dream of video games after playing them all day long? Why do I feel so strange without music or the TV on. Just sitting in a quiet room feels weird and scary. What did people do for fun pre-Ritalin®?

Life imitates entertainment imitating life.

Dreamcast/Playstation and extreme sports have melded together seamlessly. Am I watching the real Dave Mirra or his virtual video game alter ego? When watching extreme sports there is a strange mix between plain old real and super modified turbo powered real. It's the world of disinhibition. Russell Barkley's recent book, Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment makes a link between ADD/ADHD and disinhibition (as opposed to a purely genetic, inherited condition) and suggests that the best cure is to force discipline or "a structured environment" upon the patient. If that doesn't work, then he sug-gests drugs that regulate impulsive behavior. What kind of structured environment is possible today? Will we all end up addicts in order to create some sort of structure? The structure of habit.

Carey Hart is a great example of what I'm talking about, recently he pulled off the first-ever back flip in motorcross. As Travis Pastrana described it, "He sacrificed $20,000 and risked his body for a chance to elevate our sport." Let us put the emphasis on "elevate" here. Travis Pastrana is a 16-year-old motorcross legend, who was fined ten grand for jumping into the San Francisco Bay at the 1999 X Games and in the process had his spinal column dislocated from his pelvis. He has since recovered and is more extreme than ever. Extreme sports, like video games, are one of the few things today where you can be 16 and a legend.

Athletes in extreme sports are praised for greatly hideous disasters and un-real moves. This is no different from other sports, only that it is amplified to the power of ten. This is the kind of fun which was raised on sugar-coated cereals, TV and Donkey Kong. Let's share a moment of silence to think for a second of all the similarities between extreme sports and arcade games and remember Tony Hawk2 has just been released by Dreamcast, allowing you to be an extreme sports star without moving from your sofa. Like most current cultural productions they have created their own X-language and X-environment. It's a structured environment for all of us with cultural attention deficit hyperactivity disorder (ADHD), it's a structured form of disinhibition.

BMX language describes moves in snowboarding with names such as Toothpick, Tailwhip, Barspin, Superman. There are words like, Frontside Grind, 50-50 Railslide, Backside Disaster, Backside 540 and the rules and sports are always changing and developing. One of the latest is snowskating meets snowboarding. The sports seem to be released yearly similar to software, snowboarding v2.0, pre-packaged. The handrails are being mounted onto mountains as we speak. The systems of language are complete unto themselves. This is the new global tribalism with new rituals and new languages. We are no longer held together by geography, religion, race but by modes of entertainment, interests and extra-curricular activities. An ideal X-world would be fun 24-7, they would teach extreme sports in gym and students would try out for varsity motorcross sponsored by Sony Playstation.

Everything is X-treme these days, even when doing something as boring as burning a CD-ROM from my computer, the program I use is called eXtreme CD Burning. It allows me to feel a little dangerous while being com-pletely banal. During the X-events even the air is modified and commodified. X-atmosphere. Oxygen® (O^2) is a flavored oxygen product that is sold in doses of 15 minutes to enhance your "fresh lift experience," you choose your choice of atmosphere from essence of citrus, aloe, lime, lemon, grass, peppermint, eucalyptus, gingko, lavender, rosemary and sweet basil.

The rules of extreme sports and video games are clear in a way that design isn't (unless you're Frank Gehry). The goal is to defy gravity for a few minutes. Is the solution to post-modernism to try to get as much air as possible and forget about the ground? Is it structured disinhibition?

9   perpetual adolescent identity crisis

This is the culture of the perennial Madonna. Every year there is a new look, a new Madonna, it's a situation where she has to reinvent herself to remain interesting. She offers and condenses a broad sampling of imagery from multicultural female cliche mass media types, a photo-shopped stereotype. Most of us are left just trying to keep up with the change. It is a cool and pseudo sense of cultural evolution and it makes for good entertainment. It's a fake sense of progress. Fulfilling this need to believe in something larger than ourselves, what used to be the place of industry is now replaced by cultural systems of entertainment and consumerism. It is a system that panders towards the insecure adolescent in all of us, never really knowing who we are or what we want to do with our lives and it keeps us insecure and watching to see what happens next. This is a world where performance artist Orlan attempts to be interesting and shocking when we already have Michael Jackson.

In this adolescent condition, irony is the cultural currency. It is that self-effacing thing acknowledging the hopelessness of the situation and trying to show others that you know how stupid it is. Look at how clever and unpretentious I am to say nothing, other than realize this is stupid, I'm stupid, you're stupid. The safest solution is to stay outside it all, in a place where "whatever" is an over-used expression. In the realm of the adolescent identity crisis, it's a sort of cool aloofness that's respected. I don't care and I look good with the latest brand name sneakers. In high school, the biggest fear is not to be physically beaten up but to be singled out, ridiculed and teased.

10   a fake manifesto

As designers and especially as teachers, we're all fakers. We're all fakers looking for some sort of collusion and a shared social delusion, trying to make the fake seem real.

11   suffering from a serious case of I swear I didn't do it. It wasn't me. part 1

Duchamp's "Musical Erratum" and Cage's "Concerto for Prepared Piano" were the earliest chance compositions I know of that tried to remove the composer from the composition, attempting to make a chance or unaesthetic choice. As John Cage said in a letter to Boulez, "the essential idea is that each thing is itself, that relations spring up naturally rather than being imposed by any abstraction on an artist's part." Eno's popular game Oblique Strategies, was a Cageian game and a self-determined impossible future determined from John Cage's not so distant past. It assumes autonomy of sound, that sound can create its own relations "naturally." Later, Cage revised his vision after spending some time in an anechoic chamber, he realized the impossibility of negation. After spending some time there too, I happen to agree with him.

12   suffering from a serious case of I swear I didn't do it. It wasn't me. part 2

The 1960's and early 1970's focused on the search for objectivity. There were slogans such as the eye should see what the eye sees, the end of illusion, the end of trying to convey any false meaning. It was a pseudo-scientific study done by artists, which led to Optical Art, Minimalism and Systems Art. Symmetry became essential once more as the search for the ultimate objectivity in art. Lines can be drawn between these artistic efforts and the political ideals of the 1960's. These interests are exemplified by artistic groups such as the French/German group "GRAV," that included the artist Francois Morellet.

Francois Morellet said works of art are like picnic areas or Spanish inns, where one consumes what one takes there oneself. There are a lot of problems with art as a place for a picnic. In general I don't like to use food analogies but that said, if I brought my own sandwich to Manet's *Le Déjeuner sur l'herbe*, would it taste the same before I went?

There has been this interest in the removal of the individual from production. A desire that things are autonomous or they are collaborative or part of some sort of dehumanizing corporate system. This is the desire to not be there. Authors state that they have no voice. They only steal others work. Raymond Federman's "play-giarism" is a self-defacing notion of ironic writing, where there is only the displaced self. It's a pessimistic endeavor.

Play-giarism is in opposition to an autonomous objectivity. Radiohead's latest album *KidA* is a sort of meta-album that references the electronic underground scene, Richard James, Autechre, Boards of Canada, Pansonic, Ryoji Ikeda, Yoko Ono, Brian Eno and basically any group published on Warp Records. It is music about music, it's "How to disappear completely," it definitely doesn't sound new and it isn't. If you follow electronic music you might find it insulting how it rips off everybody. It is not about removing the composer from the composition but the composer disappearing within the composition, becoming background, referencing and playing with the electronic music subculture. Is it making fun of electronic music? It is a kind of play-garism but it sounds ok.

Aesthetic sampling, becomes, is and is a result of confusion, which then becomes a strategic technique of cultural production and marketing. Similarly, current architects and designers deploy Situationist© methods of détournement without any social agenda and the result is neither progressive nor regressive. These cool operations are then co-opted into academic institutions as quickly as they are conceived. Will this eventually degrade into a hum, a feedback loop, the equivalent of an extended remix of 4'33"?

13   suffering from a serious case of ugly

The anti-individual approach of Cage embraced the anti-aesthetic. Tonal structure was replaced with event based atonal composition; anti-everything, modernist negation once again reared its ugly head. Atonal became seen as more intellectually demanding, but let's face it you don't have the urge to listen to John Cage's pieces for prepared piano very often while driving to the supermarket, unless you have very discriminating taste or are just plain weird (not that the two are mutually exclusive). This tradition of the anti-aesthetic is housed within the rhetoric of anti-individual expression. It's something that basically comes out of 18th century thought, where ugly is more serious than beautiful. It's mind over body. We've disassociated ourselves from our bodies, from our gut reactions. Through the process of rationalizing beauty, eventually the means became the ends where the rational was beautiful. Presently, rationalizing beauty seems like an irrational notion, as if everything can be broken down into objective rules.

Once, ugly = abstract, beautiful = representational, now there is no longer an abstract language and representational language. It's all both abstract and representational. It's all representing something else (ideas, historical relationships) and representing itself (material, scale, size). The eyes of the contemporary art world see a painting of a Courbet-esque landscape as equally "abstract" as a Kenneth Price sculpture. Beauty is a condition of value and taste, it is as David Hume suggests in *Of the Standard of Taste* the "confirming one sentiment and condemning another." It's also about learning a sentiment in order to be confirmed as an individual. This couldn't be more apparent in art/fashion magazines. Wallpaper magazine, I hate you and continue to buy you.

14   the physical impossibility of post-modernism©

Post-modernism via post-structuralism via Fredrick Jameson is defined by the flattening of culture and the subject, where high/low are no longer distinct and the individualist subject is dead. After having spent some time in a post-modernist chamber, (i.e. university) I can tell you it is not completely true. There is the physical impossibility of removing the individual and the author. As you read this, there is something said from me to you, regardless of everything else. It is a simple physical fact. On an unrelated note, just in case you're interested, Bad Religon has an academic research grant they award yearly. (I'm serious. Really they do and I'm thinking of applying).

15   the physical impossibility of modernism©

The Farnsworth House is one of my favorite houses and my favorite space is the bathroom. In the bathroom there is this implosion of space and shit, where they have to fit all the artwork from the entire house into the only room with space for hanging art. Ellsworth Kelly, Agnes Martin, Richard Tuttle, Donald Judd, Claes Oldenburg and friends sit right above the toilet. It's the only space in the house where you can make a mess and feel ok about it.

16   Deja vu all over again, a theory of noise and flow

House has generally taken the idea of the original even further, simultaneously offering different mixes of songs on albums, harder, softer, ambient, hardfloor mixes. It is the production of multiple originals from a copy. It is a system based on loops and samples, multi-track continuous mixing, producing an uninterrupted and repetitive flow of sound. Rap and house borrow from all over the place, blurring categories and genres, DJ's are judged upon their collection of sounds, their rare collections and discriminating taste. DJ Spooky describes the turntable as a meta-instrument, and lectures on post-modernism to students, creating a completely new type of business card, Paul Miller: academic DJ. DJ culture, house and the various forms that came out of house, (techno, ambient, jungle, drum and bass, trance...) reflect the disillusion of the power of language to signify. They generally have no lyrics, only samples of text repeated as if from television commercials, possibly indicating a state of speechlessness or loss of language. For myself, DJ Spooky collaborating with Xenakis represents the penultimate post-modern music fantasy, where the theory of music, tone and representation has been replaced by a theory of noise and flow.

17   less is more of the same.

"We strip them of everything they come in with to be able to teach them"- a loose quote from one of my undergraduate professors. It is not fair to single one out, it could be attributed to most of them. School was a military type cleansing with the result being basically the turning of us into weenies. I remember thinking at the time that Architecture®'s desire was to create a completely other context, a sort-of limited intellectial historical context removed from the world outside, with the hopes to prop up the academy, a nouveau beaux-arts. It was a second generation Cornell thing and a hand me down Colin Rowe thing. I am not not grateful for it. I mean it had its benefits. I believe in the importance of history but it was only one linear and purely formal history. I, also, believe in the impotence of history. It was an emptying out of the world as I knew it and replacing it with a sense of order that I was never aware of before. I had a so-called post-modern education, if that's possible.

18   in support of the artsy fartsy

Ok, something I see myself and others doing all the time is putting down the artsy fartsy, like that really personal tortured stuff, like craft. Craft is an icky word in academia, synonymous with un-professional. It is some-thing that is seemingly so personal and touchy-feelie it makes my well-educated friends sort of cringe at the desperate naiveness of it all. It is so uncorporate, it's so not what we were taught. It's at its worst when it lacks rigor, or academic training, it's oblivious to the contemporary cultural situation, ok so, it is not explicitly about the history of art-culture but a tradition of making, ok, ok, so it's cliche, so what.

19   Mies vs. Venturi in a fight over empty

Mies's less became empty, Venturi tried to take the empty and make it more.

In Mies Van der Rohe's case, what started out as almost empty became completely drained when it was co-opted by the corporation. What began as a spiritual exchange, became an economic one. Less was not empty. Less was repeated until it was no longer less. Less is more of the same. Less became empty and generic. Was it metaphysical? Was it classical? Is Pure Inc. still pure?

Venturi loved the authentically empty and performed CPR on completely empty generic building stuff only bringing it back to life for a 15 minute interview on Donahue. It sat there paralyzed but he did do a great ventriloquist act to make it appear like it was talking. Venturi was trying to recreate a Duchampian situation (playing with what was the architectural equivalent of a urinal) but didn't have the internalized museum context to react to. Venturi was taking generic vernacular stuff and placing it into a generic context, an act that recapitulates the hopelessness of language and Architecture®? Or maybe it was a simple act in celebrating the down and out? As a result, he was more successful in his books, installations and sometimes in architecture magazines, where the context is more museum-like. Just for the record, I don't share his negativity towards the values of Architecture®.

If I could be an anachronistic architectural Don King for a moment, I would broker the fight between Mies and Venturi. Imagine these next sentences in my best Howard Cosell voice: Is it just a case of modernism vs. post-modernism? Is it the story of high that became low vs. low that became high? Who will win?

20   When we lost the author did we lose authenticity?

I apologize for throwing in a trick question. We haven't lost the author. We never had authenticity.

21   anti-revolutionary

A Revolution is an attractive proposition for us in the arts who want that sort of attention.

It comes with the application brochure and the profession, if you are trying to be the kind culturally accepted by fancy museums and galleries. If you seriously want to be a part of history, history seems to be full of revolutions. What is there to be against, what is there to change completely in the arts? A lot of people I know, mostly students, have taken up the cause and joined the forces of the post-modern army, to beat up on dead white guys.

The idea of Revolution as a total break in human life is an illusion. There was nothing total to be broken. There is nothing to fix.

22   the impermanence of things, including architecture

What happens to architecture when context shifts, language's meanings change, or cultural value systems are redefined? Architecture has always had a life separated from building. To respond to whether Architecture is an Art or science, it seems pretty obvious that Architecture is an Art and building is a science. Architecture is not permanent, even if the building is still there. All of the arts are about creating constituencies of support, that's what makes them art. Values shift, artists/designers want to make a presence, people change the channel and lose interest, artists/designers want to make a presence.

23   language games, what am i really trying to say?

Here is one contemporary, brief Fisher-Price© version of the history of language as I know it: Pre-classical views of language posited no difference between the word and the world/referent. Language was patterning there only to place the subject in context to create a conjunctive reality to allow discourse. Classicism gave a distinction between word and thing, but where the word/sign was a transparent mediator of the world. Modernity creates a rift between word and thing, signifier and signified. Beginning with De Saussere's structuralist notion of language, then Wittgenstein's *Tractatus Logico-Philosophicus* takes what Decartes started to the ultimate logical end, where we are left alone separated from the world by language. *Tractatus* describes the whole loss of the external world, the complete abstractness of it all through language. Language creates a split between us and everything else, leading to solipsism. We are all marooned inside our heads and language creates this division.

Next there is post-modernism where 1960's poststructuralist metacritics pushed the crisis of representation one step further, affirming the primacy of the signifier independent of the referent or signified. The important aspect of language became the signifier divorced from any attempt to stand for something that it is not. Post-modernism became the flattening of language to a surface. The subject disappears, the author is dead and we all become de-individualized by the system. Language speaks to us.

Here we are caught in the debate between the author as cause of text or effect of text. This is the point in the conversation where I usually get up and go to the water fountain, as younger philosophers are coming along and picking apart post-modern arguments and some older ones such as Alan Sokal, who has tried to prove them, despite all their articulate sophistry, scientifically false.

A final side note, Wittgenstein's self-criticism of *Tractatus* forced him to produce *Philosophical Investigations* (published 29 years later) arguing against private language. The private language argument states that the inner workings of man do not allow for a good description of our inner experience. It is within *Philosophical Investigations* that Wittgenstein explains words only have meaning in the context of a shared relation, a public criteria for their correct application. This turns out to be one of my favorite arguments against solipsism. Is it just me or doesn't it seem obvious that language is just about the transference of an idea from one person (the author) to another (the reader)? Of course I am a product or an effect of language but I hope I am not just that. I believe there is more than language. I don't really like to think about this too much, it ends up causing strange headaches.

24 what is this autonomy you speak of?

I have a small confession to make. I've never understood the notion of autonomy. I've been faking it for years. I've nodded many times in reviews and even used it in describing work but it's always seemed like a silly idea that something could have its own internalized system of value.

25 a footnote for a friend

One of the most disturbing and prevalent conditions of contemporary society is when you're speaking to a friend on a mobile phone and you hear your own voice delayed, as if it's the echo from some huge transcontinental void, repeated and distorted. I usually have to shorten the conversation or hang up, preferring quiet, which also has its own set of problems.

26 surrounded by wimps

Henning Genz's beautifully simple and thorough book *Nothingness*, examines the history of emptiness concluding with the quantum physics notion that there is no such thing as emptiness. It just doesn't exist in the universe as we know it, following the tradition of the Greek *horror vacui*. It's a physical impossibility. All space contains matter or energy and even taking it further everything is part of a field condition, (a Higgs-Boson field condition). In the 17th century, it was thought that there was only matter and void. Void was described as continuous, homogenous, constant and empty. The current cosmological model, roughly based upon scientific observation of supernovas and Einstein's cosmological constant, is an inflationary universe where 99% of it is labeled as dark matter. Speculative weak particles such as WIMPs and many others offer preliminary models of what dark matter might be filling the void. The conclusion to be drawn from all of this is that only 1% of all the matter in the universe is visible and it's within this 1% where we work surrounded by WIMPs we cannot see.

27 the part of my resume titled objective

This is the part that everybody I know from school, including myself, took off our resumes.

possible answers:
a.) it seems limitless
b.) it seems doomed
c.) it seems like it's never changed
d.) it seems like it's on the brink of something new
e.) all of the above
(answer: all of them are equally correct and wrong.)

The crisis of criticism is at the point where "it's all good," anything is justifiable and completely wrong concurrently. The cultural paradigm can be found in the new national educational policy of the new-new math where there are no wrong answers. New-new math is where students are encouraged to use language and problem solving skills to find answers to problems but the answers don't have to be exact. Even mathematics has become relative.

The contemporary discussion has temporarily moved from linguistic criticism to issues of beauty, of materials, of sensuality. In the state of post-modern linguistic grammatical confusion, it is where you rediscover your senses, you go back to literalness in the attempt to find your displaced body.

But what is my objective?

This is the problem I feel I am confronted with most of the time, as I am always asking myself, what is the objective? It is the problem of what I am working towards because more often than not, I am concerned with what I am working from. It is a problem of defining myself and the world, where meaning has been drained and sucked dry, where everything has ended, where it is all good. Everything has become middleground, there is no difference between whole and fragment. I'm in a situation where this grand confusion is both constraining and truly liberating and all I can say is thanks for nothing.

(my shout-outs) Thanks: Jake, Lucia, Keith, Robert and especially Hilary, for whom I am the most thankful of.

Anne Hinsman
LONGING (lông′ing) *n.* A strong persistent yearning or desire,
especially one that cannot be fulfilled.[1]

Longing un[*defined*]

Longing is a state of being that is created by physical removal from a desired object, individual or location/atmosphere. Or, as suggested by Dante as one of his versions of Hell, longing may simply be proximity without intimacy. Longing produces the sensation that one remains endlessly incomplete without the desired. In turn, longing is propelled by the belief that the attainment of the desired will provide fulfillment and completion. Longing may produce a state in which emotions and imagination regarding the desired become an obsessive fuel for creativity.

Longing may be created from a void. The sudden displacement from the desired may induce an almost obsessive nostalgia for the time and place that once housed the desired.

Longing is that which is seen and not consumed. It may be based upon the memory of a fleeting glimpse or a deep-rooted memory of years ago, so deeply buried in the sub-conscious that it becomes an integral part of one's existence. The brevity of a glimpse may plant the seed of longing. The glimpse may be the spark of desire because it leaves room for imagination, something that a finished, complete image cannot do.

Longing is an intrinsically incomplete existence in which a void consumes. It is the exponential growth of a void which creates passion from emptiness. The void is both the seed of longing as well as an infinite emptiness that grows ever larger, increasing with time and desire into a potentially boundless realm.

Longing requires imagination. Without imagination, it dies. Imagination is the growing medium for desire. Imagination infiltrates the incompleteness of longing, slips into the corners of a glimpse and then begins to create a myriad of outcomes. It is imagination that allows the massive void of desire to grow out of control. Imagination grows as a crystal upon a shard of reality and then spirals off into longing's void. Imagination attempts to finish the incomplete quality of longing, yet in doing so, creates an endless cycle of desire. Imagination creates a thousand scenarios to fulfill desire, which is ultimately just an exercise in frustration.

Longing has been an inherent quality in countless works of art. I have chosen to investigate three specific cases.

Joseph Cornell

Joseph Cornell attempted to recreate a miniature universe in which to orient the self. Although he sought the self, it was not an openly confessional displayed. The self for Joseph Cornell always had to remain protected behind a web of symbolism. Cornell's works were produced as a result of a careful artistic process. He voyaged from his home on the fringe of New York City to the heart of Manhattan, searching for materials, glimpses and chance encounters. His daily forages were carefully recorded in diaries and his ultimate quarry became a source of inspiration. The objects that Cornell found were then carefully classified in his basement studio, some to be stored for years before being incorporated into a particular work.

Cornell's process and subsequent works involve constant movement, an ironic reflection of an eccentric bachelor who used his private and isolated situation to focus on the state of his own mind. He was obsessed with his own interior reality and with the possibilities of attaining a higher spiritual state. Cornell's subject is his mind watching itself, which helps to create a sense of voyeurism in his work.[2] He developed an enigmatic myth about himself while keeping the public at a distance. It is difficult to ascertain whether his life at the fringe of society was a result of choice, mere circumstance or a necessity for his creative process. Perhaps Cornell's isolated lifestyle was an attempt to recreate the sheltered world of childhood, secluded as in a nursery, blissfully oblivious to the concerns and responsibilities that accompany adulthood. Cornell chose to further isolate himself from direct human contact by choosing written correspondence over face-to-face encounters as his primary means of communication. Written correspondence, even mailing his works to friends, served to both distance him from society and enrich his system of collecting and classifying. Cornell's boxes are therefore the ultimate representation of longing; they are perfect universes that are completely uninhabitable. Cornell's existence is a bottomless well of longing, an endless cycle of an isolated bachelor who obsessively creates a world in which he can never exist. This world is populated by the fairies of childhood dreams, distant celebrities and exotic, visited lands, rather than real people or known landscapers.

Cornell consistently used childhood as an inspiration for his work.[3] He sought to recreate the remembered qualities of his childhood, a bygone era of a comfortable, cultured environment, which was abruptly brought to an end with his father's death. Above all else, childhood was for Cornell a world of *order*. He viewed it as a world of confinement that offered a sense of security. The realm of childhood also provided other important apects of Cornell's work: ritual, innocence, a storehouse of visual images and attention to the sensuous surface of objects. Cornell admired the wonder and spontaneity of the child's apprehension of the world. He believed that the incompleteness of a child's knowledge added to this sense of wonder and spontaneity, in contrast to the pre-informed notions that muddy an adult's perception of the world. Cornell used images of childhood as further sources to connect to a string of associations. For example, Cornell's brother Robert, afflicted with cerebral palsy, represented for Cornell an image of innocence and purity as well as a reason for his own isolation.

While Cornell's work is saturated with images of childhood innocence, his work is also fraught with desire.[4] Even the mode of viewing his work is imbued with a sense of voyeurism. Cornell's work also includes images of nude women and the bizarre fetishistic incorporation of dolls, which are icons of desire, not the innocent musings of a child. The viewer peers into a miniature realm, as at a peep show, looking upon the contents of Cornell's personal obsessions, which have little to do with outward appearance and reality and everything to do with Cornell's own work. His portraits of actresses and ballerinas are not portraits of innocent girls after all but of grown women. These portraits, however, are less about the particular woman than they are yet another glimpse into Cornell's inner reality. Cornell juxtaposes innocence and desire, and in doing so states the paradox of his existence. He is endlessly looking back to a childhood that can never be completely recreated.
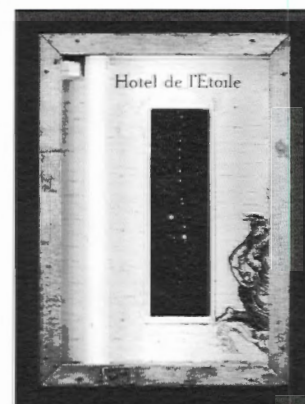
Untitled (Hotel de l'Etoile), 1954

Cornell uses a half-hidden image in this box, an alluring element that is essential to the creation of a mysterious aura. Cornell has pasted a clipping of the image of a woman with two goats on her back in the corner of the box. This woman is the personification of the constellation Auriga, which is visible in the night sky through the window on its back wall. The woman is not simply the constellation but an ancient's interpretation of the heavens. Rather than position her image directly on the back wall of the box so that she is immediately viewed in full, Cornell wraps her image on the inside corner. The image is pasted so that the corner of the box aligns down the woman's back and separates her head from the goats on her back. Thus, she is at once both supporting the young goats and separated from them. Perhaps it is not mere coincidence that young goats are named "kids," a subtle reference to Cornell's utopian view of childhood.

The constellation visible through the window may be interpreted as yet another icon of longing. A constellation is an image that may be associated with evening contemplation, a leisurely, romantic or childhood activity. A constellation is intrinsically unreachable and is only whole when viewed from a great distance. Were one to ever approach it, its wholeness would disintegrate. The constellation is therefore an image that is real and whole because of its incredible distance from the viewer; like Cornell's secluded life, its existence depends upon separation and infinite distance. Cornell has also included in the box a clipping from an advertisement for a Parisian hotel, a locale he must have viewed as exotic. Presumably Cornell never traveled to Paris, thus this clipping adds yet another layer of longing. It is a place that exists only in his mind, never to be visited in reality.

The complete image of Auriga is not fully visible when viewed in the normative sense, which is frontally. When the box is viewed directly from the front, one only sees half of the image. The two goats are visible but Auriga's head is not. In order to see Auriga in her entirety, the viewer must peer in at an angle, creating a forced voyeurism. The partial frontal view of Auriga is a tease, a glimpse of the total image, and compells the viewer to move to see Auriga in her entirety. Auriga beckons and leads the viewer by teasing the eye with only a glimpse of her foot.

Auriga's celestial image is complete in the frontal view of the window that appears to open at the back, inside face of the box. The constellation that is visible in the night sky through the window is complete. This is perhaps another facet of allure as it offers a preview of the personification of Auriga that inhabits the corner of the box. The window/constellation and the Auriga/personification form a pair. One is the physical arrangement of celestial beings and the other an ancient mythical personification of those same orbs. The former is constructed using only a dark sky and a telescope, while the latter relies on the imagination and faith in myth.

Joseph Beuys

Joseph Beuys' work functions through multiplicities of association and multi-layered symbolism. He employs a collection of "object-types" as signifiers.[5] Beuys chooses banal objects and transforms them into subjective objects. He charges marginal materials with symbolism and injects energy into the banal. He plants the seed of references and memory while revealing only fragments of meaning in a flux of incomprehensibility. Beuys' work stimulates a meditation between the human and the divine and does not necessarily make explicit sense.

Beuys created a personal mythology, a "false-self" in response to the personal trauma inflicted upon him during World War II, as a means of healing not only himself but society at large.[6] Beuys claims to have been shot down in World War II and then saved by Tartars. Some scholars believe this is a fabricated story that he created to intensify his mystique. Regardless of its authenticity, Beuys' identification with the Tartars is the foundation for his creativity. In a manner similar to that of Cornell, Beuys reaches back to an earlier time in his life as an endless source of inspiration and creation of associations. Beuys' past has value even if it is fictitious because it symbolizes actual suffering. Even though his art may be deceptive from the outside, it still contains inner meaning for Beuys. His objects are symbols residue that create a transitional space that functions as a facilitating environment in which to recover the self. Beuys uses his "myth" as a means by which to discover the true self. Unlike Joseph Cornell, Beuys did not withdraw from society to act in a creatively self-contained manner.

Joseph Beuys' creativity acts as reparation and the works are intended to thrive in an environment of meditation.[7] Beuys apparently suffered from a profound feeling of inner self-absence. He felt compelled to make art continuously to replenish a body and spirit that seemed empty. Therefore, his work would be devoid of meaning if it were to be stripped of his symbolic re-creation of self. His art becomes a radiating symbol of body heat, which relates back to his personal mythology.

Beuys' sense of space is that of an opaque, material medium that is almost impossible to move through. Beuys explores impossible movement through impossible spaces. Movement is impossible because it is self-contradictory in these spaces. Beuys is interested in the impossible symbolic voyage of going forward into the future by going backward into the past or the creation of a personal mythology as a means of healing.

Beuys' creative process begins with essentials of human existence and makes them strange. He tested organic materials as possible sources of warmth and wrapped cultural objects with them to restore them to life. For Beuys, vital warmth was inherently spiritual and to regress to it was to become full. Regardless of whether or not one chooses to believe Beuys' personal mythology, his choice of elemental materials, such as fat, and the concentration of these materials as their essence, still produces a powerful effect. Beuys' work sparks a series of associations for the viewer, which may have nothing at all to do with Beuys' own intent. Whether one views his use of pure fat as repulsive or beautiful, it elicits a strong reaction.

Fat Chair, 1963.

Fat Chair demonstrates Beuys' use of elemental materials. In this work, he uses an ordinary, aged chair upon which he places an enormous, solid volume of fat. Both elements are banal and their composition is both repulsive and alluring. It at once invites touch and revulsion. The juxtaposition of the fat and the chair is absurd to the point of being disarming. The excessive warmth of the fat sharply contrasts the starkness of the chair. The fat is the ultimate in softness while the chair is composed of hard lines. The fat has been placed on the hard seat of the chair, as if to soften and warm it, yet in such an extreme amount that sitting upon it would be impossible. The concentration of fat longs to warm and heal the hard chair yet it fails in its ability to function, therefore remaining intrinsically unfulfilled. The fat yearns to give its warmth to the chair, but remains a separate element from the chair. The fat of this work cannot function as it would normally, because it has been removed from the body it once warmed. It is dislocated yet still attempting to act as a warming element, therefore painfully out of place. The fat and the chair are both denied their normative function. The fat is trying to warm a chair but an inorganic object does not require warmth for survival. The absent human produces a void.

Fat's realm is beneath the flesh of a living creature or the unwanted edge of one's steak. Beuys uses it in extreme amounts and moreover, he uses it as a sculptural element, manipulating it as if it were stone or plaster. The fat is not even articulated in an amorphous, naturalistic manner as homage to its source but is sculpted in an almost architectural manner. It is manifested with precise angles and planes, a measurable volume. The fat is far removed from its subcutaneous, amorphous origin and honed to precision as if it were a piece of stone. Beuys' piece works with a minimum of materials but articulates them to the limits. Nothing is more banal and quotidian than an old wooden chair, yet when coupled with the fat, an arresting object is created. Beuys' choice of only two elemental materials in *Fat Chair* seems to be a test and exhibition of artistic prowess. Beuys proves that powerful sculpture can be created using a minimum of mediums and furthermore, mediums that are not precious or rare. *Fat Chair* transforms two elements of the everyday through thoughtful juxtaposition. Like a conscientious master-craftsman, Beuys hones fat to an architectural precision and then places it upon a modest chair, a bizarre combination. The placement of the precisely crafted volume of fat upon an aged chair becomes an aspect of its absurdity.

Rachel Whiteread

Materiality in Rachel Whiteread's work is an index of absence because the sculptures are castings of objects. They are not replicas of the objects and therefore do not operate in the same fashion as the parent objects from which they were created.[8] Their distortion into a non-functional object renders them as a memory of the object from which they were cast. The materiality of Whiteread's sculptures is not a mere translation of mundane objects. The sculptures are surreal morphs of the everyday. Whiteread often utilizes materials that would normally not be associated with the parent object. The sheer weight and/or translucency of Whiteread's materials lends her sculptures a ghostlike quality or that of a memory made solid. Because of their weight, they are not memories that will quickly fade but are deep-rooted in the unconscious.

Whiteread's works are heavy memories, weighed down by the traces of their former human utilization. In her castings of old bathtubs, for example, traces of rust remain on the sculpture as if the age and decrepitation of the object were brought to the forefront via Whiteread's manipulation. What was once overlooked inside and under is now celebrated as outside and top. This includes hidden traces of use such as rust, dirt, gouges and scars. Casting is a mode of working that intrinsically and easily accepts traces of "other." It may be more difficult to cast a "pure" object (one that is devoid of the remains of its creation) than one that has been marred during the creative process by the evidence and devices of its labor.

Whiteread is fascinated by things that have been designed for human use. The objects that she elects to cast are commonplace yet loaded icons of everyday existence. Whiteread photographs discarded furniture on the street and garbage as preparation for her sculptures. Her preparatory photographs are further attempts at documenting presences and absences.[9] The fact that these objects were once used by humans (they were acquired, not purchased new, as is apparent from the traces of use found on the sculptures) makes their sense of absence even more powerful. Whiteread's sculptures invoke a feeling of absence and longing in that these solidified memories can no longer be used by humans. Their only function becomes that of a comtemplative object to induce memory and association.

House, 1993.

Whiteread's *House* was the casting of a typical London row house. This particular work takes on a surreal quality and is imbued with longing on a variety of levels. Whiteread cast one rowhouse, whereas, an actual, functional row house (even in name) implies a series and a sense of belonging. *House* stands alone on a stark, painfully empty block. The image of a lone row house is a bit unnerving and its odd solitude becomes an uncomfortable pause, lending an aspect of the surreal. *House* implies a sense of longing because it stands alone, stranded, on what was once a block filled with others just like it. As in Whiteread's other works, *House* is a strange three-dimensional memory of domesticity. *House* makes bizarre one of the most fundamental icons of human comfort, the home. It seems that this work's power is derived in part from the fact that Whiteread has chosen an easily recognizable icon of "home" to use as a mold for her memory trace. Furthermore, it seems that *House* is imbued with longing by its associations with abandoned buildings. It stands as the visible inside of an abandoned building, with all its secrets exposed. *House* is voyeurism taken to the extreme; the walls that normally conceal and clothe the intimate domestic realm have disappeared. The gouges and scars that compose the house are no longer veiled behind windows and walls but are brought to the exterior, and become the first impression one gains of the house, rather than an insight gained over time and trust. The viewer is immediately, perhaps too soon, privy to the secrets and traces of time. *House* makes one long for the walls to shield and return to normalcy.

Joseph Cornell's *Untitled (Hotel de l'Etoile), 1954*. Joseph Beuys' *Fat Chair*. Rachel Whiteread's *House*. Three works whose underlying strains of longing may act collectively as an outline for an architectural proposal. These three works may provide clues as to how longing may be invoked as an architectural agenda, as a means of creating a subtle, yet nevertheless compelling, emotionally charged architectural experience; architecture as the embodiment of emotion.

Bibliography
Achleitner, Friedrich. *Walter Pichler*. New York: Princeton Architectural Press, 1993.
Ashton, Dore. *A Joseph Cornell Album*. New York: The Viking Press, 1974.
Blair, Lindsay. *Joseph Cornell's Vision of Spiritual Order*. London: Reaktion Books Ltd., 1998.
Caws, Mary Ann. *Joseph Cornell's Theater of the Mind*. New York: Thames and London, 1993.
Cooke, Lynne and Karen Kelly. *Joseph Beuys Arena-Where would I have got if I had been intelligent!* New York: Distributed Art Publishers, 1994.
Hays, K. Michael. *Hejduk's Chronotype*. New York: Princeton Architectural Press, 1996.
Hejduk, John. *The Lancaster/Hanover Mask*. London: Architectural Association, 1992.
Pawson, John. *Barcelona*. S.A.: Editorial Gustavo Gili, 1992.
Cornell, Joseph. *Dovecotes*, "hotels and other white spaces." New York: The Pace Gallery, 1989.
Lerup, Lars. *Planned Assaults*. Cambridge: MIT Press, 1987.
Lingwood, James. *Rachel Whiteread: House*. London: Phaidon Press Limited, 1995.
Lyotard, Jean-Francois. *Duchamp's Transformers*. Venice: The Lapis Press, 1990.
Mack, Gerhard. *Herzog & deMeuron 1989-1991*. Basel: Birkhäuser Verlag, 1996.
McShine, Kynaston. *Joseph Cornell*. New York: The Museum of Modern Art, 1980.
Paz, Octavio. *Marcel Duchamp: Appearance Stripped Bare*. New York: Seaver Books, 1978.
Schellman, Jörg. *Joseph Beuys: Multiples*. Munich: Verlag Schellman & Klüser, 1977.
Tashjian, Dickran. *Joseph Cornell: Gifts of Desire*. Miami Beach: Grassfield Press, 1992.
Thistlewood, David. *Joseph Beuys: Diverging Critiques*. Liverpool: Liverpool University Press, 1995.
Waldman, Diane. *Joseph Cornell*. New York: George Braziller, 1977.
Wang, Wilfried. *Herzog & deMeuron: Projects and Buildings, 1982-1990*. New York: Rizzoli, 1990.
Whiteread, Rachel. *Shedding Life*. New York: Thames and Hudson, 1997.
Zaugg, Rémy. *Herzog & deMeuron: an exhibition*. Ostfilden-Ruit: Cantz Verlag, 1996.
Zumthor, Peter. *Peter Zumthor Works: Buildings and Projects 1979-1997*. Baden: Lars Müller Publishers, 1998.
Zumthor, Peter. *Thermal Bath at Vals*. London: Architectural Association, 1996.
Zumthor, Peter. *Thinking Architecture*. Baden: Lars Müller Publishers, 1998.

1. Robert B. Costello, et al, *The American Heritage College Dictionary, Third Edition*, (Boston: Houghton Mifflin Company, 1997), p. 799
2. Lindsay Blair, *Joseph Cornell's Vision of Spiritual Order*, p. 36
3. Ibid., p. 98
4. Ibid., p. 126
5. David Thistlewood, *Joseph Beuys: Diverging Critiques*, p. 3
6. Ibid., p. 7
7. Ibid., p. 29
8. Rachel Whiteread, *Shedding Life*, p. 8
9. Ibid., p. 11
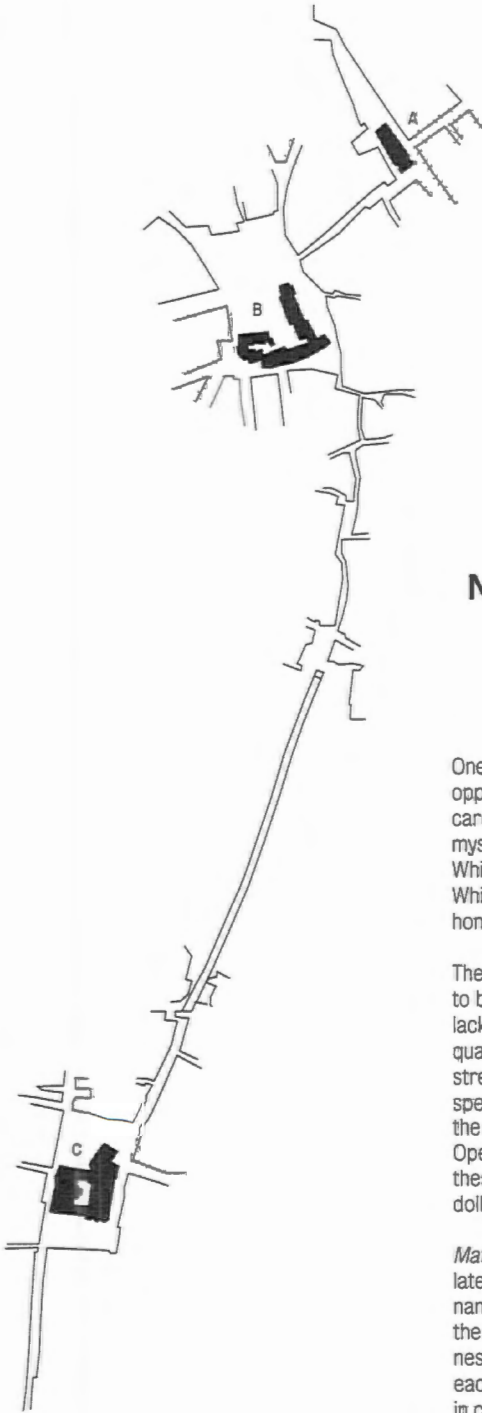
MULTIPLE LIMITS: In Search of *Matryoshkas*

Karl Daubmann

One cannot walk more than a few paces in Prague without the opportunity to purchase some kind of memento. Trinkets, postcards and paintings all serve as a reminder of one's trip to this mysterious city. Which memento captures the essence of Prague? Which purchase is the best value in terms of the Czech Crown? Which can be packed in a suitcase for the safest transport back home without exceeding the airline luggage weight limit?

The answer to these questions plagued me. Each day, the urgency to buy keepsakes grew as my departure date neared. Postcards lack tactility and glass is too fragile. Russian dolls contain many qualities of a great memento and were consistently found on the street vendors' tables of goods. (Fig.1) From the vendors' perspective, the dolls probably contain a bit of exotic culture and at the same time have a playfulness suitable for a tourist purchase. Opening them to find smaller dolls within, I became intrigued by these Russian nesting dolls. My interest was in containment. The dolls were spatial.

Matryoshka was the most common woman's name in Russia in the late 1800's and became adopted as the name of the doll. The name *matryoshka* is derived from the Czech term for mother and the dolls have appropriately become a symbol of fertility.[1] The nesting dolls are passed down from generation to generation, each time gaining a new container. The nesting of containers within containers was constantly on my mind. Pregnant women on the street, the trains of the metro in the tunnels below the city and even the food on my dinner plate would conjure up images of the *matryoshka*. She seemed to appear everywhere. As a result, the plan of the city began to change before my eyes. Churches, buildings, squares and courtyards all took on similar nesting qualities.

As I began to find these nesting qualities in the architecture of Prague, I reflected on the architectural qualities of the *matryoshka*. The form of a single doll is figural. Like a building or square, it is a container of space with an interior and an exterior. While the space of the interior is contained, the exterior is displaced. As the dolls are nested within each other, the original contained space is displaced by each additional doll. As I thought about these spatial qualities of the doll, I began to discover Prague's urban-scaled *matroyshkas*. My daily commute from the flat to the studio became my time to explore the city and quickly revealed three nested spaces. Much like the *matroyska* herself, the first space was found simply.

The first *matroyshka* I found on my commute is located two blocks from Vaclavske Namesti and is called Ovoony Trh. (A) This nested space contains the Estates Theater and shares many qualities with the *matryoshka*. The square that contains the Estates Theater is a well-defined, figural space. Unlike the dolls, the placement of the theater within the square does not create residual space. Instead, the container and the contained are complementary they have a reciprocity with one another.

Fig. 1 Nesting Doll
Fig. 3 Theater Terminating a Street
Fig. 5 Vendor and Clock

Fig. 2 Estates Theater from Old Town Square
Fig. 4 Front of Theater
Fig. 6 Residual Space

The theater is similar to a single doll because of its simple form although it diverges from this model by having a well-defined front, back and sides. Only from one side does the building actually have the quality of an object. This is the service end of the building that faces the open square. (Fig.2) The two sides, because of their articulation and proximity to the surrounding buildings, take on the character of building fabric and define the edges of street spaces. (Fig.3) The front of the theater also engages in a dialogue with its neighbor in defining the street front. (Fig.4) The object has different readings from various perspectives as a result of the relationships developed with the square and its complementary spaces.

As my commute continued, the second *matryoshka* appeared. Only a few blocks away from the Estates Theater is the Staromestske Namesti or Old Town Square, which is the heart of the historic center. (B) This space is one of the most important stops for the tourist; it seems as though all the streets lead to this square. Not only does this space resemble the spatial qualities of the *matryoshka* but many vendors there sell numerous varieties of the doll. (Fig.5) Like the un-nested doll, the Old Town Square initially defines and fully encloses a space. Then, the introduction of an additional, surrounding figure disguises the square that sits within. This figure made up of a group of smaller buildings including the City Hall has two qualities; it displaces space to create residual space while it acts as a background. (Fig.6) The residual spaces are created at the rear of the square and along its sides. From within this large object figure, the buildings act as a background for the various activities that occur in Old Town Square. The scale and articulation of the buildings camouflage the figural object of the square.

Nearing the studio at the castle, the Malostranske Namesti revealed itself just over the Charles Bridge. The Malostranske Namesti is the main space of the Lesser Town and proves to be the strongest example of an urban *matryoshka*. (C) This figural space is divided by the Baroque church of St. Nicolas that defines two smaller squares. (Fig.7) Through its location in the space, the church creates a street on either side of itself, which aids in the reading and definition of the two squares. (Fig.8) Upon closer inspection, the church and adjacent building form a courtyard, adding one more layer to the urban *matryoshka*. It is a space within a building, within a space. (Fig.11)

The parallel to the dolls continues to intensify once inside St. Nicolas. The interior reads as a completely different "doll" than the exterior. The Baroque space is separated from the external mass by a series of residual spaces that insulate the internal volume. Climbing to the gallery space reveals the residual space between the "dolls". There I found myself between the inside of the exterior volume and the outside the interior volume. This reading is articulated through the dramatic shift in materials; the in-between space lacks all ornamentation. (Fig.9) This volume also collects light before it enters the internal volume of the church. (Fig.10) Because of these multiple nested layers of enclosure, the church becomes a womb-like space completely isolated from the outside world through acoustics, light and its temperature

Once the studio was over, my daily commutes ended. It was time to leave Prague. In preparation for departure, I packed my clothes, books and mementos in my suitcase. Carefully placing a *matryoshka* in my bag, I realized that I was giving her a new container. (Fig.12) I had found my *matroyshkas* and had purchased the perfect souvenir.

1. Larrissa and Marina Marder, *Russian Matryoshka*, (Moscow: Interbrook, 1993), p. 6
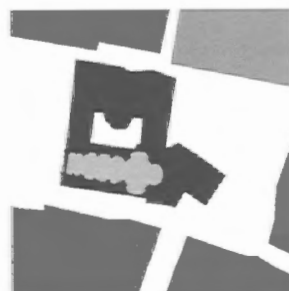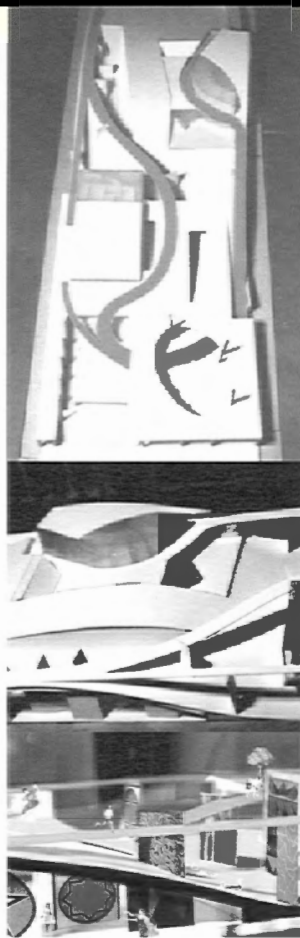
Koonseo Ahn

ACTIVATING THE LIMITS

Yousif A. Albustani

Tonino Vicari
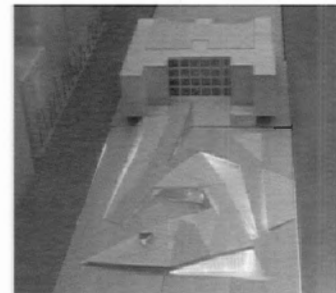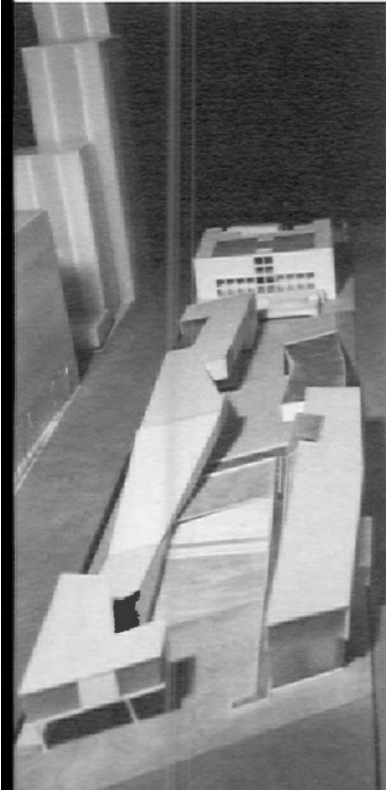
Sungjae Lee

TRANSGRESSING CONTAMINATING

The focus of this inquiry is to explore new ways in which space might be perceived through examining the limits of architectural ideas and determining means of transgressing these limits to reconstruct the inhabited space. My use of the metaphor trangression is a tool to critique current issues and rethink existing parameters based on advances in technology, tools of representation, cultural attitudes and the globalization of the world economy. According to Michael Foucault,

> ...transgression is precisely that which exposes the limit as limit. Transgression does not deny specificity or difference; rather, it highlights and celebrates it. It reveals the difference between what is before and beyond the limit.[1]
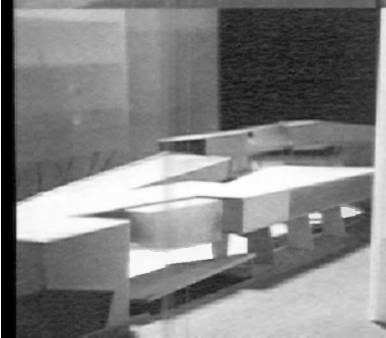
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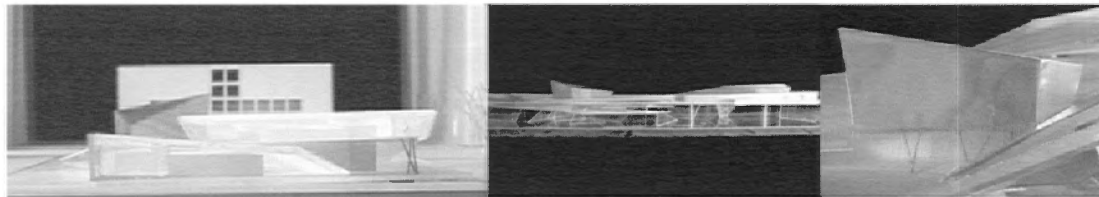
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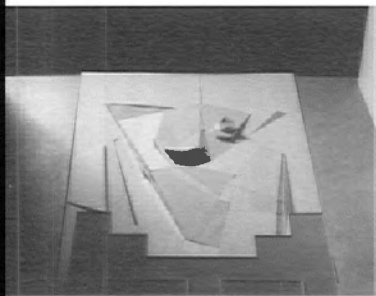
COALESCING   FLUCTUATING   CAMOUFLAGING

Through teaching and architectural practice, I investigate how to activate current constraints in order to reformulate and reintegrate the built environment. Through contaminating, blurring and distorting... I seek to create an architecture in which the fixed singular condition is transformed to generate dynamic, multiple experiences by accomodating a dynamic indeterminacy that fluctuates between fixed and variable parameters. The objective of the following investigations was to explore such indeterminacy and transform the current position of a singular text, determinate form to that of indeterminate dynamic form. The challenge lay in stimulating and interweaving a flirtatious indeterminacy into the formulation of architecture. The discretion with which form and program are constructed and the manner in which their parameters are transgressed is intrinsic to the quality of the final construct. The pedagogical agenda sought could foster a multitude of integrations of various aspects of the design process, underpinning program, form and context in a new coalescence.

The following projects of my graduate design studios at the University of Michigan, are a series of explorations focusing on transgressing the limits. The project "The Museum" questions design stratagies, the balance between art content and architecture container and evaluates means of contaminating both. The project "Dupont Healthcare Retreat" interrogates the identity of the object and landscape, and explores the concept of coalescing building and site. The project "Rethinking the Highrise" examines current limits of highrise design, explores means of transgressing these restraints and investigates the dominance of a fixed singular approach in the formulation of form, skin and structure.
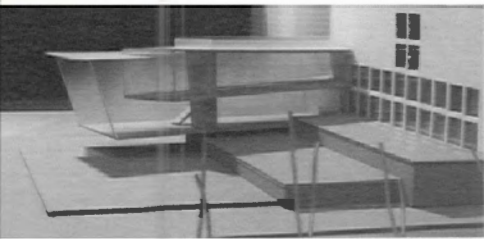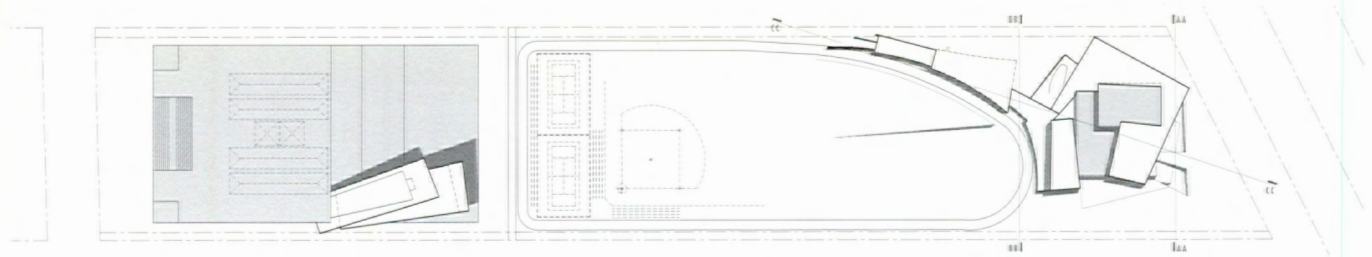
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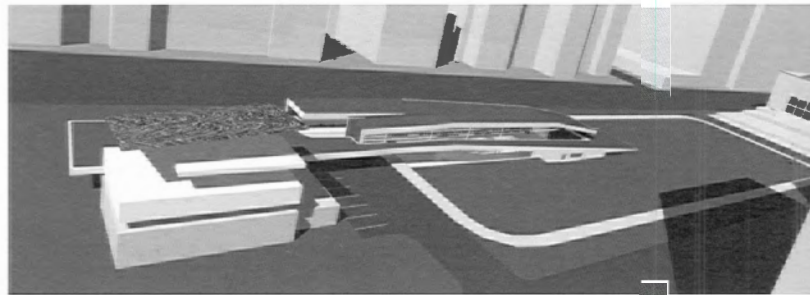
Jesse Pedersen

INTERWEAVING   PROPOSITIONING   FLIRTING

THE MUSEUM:
A Site of Encounter
Transgressing Content and Container

The Italian poet Filippo T. Marinetti declared at the beginning of the Twentieth century, "Museums were nothing but public dormitories that had become redundant in a world whose glory was enhanced by the beauty of speed and mechanization."[2] Traditionally, museums were built to accommodate "high art." This separated them from the day-to-day reality of most people's lives. Demystifying "high art" requires a critique of its transcendental status and of the way in which it is exempt from the mundane realities of history and contemporary life. The changing context and new frontiers in which museums operate requires a redefinition of the role of the art museum in the twenty-first century. The challenge for architects is therefore to rethink the morphology of the art museum as an institution within the cultural mind set of its users and to establish a dialogue between the buildings external context and its relationship to the city and its culture. Architects are further challenged to examine the building's internal focus, for example, the art exhibition room and to address and define the relationship, balance, limit, primacy and hierarchy of the museum's content to its container. Jacques Derrida supports the need to contaminate architecture by putting it into communication with other media and other arts. He explains;

> The very immersion of architecture in the seemingly homogenizing morass of inter-disciplinarity, is precisely what guarantees and augments its own individuality. Far from denying the specificity of architecture, it actually promotes it.[3]
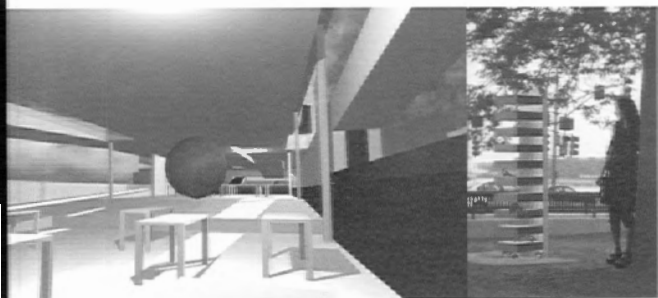
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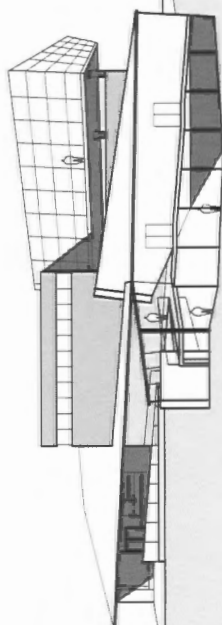
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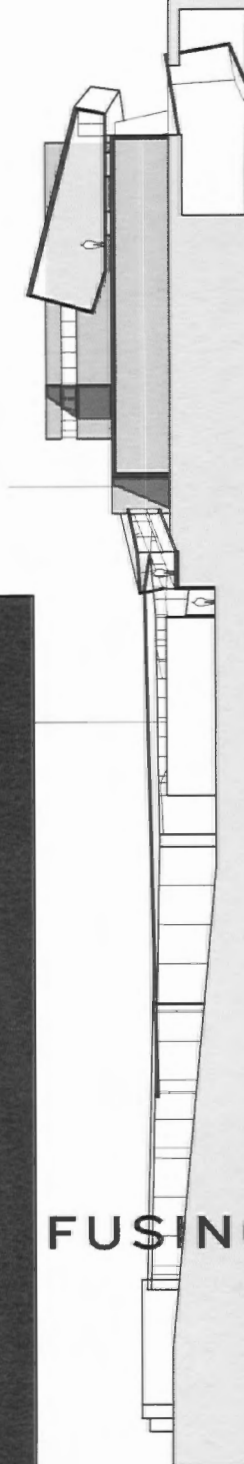
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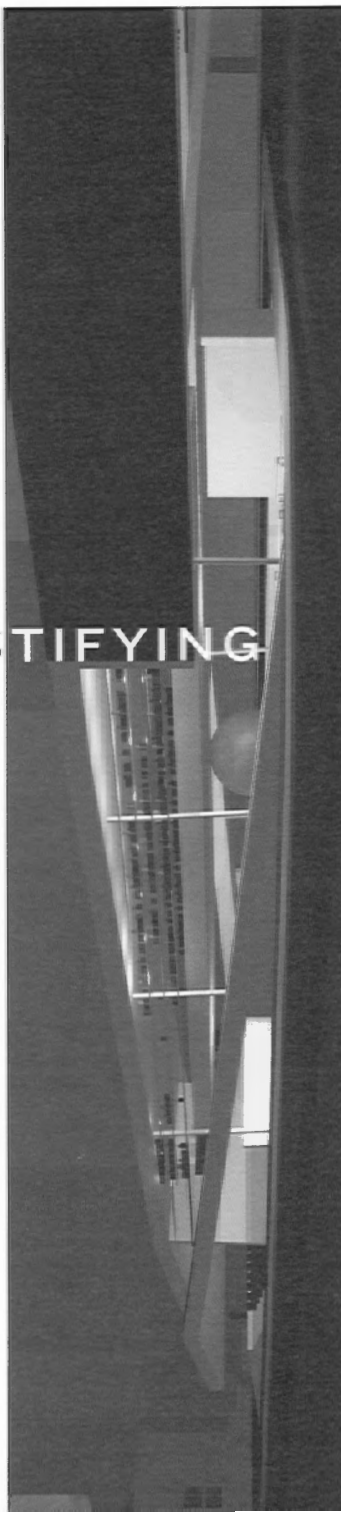
CONCEALINGN INFECTING   MYSTIFYING   FUSING

Art should mysteriously conceal an ability to communicate through time and space to the spectator. Picasso claimed that art is "...a form of magic designed as a mediator between this strange hostile world and us."[4] Creating correlatives across antithetical structures is also a central feature of both art and architecture. A unique visual capacity to bring divided things into unison or to span the gap between the real and the abstract helps us form ideas and emotions and links our human consciousness to an artifact-littered reality. John Hejduk explains the relationship between art and architecture;

The painter starts with the real world and works toward abstraction...but the architect starts with the abstract world, and due to the nature of his work, works toward the real world. The significant architect is one who, when finished with a work, is as close to the original abstraction as he or she could possibly be.[5]

Paul Van der Kolk
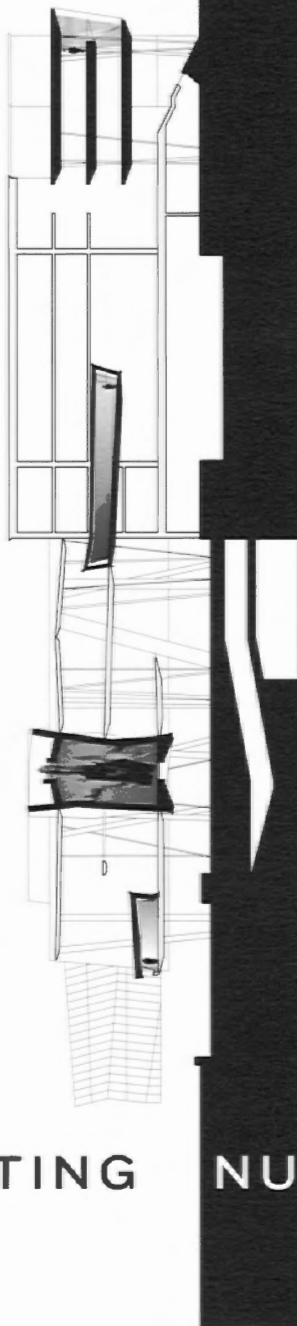
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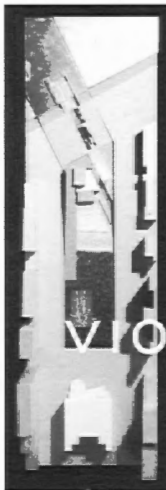
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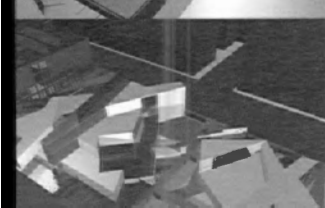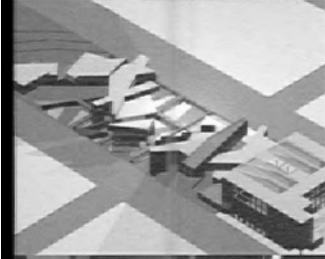
INFRINGING   VIOLATITING   NULLIFYING   TAINTIN

A visit to an art museum involves far more than simply an opportunity to come into contact with original works of art. It is evident to the observer that museum visitors act out and thus in some sense internalize a version of the art itself. Marcel Duchamp argues,

> ...a work of art is completed by the spectator. There is no single definitive work of art. In any case, colors fade, metals oxidize and all masters undergo the inevitable drift to uniformity. The seeing mind is not a constant, and a work of art is a particularly capricious object because social mutations, the whims of fashion and manipulations of markets make for a notably unstable environment.[6]
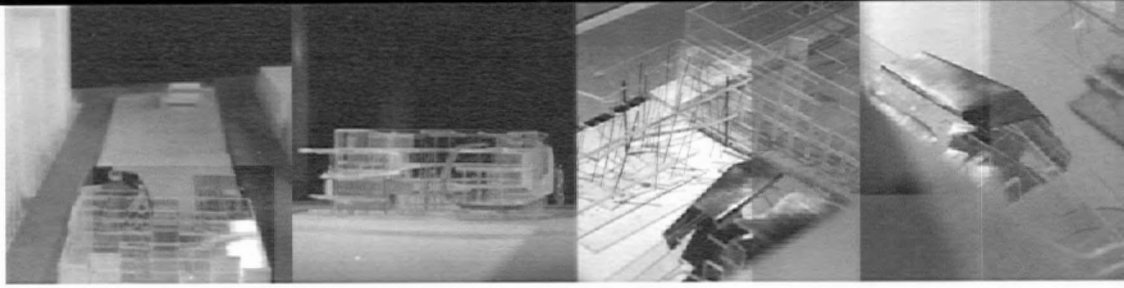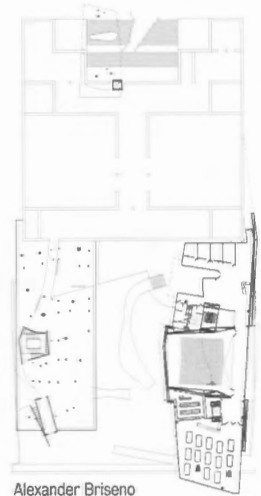
Alexander Briseno

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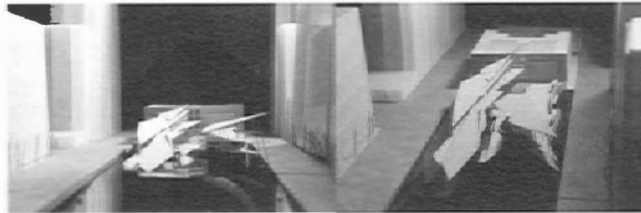
Heonju Jang

TRANSCENDING   BREACHING   INFRACTING

Images have power because they live within us. They should live within the person, not on the canvas or building. Hence, what is the goal of an art museum? Is it to present works of art in an environment where space, light and atmospheric conditions are ideal? Is it to domesticate high culture? Is it to give cities a new public living room which could serve as a social and urban catalyst? The challenge for designers is to build museums that are neither dormitories nor entertainment centers but laboratories for critical thinking and sensual perception. Perhaps, the critical issue for museum designers in the new millennium is what to do with this unique city space as it encounters the spectator so that art can live and thrive at all scales of architecture.

Project: An Intervention in Chicago's Museum of Contemporary Art.
New Program: This includes galleries, an exhibition room based on a specific art collection or artist(s), a sculpture garden, an educational facility and industry association offices (35,000SF). The program sought to rethink existing facilities on site including Lake Shore Field School and a recreational park.
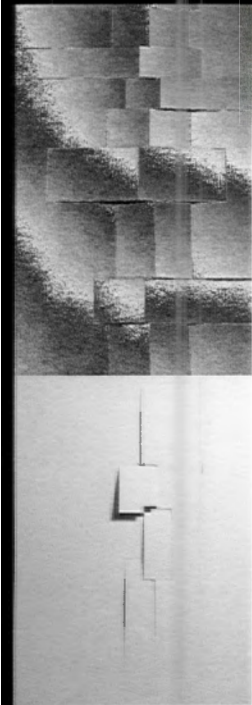
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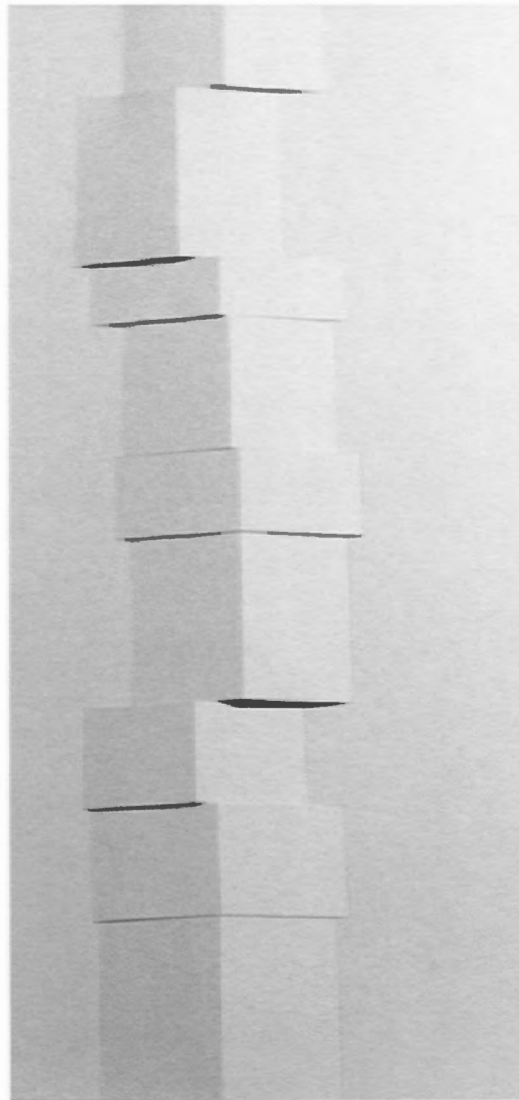
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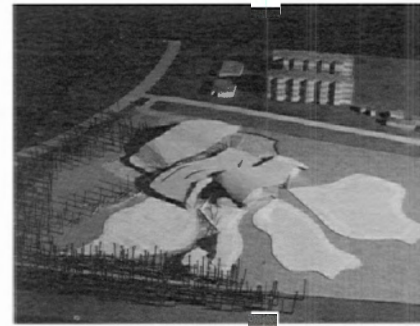
RELEASING LIBERATING OSCILLATING WAVERIN

DUPONT HEALTHCARE RETREAT:

Animating the Landscape
Coalescing Building and Site

Art should disclose the elemental forms, not by the superficial imitation of things found in nature but by attempting to follow a process which makes them grow. Nature should be reborn in the picture. Which, while separate from the natural world, must obey the same laws within its own discrete, autonomous environment. Starting from nature, you will achieve formations of your own and one day, you may even become like nature yourself and start creating.[7]

Paul Klee
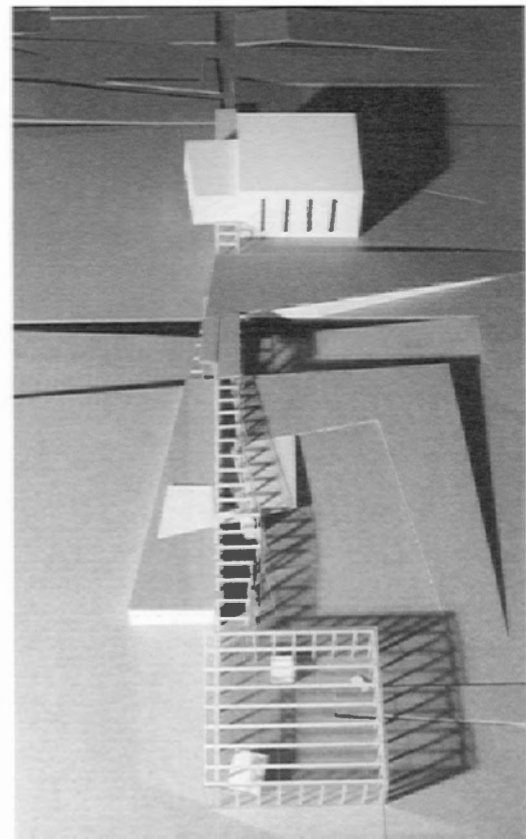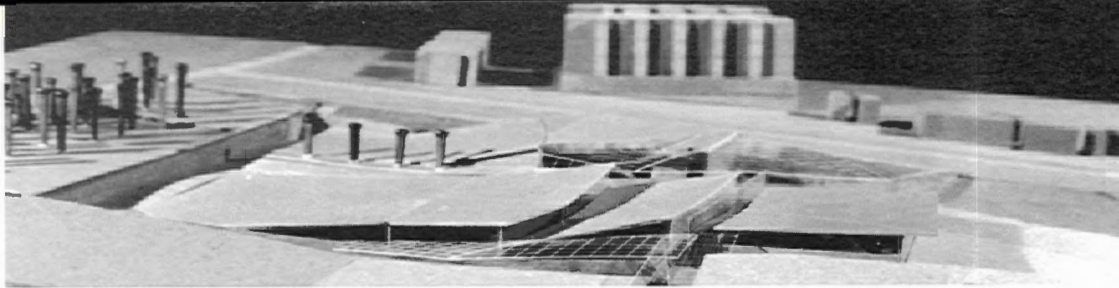
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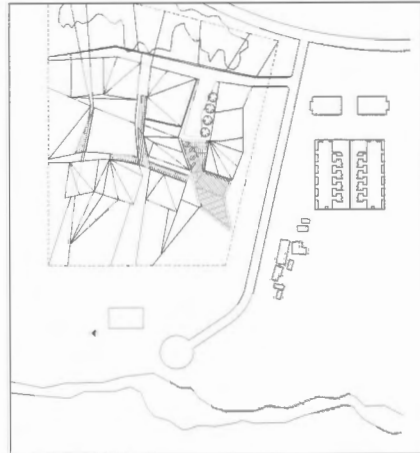
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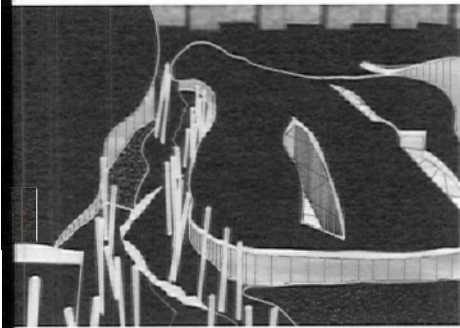
Thomas Danckaert & Pamela Field

LITTERING PULSATING EVOLVING UNDULATING

The building process is an intervention in the landscape and sky. A building manifests itself through carving the ground, sculpting space and accommodating the program, thus, an inhabited sculpted space is generated through the activation of the landscape. In this process of assimilation, the interior space becomes an extension of the landscape by neutralizing and blurring the boundaries between the building, the program, the site and the environment. This studio sought to investigate the conventionally opposing positions of building versus site, function versus beauty and technology versus environment. Instead of enhancing these dualities, we sought to unify the primary pillars of the tectonic nexus namely the environment, technology and the arts. The inhabited landscape served to activate fluctuations between the real, the surreal, technology, art, culture and nature. The manipulated landscape animated floors, walls, roof, skin, structure and furnishings through folding, wrapping and peeling. This "play" between the physical and virtual worlds discloses a new attitude towards inhabiting the land.

Project: This healthcare facility focuses on the treatment of patients with cancer, family and community education and data research.
It also serves as a retreat or healing environment for all (78,000SF).
Site: Thirteen acres situated on the California coastline, adjacent to the Salk Institute outside of San Diego.

RETHINKING THE HIGHRISE:
Activating the Limits
Transgressing Parameters and Perimeter

The tall building is undoubtedly an icon of the twentieth century. It embodies mankind's persistent ambition to transgress the limits and build to the heavens. Today, its role in the city and effect on users is vexing. Its impact on the environment is shattering and its principle formulation is shifting. Tall buildings stand at the crossroads of a significant transitional period within the global economy and with information technology. This invokes a series of questions that address its standardized parameters and challenge a design process that has been motivated by an aesthetic preoccupation with its perimeter and dominance of form. Louis Sullivan was credited with inventing this typology in 1896. In an article entitled "The Tall Office Building Artistically Considered" he declared, "Form follows function."[8] This notion was modified in the later part of the Twentieth century to form follows function and style. Nevertheless, the key principles of the tall building have remained essentially unchanged. At the time of Sullivan, it was assumed that architecture should accede to the demands of the machine, which meant standardization and repetition. Several questions arise today. Is the city skyline suffering from "object fatigue"? Has this typology reached the end of its line? What is the role of the designer in evaluating these parameters? How can we address the dominance of form? The post-structuralist theorist Paul Virilio questions the authority of the architectural form itself, he explains, "Advanced technologies engender a new way of thinking that erode the primacy of the physical form."[9] Michel Foucault takes this argument further by interrogating the dominance of a singular fixed form, he states; "Every form is actually a compound of forces."[10] Both argue that the economy, tools of representation and advances in technology provoke a shift from a singular fixed form and static space to multiple forms and dynamic space. The globalization process has lead to the enhancement of diversification and heterogeneity by increasing our awareness of differences and similarities and by demanding, not the standardization and repetition of parts, but customization and variation.
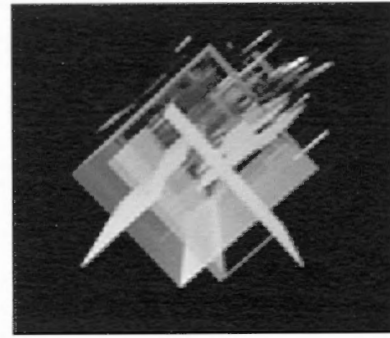
ROCKING VACILLATING AGITATING DISTORTING.

I see the role of Art, Architecture and Technology as a means of bringing chaos into order, in other words, a means of rationally organizing chaos. The Surrealist artists utilized collage and montage to transform the familiar everyday object into an unfamiliar composition. This set in motion a new attitude towards the unfamiliar or irrational. Salvador Dali wrote in the essay entitled "The Conquest of the Irrational;"

> My whole ambition in painting is to manifest the images of concrete irrationality in terms of authoritative precision...images which for the moment can neither be explained nor reduced by logical systems or rational approaches.[11]

Similarly, quantum mechanics has incorporated indeterminacy as a fundamental principal in the order of nature. It is this dynamic imbalance that keeps the system going. Likewise, in his design process, Alvar Aalto seeks differences and discontinuities. He uses the expression "human error" instead of a unity of logic to explain his architectural strategy.[12] The architectural transformation of space should be flexible enough to evolve over time but specific enough to give a direction to future growth. In other words, it should permit a loose fit between content, container and context by leaving enough "error" or "play" to accommodate the participation of users. The objective of this studio was to explore and activate such a "play." The challenge lay in how to engender and interweave indeterminacy into the formulation of the high-rise.

Aan Ng

The Project: Program for this high-rise complex includes Sun-Time offices (700,000SF), an apartment tower (850,000SF), a hotel (650,000SF) and an entertainment center including restaurants, retail stores, cinemas, conference facilities and a gymnasium (total 135,000SF). Site: Downtown Chicago, north of the Chicago River between Michigan Avenue and State Street.

We have learned that at the deepest level these activities of science and art, so seemingly different, are aspects of an impulse universally definitive of our humanity: to find meaning in the flux of things, to structure coherence. Both depend upon speculation, play and invention. Both seek to express truths about the underlying patterns in phenomenal diversities, patterns that can only be revealed by creative human intervention. Science and art are both, in the first place, creative activities of the intuitive mind. And like art, science has always engendered myths: it is a way of imagining the world. Who can doubt that the twenty-first century will not discover new landscapes of its own, new places for the adventure of the mind?[13]

Mel Gooding
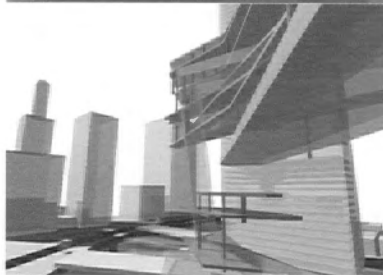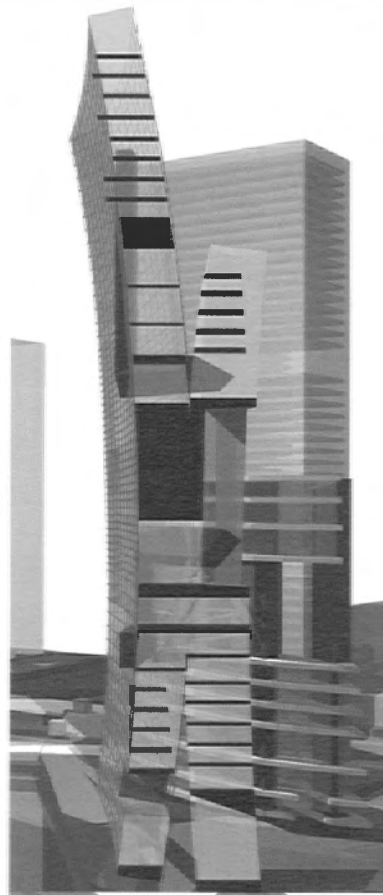
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Adam Clark & Dan Tyrer

David Connally
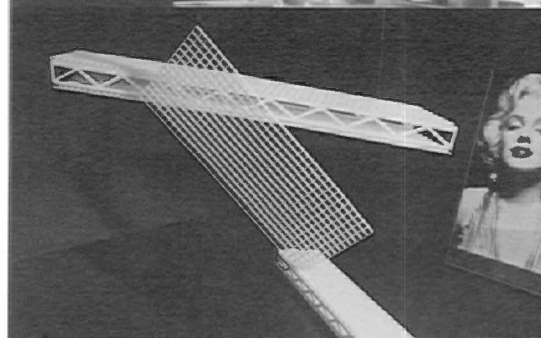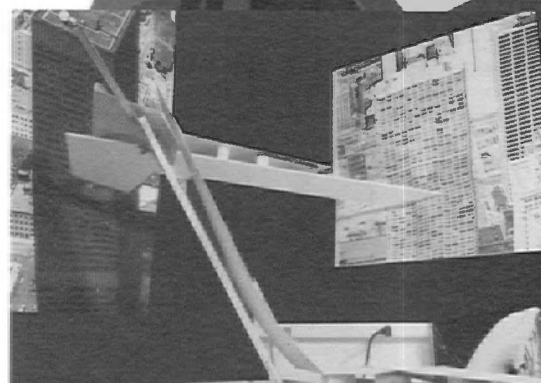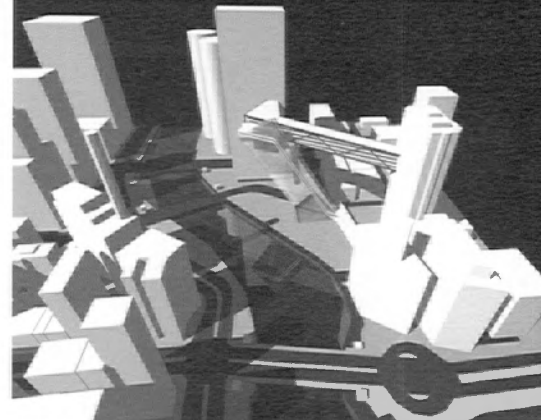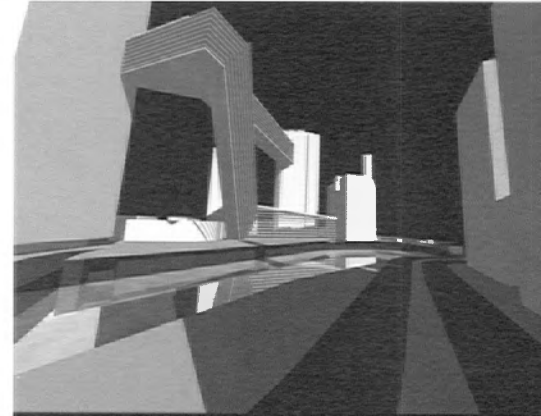
1. Michel Foucault, *Preface to Transgression*, (New York: Pantheon, 1984), pp. 33-4
2. Vittorio Magnago Lampugnani and Angeli Sachs, *Museums for a New Millennium*, (Munich: Prestel, 1999), pp. 5-13
3. A. Papadakis, et al., *Deconstruction Omnibus*, (London: Acadamy Editions, 1988), p. 72
4. Barbra Maria Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, (Boston: MIT Press, 1999), p. 25
5. John Hejduk, *Masque of Medusa*, (New York: Rizzoli, 1985), p. 67
6. Marcel Duchamp, *The Art of Making Art in the Age of Mechanical Reproduction*, (Amsterdam: Abrams, 1999), pp. 26-33
7. Paul Klee, *The Mind and Work of Paul Klee*, (Weimar: Bauhaus Publication, 1954), pp. 114-115
8. Robert Twombly, *Louis Sullivan: The Poetry of Architecture*, (New York: W.W. Norton & Co., 1999)
9. Paul Virilio, *The Overexposed City: Lost Dimension*, trans. D. Moshenberg, (New York: Semiotext[e], 1991), pp. 9-27
10. Michel Foucault, *Of Other Spaces: Utopias and Heterotopias*, Lotus, Vol. 48, No. 9, (June 1985), pp. 9-17
11. Salvador Dali, *The Conquest of the Irrational*, (London: Thames and Hudson, 1948), p. 435
12. Alvar Aalto, *The Human Error*, (Helsinki: Otava, 1999), p. 282
13. Mel Gooding, *Science*, (Redstone: Redstone Press, 1999), p. 3

S T R A I G H T   P A T H S

The history of architecture reflects continually changing ideas about perception, representation and sensorial experience. While certain phenomenal elements such as space, light and measure have been regarded by different cultures and historical periods to be the constitutive components of all architectural experience, the different ways these elements have been theorized demonstrate complex shifts in cultural values and ideology.

A recent example is provided by the many discussions that focus on ideas such as transparency, materiality and lightness in architecture. The sensorial characteristics that tend to be associated with these terms are frequently employed in order to lead discourse away from issues of representation and thereby limiting the discursive domains of architecture to a closed system of formal references. At the same time, ideas about transparency and lightness have also been used as a means of representing more abstract interpretations of political and cultural orderings, literature, economics and our cultural predilection for the disposable.

In such discussions, primacy tends to be given either to cognition or sensation. Subsequently, value is assigned according to a polarized distinction between thought and experience. But the dynamic between the way things appear to us physically and the way we conceptualize them intellectually tends to be far more complex and contradictory than represented by any simplistic opposition. In more recent critical trends, the complex psychological dimensions of perception, as described in the terms of subject/object relationships, have garnered increased interest.

In his book *Psychological Types*, Carl Jung writes,

> Type differentiation can be divided along the lines of the extrovert and the introvert. The earliest sign of extroversion in a child is his quick adaptation to the environment and the extraordinary attention he gives to objects and to the effect he has on them. Fear of objects is minimal; he lives and moves among them with confidence. He apprehension is quick but imprecise. He feels no barrier between himself and objects, and can therefore play with them freely. He likes to carry his enterprises to the extreme and exposes himself to risks. Everything unknown is alluring.

> To reverse the picture, one of the earliest signs of introversion in a child is a reflective, thoughtful manner, marked shyness and even a fear of unknown objects. Very early there appears a tendency to assert himself over familiar objects, and attempts are made to master them. Everything unknown is regarded with mistrust; outside influences are usually met with violent mistrust. The child wants his own way, and under no circumstances will he submit to an alien rule he cannot understand. When he asks questions, it is not from curiosity or a desire to create a sensation, but because he wants names, meanings, and explanations to give him subjective protection against the object.

> The introvert sees everything of value to him in the subject; the extrovert sees it in the object. This dependence on the object seems to the introvert a mark of the greatest inferiority, while to the extrovert the preoccupation with the subject seems nothing more than infantile autoeroticism.[1]

T O
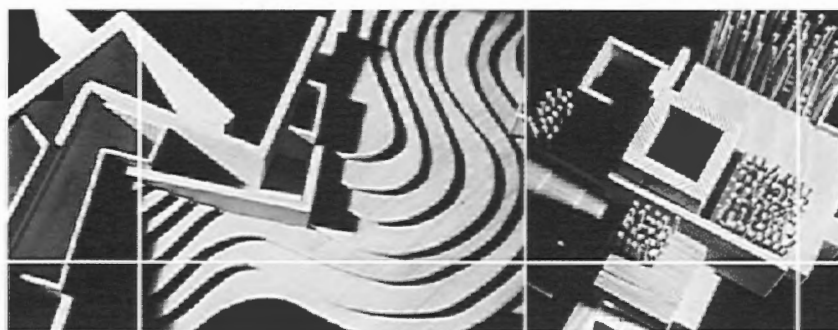
I R R E G U L A R   S P A C E S

Keith Mitnick

This description of the introvert and the extrovert poses an interesting structure for thinking about architecture both perceptually and theoretically. Ultimately, the perception of a phenomenon such as light or space is the consequence of our own orientation. For instance, in trying to perceive space, one becomes aware of certain formal dynamics that cause some volumes to have stronger spatial definition than others. Interspersed with the formal variables that affect spatial definition and perception are our cultural ideas about space. Thus, in order to develop our perception of space, or any other phenomenal element, it is necessary to study it both as an idea with historical permutations, as well as a perceptual phenomenon with discernable formal dynamics.

According to Jung's structure of introversion and extroversion, such concepts as space, light, transparency, scale and measure may be regarded as ideas with which we reflect upon the world and as instruments with which to manipulate it. Regardless of the bias inherent in either orientation, the dynamics by which such phenomena are revealed are the result of interesting and elusive oscillations between subjects and objects. The following exploration will investigate the introvert/extrovert diagram in order to chart the dynamics of contemplation and production relative to architectural space.

Introverted Space
Thoughts and Diagrams for the Naming of Space

The fundamental dichotomy from which all spatial conditions are derived is the relationship of the solid mass of the earth to the unbounded space of the sky.

The means of constructing space are:
1. The creation of a cavity within a larger mass through the subtraction of material.
2. The enclosure of a volume through the organization of materials upon a solid mass.
3. The displacement of space by an object in an otherwise undefined space.

Constructed space is distinct from the unlimited space of the sky. The unbounded space of the sky extends infinitely above the ground and is perceived in relation to the surface of the earth at the horizon line. It is in this relationship that difference may be perceived as the coming together of two mutually exclusive entities into a single phenomenon. One side is revealed by the other along a common edge. Architectural space, however, is not oriented towards the surface of the earth but in relation to the human body.

The scale of constructed space is removed from the more colossal scale of unlimited space adjacent to the mass of the earth. It is oriented along the surface of the ground to the space around the human body. Through the body and the intellect, humans form a substratum, or cavity, within the larger spatial field. This allows us to comprehend and manipulate local spatial conditions in an intentional way. While the existence of the substratum is predicated upon its independent, yet symbiotic, relationship to unlimited space, the realm of architectural space is not configured against the surface of the earth. It is between the surfaces of artificially created walls and structures.
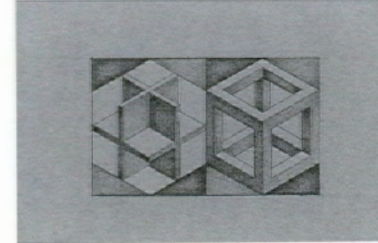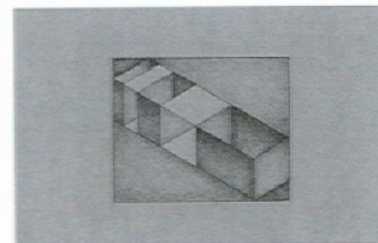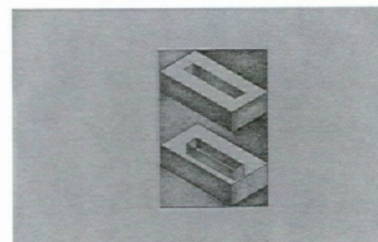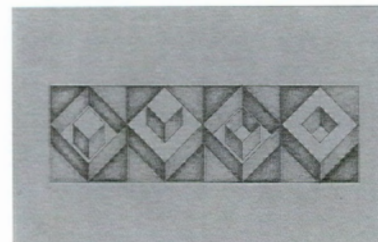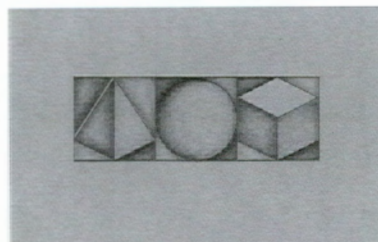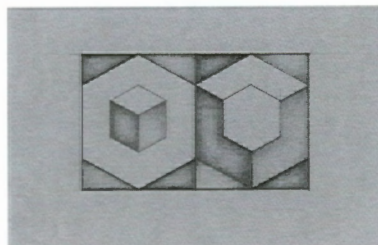
The contrast between a solid wall and the space it defines is similar to, yet different from, the contrast between the sky and the unlimited ground. The sky and ground have no edges or boundaries with which to give measure and shape to their respective volumes. Unlimited space only becomes apparent at its point of intersection with the unbounded ground. Because our perspective is located upon the earth, we cannot visualize the form of the earth in its entirety. Only its surface formations of concavity and convexity can be seen.

Through the bounding of finite volumes of space with building materials, varying degrees of architecturally defined space are formed. Architecture is the means by which we adapt the essential dichotomy of solid and void to our needs. By limiting and localizing the scales of this dichotomy, we make evident the dynamics of a scaleless phenomenon otherwise inaccessible to our perception.

Architecture is the formal resultant of the interdependence between a specific material body and spatial volume. Whereas a hole in the ground is comprised of a limited amount of interior volume, the surrounding mass is undefined and therefore formless. In a similar way, a post standing in a field displaces a finite volume while the surrounding space remains mostly unformed. Architectural space is generally made comprehensible by a solid/void dynamic whereby neither the solid nor the void achieves figural dominance.

The relationship of constructed space to unlimited space can be illustrated as a small house sitting on a field. Figural dominance may be accorded to either the constructed interior volume of the house or the unlimited space that envelops it. In this dynamic, one must be tangible and the other void. The volume that is enclosed by the walls and the roof of the house is a cavity within the vast and uniform field of unlimited space is understood as either an interruption or a subtraction. Parallel to this reading is the sense that constructed space is surrounded by a vast, formless emptiness.

Despite the optical dynamics of figure/ground relationships, the distinction between constructed space and unlimited space does not need to be mutually exclusive. In a spatial conception that allows the sense of infinite space to be included relative to finite constructed space, the two can be comprehended in relationship to one another rather than in opposition. Architectonic space can be understood as an excerpted fragment of unlimited space made intelligible to our frame of reference by taking on a form resonant with the scale of the human body and intellect.

Architecture is the bridge that fuses unlimited space with constructed space. It is a means of ordering the boundless space of the sky and of reflecting the principles of perceptual phenomena in built form. While manipulations at the level of constructed space may serve to accentuate or distort the contrast between constructed space and unlimited space (through nebulous boundary conditions, thresholds, apertures, etc.) the relationship between these essential spatial types remains constant and pervasive.
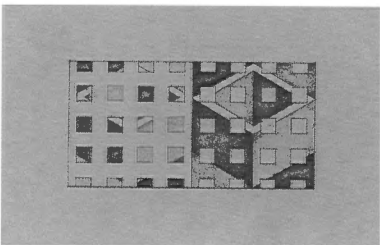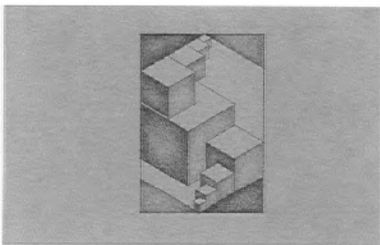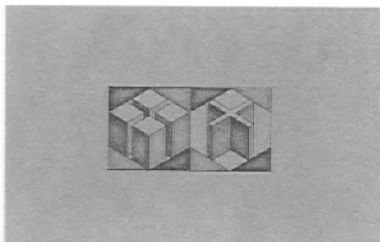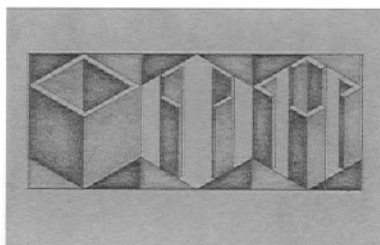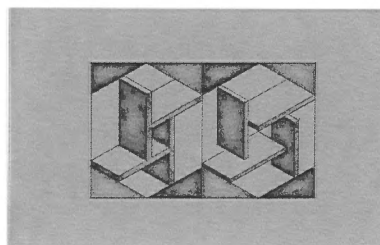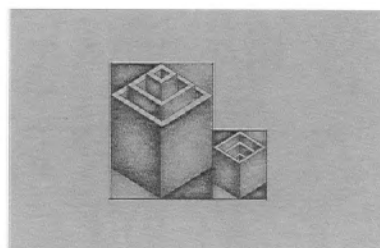
Extroverted Space
Three Propositions for the Manipulation of Space

Spatial principles and attributes may be reflected upon and revealed as thoughts and diagrams independent of any formal application. Thus the naming of spatial typologies and the description of the formal mechanics by which space becomes palpable in many ways coincides with Jung's description of the introvert's mode of orientation toward the physical world.

In addition to the introverted manner of description is the examination of spatial dynamics through the manipulation of discernable principles. While the following formal propositions are more arbitrary than the diagrams, they represent a continuation of the line of reasoning demonstrated in introverted space. The difference is that introverted space is aimed at a distillation of the spatial vocabulary while extroverted space is organized around the production of artifacts that, while less restricted in formal language than the diagrams, seek to express different ideas about the dynamics of constructed space.

In this series of conceptual drawings and models, diagrammatic ideas about the forming of space are applied to a distinct range of formal operations. Using the geometry of right angles, curves and acute angles, walls are oriented toward one another with the aim of capturing, displacing and framing space in such a way that the influence of shape and contour on spatial definition is amplified. Additional interest is taken in the potential of two-dimensional voids to suggest patterns of extraction and transparency.

Several specific concepts directed this series of work toward a more creative assembly of ideas than intended with the diagrams. They include the juxtaposition of distinct spatial typologies, and approach to the conception of a building more as a spatial matrix than an object and the desire to give figural clarity to different scales of interpenetrating solids and voids. Additionally, thoughts are explored about such formal distinctions as the tectonic and stereotomic, landscape and architecture and inside and outside as they pertain to spatial experience.

Conclusion
The history of architecture is animated by continually changing positions about the relationship between sensation and cognition. To the extent that architecture can be said to symbolize or promote ontological experience, it also represents a history of varying interpretations of the dynamics of perception motivated by philosophical and ideological imperatives. While the domains of architecture are irrefutably constructed around such phenomenal elements as space, reflection, scale and measure, the stability of these terms as signifiers of consistent categories of experience is elusive and transitory.
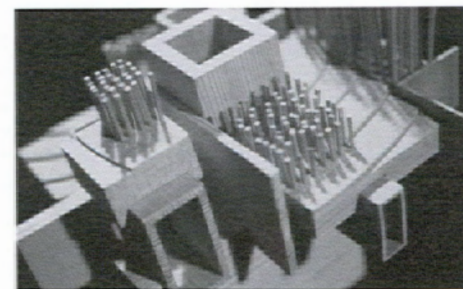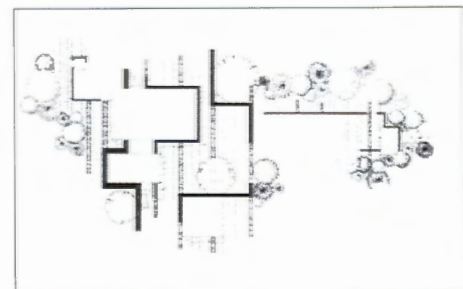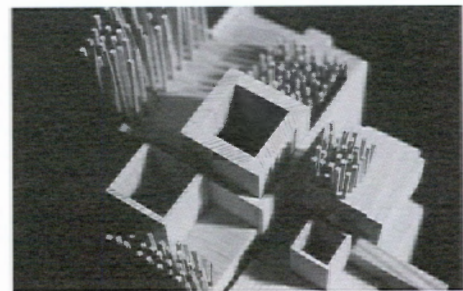
1. Carl Jung, *Psychological Types*, (Princeton: Princeton University Press, 1971), pp. 516-517
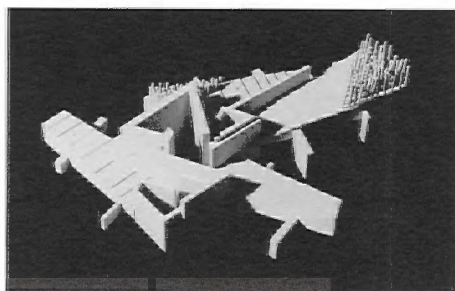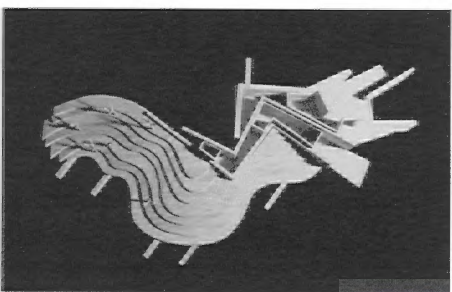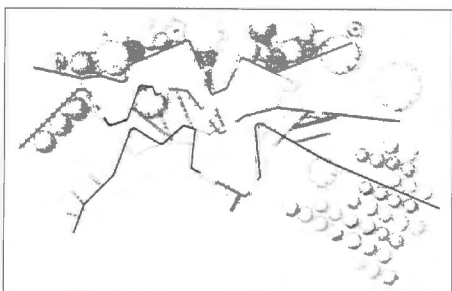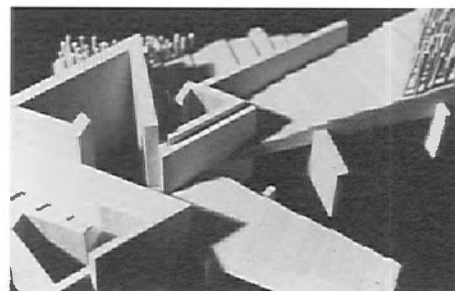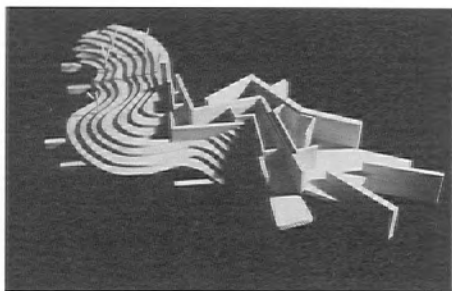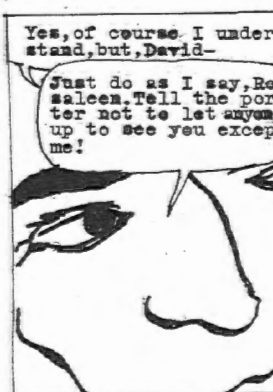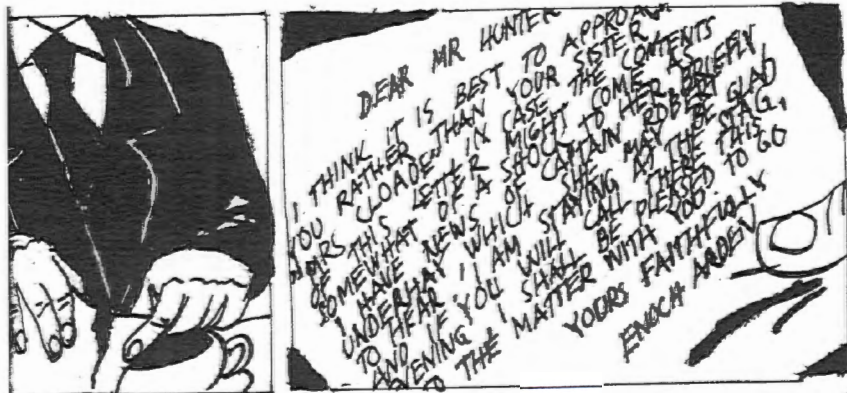
Comic Strip
Mikko Heikkinen

START DRAWING: A Discussion with Mikko Heikkinen

What attracted you to architecture?

Before I began studying architecture, I knew hardly anything about it but had been interested in drawing and in comics. When you make comics you have to choose the viewpoints, find the particular landscape, building, background and so on. You have to be able to dramatize what's happening in a story and translate it into drawings. For me that has a lot to do with architecture.

When I studied architecture, Mies van der Rohe was an inspiration, but to re-site Mies into Finland with its severe climate is difficult. However, we tried but it caused severe problems.

I've seen Alvar Aalto twice. The first time, he was showing the Otaneimi campus to some guests. After that, I attended one of his lectures. He was like a great-grandfather for us. He was a historic figure who influenced us indirectly. We didn't have to copy his details and approach or oppose them. Saarinen was very important but his influence was also indirect. Eero was often in the shade of Mies van der Rohe.

When you were designing the Embassy of Finland in Washington, DC, did you try to express the Finnish nature of architecture?

I don't think it's possible to decide to be modern or non-modern, Finnish or Japanese in one's architecture. Of course, where you have been living, where you have been educated and your roots are influential. I think what is actually Finnish might be a certain respect for the site and an awareness of nature. When we were designing the Embassy, the site was the context. We wanted to be in contact with its unique nature: the landscape, a park nearby and the trees.

When I think of Finland, I think of wood as the traditional building material. What role do materials play in your work?

Every project is unique with its own programmatic features, site and landscape. Structure and fire regulations often have a lot to do with this. A good example of how materials could be used in a building is the Heureka, a science museum. That was the first competition we won. We wanted to experiment with different materials depending on the specific spatial and structural qualities of the space because the museum itself is a conglomerate of different spaces. These spaces have their own characteristics that suggest structural orders and materials. For instance, there's the spherical super movie theater that is made of peeled orange-like concrete elements. We tried to find the most suitable structure for each space and the most suitable material for each structure. Also, because this building was a science museum we tried to explain the different conditions in buildings so visitors could experience them.
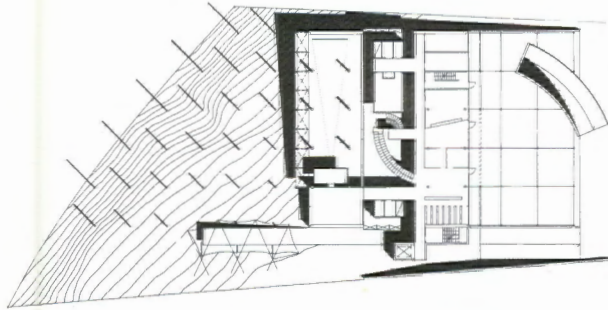
Finnish Embassy, Washington DC
Entrance Level Plan
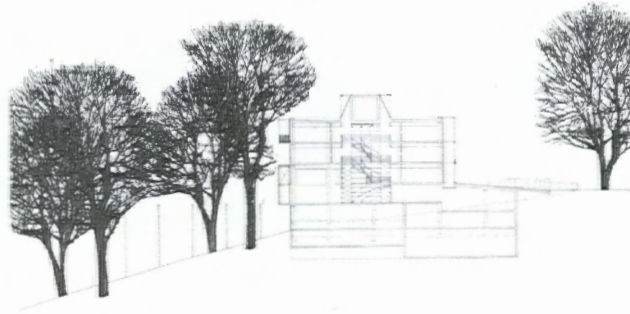
Section

How do you use light?

When you are building in Nordic countries, you can't exaggerate the importance of light. The light changes dramatically depending on the time of the year. However, for us, light does not deal with the same kinds of issues as it did for Aalto. Aalto sculpted with light and created quite dramatic settings in his architecture. In our work, light is not objectified.

For us, it has to do with the overall strategy of how the building relates to its surroundings. Its not a single gesture. In some of our projects, through the use of different materials, light creates a texture.

How would you characterize your process of developing ideas?

Well, when we are working on a project, the diagram happens but it is not necessarily a first sketch. We like to concentrate the basic essence of a problem into a simple form. All the unnecessary elements are reduced almost to a kind of heraldic icon and we try to focus on the essence of the problem.

The diagram is a very useful method of concentrating your thoughts. With a more complex building, you can easily get lost in all the details, codes and programatic requirements. The diagram helps to clarify the core of the project.

In Europe the competition is a primary vehicle for architects to get work. What do you think about competitions and their opportunity for providing work to architects?

I think it's an excellent way for young architects to start working and get a commission — it's a pity that you don't have a similar system! The competition system is also a part of our education. When young architects are working in offices they can also enter competitions. Every entry, even the lowest class, is criticized. If it's true that the quality and standard of architecture in Scandinavia is higher than other places, perhaps these competitions are one of the reasons.

Without this competition system, my partner, Markku Komonen and I would certainly not have a practice — nobody knew us until we won the first prize in the science museum competition. While working on a competition you have a short time to develop ideas in isolation. There is the possibility to develop a concept. Once you have the commission, you start developing those ideas with the client.

I prefer the competition process. You are given the problem and then have to produce your solution. After that, you begin discussions with the client. Normally when there isn't a competition and an architect receives a commission, that architect is expected to show something quickly and is also loaded with the pragmatics of the project early on. Markku Komonen and I do the work together on competitions. We have a small practice with ten people altogether and we have studio critiques for even the smallest projects.

How has teaching affected your architecture?

When you are teaching you just have to stop and think about what you are doing and why. I think it's necessary to bring out the essentials in your approach. Teaching is also a two-way process. When you are teaching a studio with eight to fifteen students and they are working on the same project and problem, it's very enlightening to really see how that same problem could be solved in different ways. This is not possible if you are just doing work by yourself. Being acquainted with a whole variety of approaches and trying to understand why people do certain things can be very enlightening. Teaching is a two-way street.

What advice would you give to students?

Students sometimes stay too long in abstraction. Perhaps they are afraid of really beginning to do something. But when you are flying try to put one foot on the dirt at the same time. Start drawing and making things while reading Merleau-Ponty.

Mikko Heikkinen was interviewed by Yumiko Aoki, Tara Earnest and Tonino Vicari on October 20, 2000.

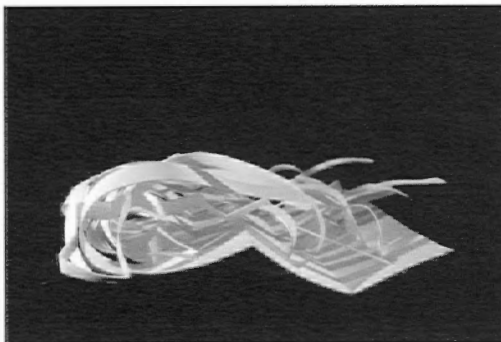All images courtesy of Heikkinen+Komonen

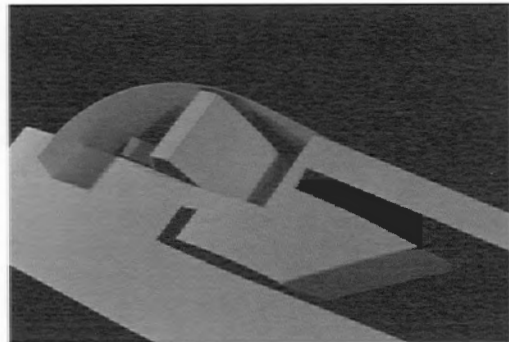# D E T R O I T   P A R A L L E L

Lars Gräbner

The Studio:

Amy Apple
Rick Broene
Sandra Choy
Brie Daniel
Aram Garbooshian
Erik Jostock
Anna Lauri
Simeon Maleh
Chris May
Dave Romano
Kevin Short
Angela Steinke
Kelly Taylor
Darren Wilson

# Z E R O - G R O U N D

Kevin Short & Simeon Maleh

Angela Steinke & Brie Daniel

Unfolding the Chora

We know that the current urban condition is ruled to a large extent by political ideologies and economic constraints. Architecture, too, is inevitably part of our cultural expression. Architects, in general, follow those ideologies.

The aim of this housing studio was to study the personal needs of the individual in the context of those dominant ideologies. The personal encounter with the larger context of the urban network of cultural manifestations and ideologies results in the projection for inhabitable space beyond the preconceived. One of our starting points for identifying inhabitable space was the expression of the relationship between the body and the subjective ground. The understanding of every individual having a personal relationship to its context and playing a significant role on his own stage, the private "chora," provoked to render this space visible.

The first exercise of revealing the personal ground, the self versus the other, led to an unfolding model of the personal "chora:" the individual stage of life as a spatial configuration, "open" to itself. A stage, "effectively open to a virtually unlimited range of possible readings, each of which causes the work to acquire new vitality in terms of... perspective, or personal performance."[1]
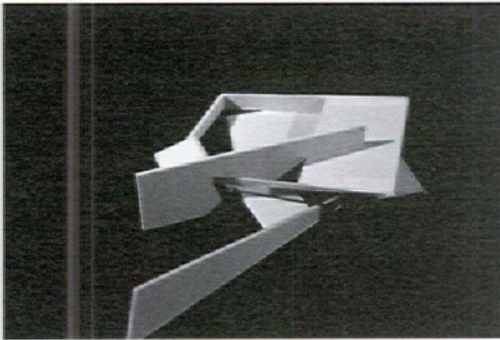
Aram Garbooshian & Erik Jostock
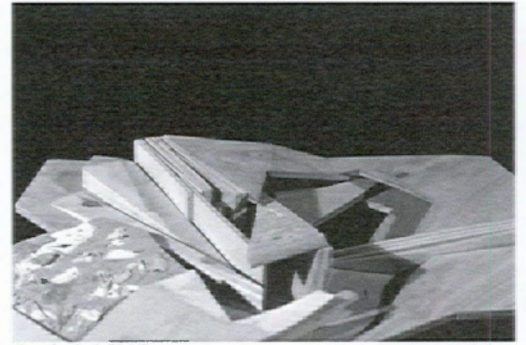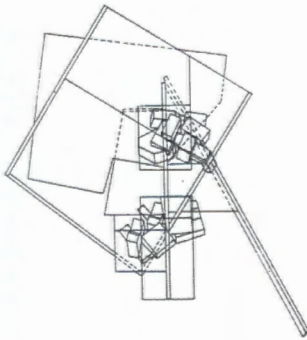
Amy Apple & Rick Broene

After positioning this entity into a created context of other individuals, its adjacencies, thresholds and borders were examined and consolidated. This new habitational field was then analyzed according to its programmatic possibilities and its dynamic equilibrium in the spatial hierarchies.

This study provokes new ways of living in the American city. These were elaborated in abstract models and programmatic drawings as a preparation for a close encounter with the city center of Detroit and the Brush Park area.

Aram Garbooshian & Erik Jostock
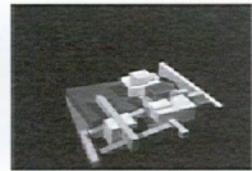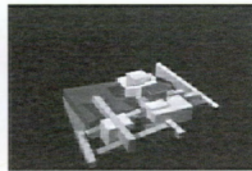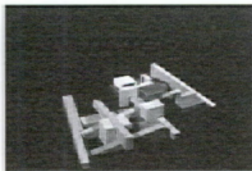
The Urban Ground

The term Detroit Parallel Zero-Ground refers to the understanding of the existing context as a "Zero-Ground" that bears the potential to receive new vitality. In painting, the term Zero-Ground virtually merges a current color difference to equal value, yet not to a neutral base for new applications. Respect for the existing offers a high potential for the new, by allowing a parallel view without preconception. One could refer to this condition as a future ground in movement, "open to a continuous generation of internal relations which the addressee must uncover and select in his act of perceiving the totality of incoming stimuli."[2]

The contemporary French philosopher Jean Baudrillard adopts the theme of Borges' story, *Travels of Praiseworthy Men,* to the position of today's city. The analysis of Detroit deals exactly with this understanding of the shift of perception.
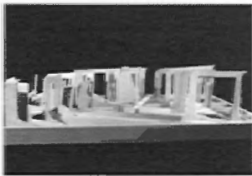
Kevin Short & Simeon Maleh
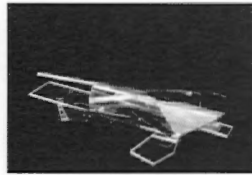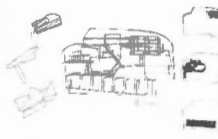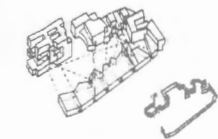
Kelly Taylor & Darren Wilson   Angela Steinke & Brie Daniel

. . . In that Empire, the Craft of Cartography attained such Perfection that the Map of a Single Province covered the Space of an Entire City and the Map of the Empire itself an entire Province. In the course of Time, these extensive Maps were found somehow wanting, and so the College of Cartographers evolved a Map of the Empire that was of the same Scale as the Empire and that coincided with it Point for Point. Less attentive to the Study of Cartography, succeeding Generations came to judge a map of such Magnitude cumbersome, and, not without Irreverence, they abandoned it to the Rigours of Sun and Rain. In the western Deserts, tattered Fragments of the Map are still to be found, Sheltering an occasional Beast or Beggar; in the whole Nation, no other Relic is left of the Discipline of Geography.[3]
(J. L. Borges)

The territory no longer precedes the map, nor survives it. Henceforth, it is the map that precedes the territory ... it is the map that engenders the territory and if we were to revive the fable today, it would be the territory whose shreds are slowly rotting across the map. It is the real, and not the map, whose vestiges subsist here and there, in the deserts which are no longer those of the Empire, but our own.[4]
(Jean Baudrillard)

Today, Detroit's city center is marked by a fascinating and challenging state of absence, being the seam between the map and its vanishing territory: the deserted grid of a once residential neighborhood. Some attempts have been made to establish forms of order and stability by new housing developments in this area, but with little effort to connect them to their contemporary ground. Instead, some areas resemble suburban patterns; others are mere historicizing replicas of the vivid and wealthy Nineteenth century industrial city. Both are detached from the actual cultural and social situation of today's constant change and progressively ignore current urban and environmental issues.

The project explored in eleven weeks extracted the invisible layers, long deteriorated or not yet experienced, to establish a **"parallel zero-ground"** for a new dynamic redefinition of urbanity, in an increasing acceleration of economies and cultures. The evolving fertile ground will eventually resemble the contemporary urban life, being on the threshold of Detroit's history and its cultural and social life to come.

Seven maps were extracted with a careful examination and transformation in order to provoke a set of operations and strategies that lead to one whole **"parallel zero-ground"** where new development is possible.

The site is directly north of Detroit's city center, which is marked on the south by the famous Fox Theater and the new Tiger Baseball Stadium. Here, the examination departed. The development of patterns and strategies of mixed use and live/work units were explored through an investigation based on programmatic inner city housing.

The 7 maps

The aim of the studio was synthesizing, rather than merely analyzing and reacting. The found context succeeded by its own map could no longer count as a valid point of departure. A strategy of the production of new maps was proposed based on a series of subjective qualities, specific for each perspective.

Through these tools, seven maps were produced, each specific in its message, but different from traditional modernist readings of the separation of program and function.

1. Simulacrum of volume:

Luminous swiftness. **Verticals, elevators, curves, Spinoza.**
- Narcissistic tactility. - Stiff and hysterical instantaneity of a voyeur.

2. Disintegration and destruction of illusory volume:

Height, immobility, "enveloped insinuation." - Edible sparks.
- Chemical silhouette **brush.**

3. Contours accentuating volume – plaster, cotton:

Affective contours. - Mineral or metallic sparks.
projector of light, of ambiance. Freud.

Rick Broene & Chris May   Angela Steinke   Angela Steinke
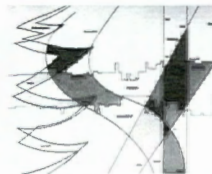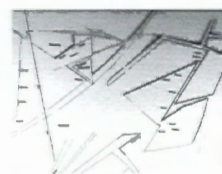
4. Obese stability:

Visceral contours. **Diagonals, staircase banisters, ridges, Uccello.**
- Phenomenal silhouette. - Fine biological terror.

5. Extraflat and extra-thin instability:

Speed, instantaneity, "blazing manifestation." - Exhibitionistic sagging. - Explosive dissection. **Silhouette of anxiety that is opaque, voluminous, spongy.**

6. "Rays" shredding the contours – asbestos, silk:

Metaphysical perimeter. - Exhibitionistic erection. **sponge.** Duchamp.

7. Immobility or suspect mobility:

Physical perimeter. **receiver of light, of ambiance.** - Architectural anxiety. **Anxiety that is luminous, ruffled, iridescent.**

The Parallel Territory

Through a symbiosis with the "shreds of the existing territory" a new map has been created. Based on different patterns of habitation, a variety of neighborhoods were created around a wedge of green, alternating in densities and interfering with the existing, identifying places for future development. The parallel territory will be inseperable from the Zero-Ground, not interchangable and therefore will provoke unconventional solutions for inhabitable space fostering adequate sensibilities for our culture and environment.
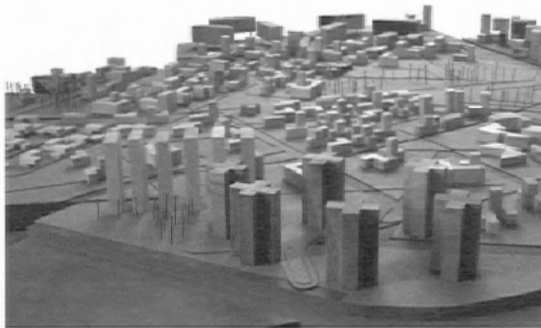
Group Model

Group Site Plan

1. Umberto Eco, *The Open Work*, (Cambridge: Harvard University Press, 1989), p. 21
2. Ibid., p. 21
3. Jorge Louis Borges, *Travels of Praiseworthy Men* (1658)
4. Mark Poster ed., *Jean Baudrillard: Selected Writings*, (Stanford: Stanford Univ. Press, 1988), p. 166

Photographs courtesy of Lars Gräbner & Garrett Harabedian
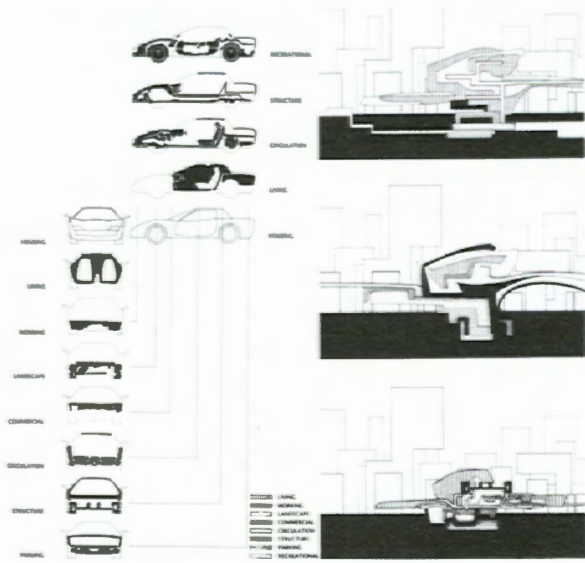
Sandra Choy
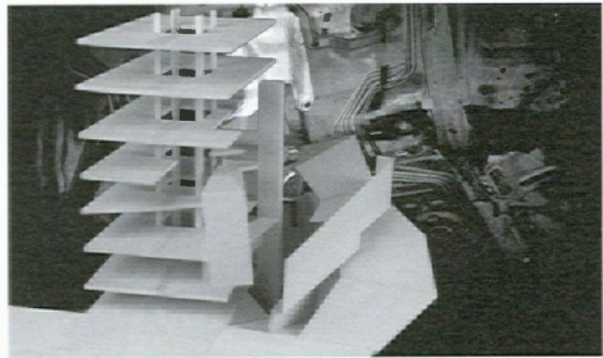
Sandra Choy

The understanding of comparable qualities of the city's interstitial spaces with those of a car led to a study of how those parameters might be translated into programmed architectural space.
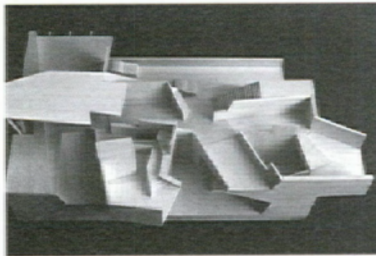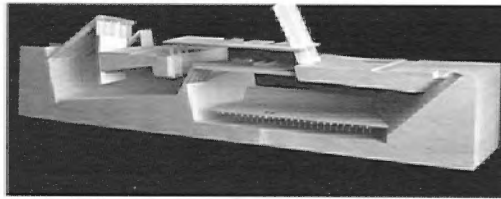
Rick Broene

Inhabitable surfaces: housing taking advantage of the threshold between the urban park and the Fisher Freeway.
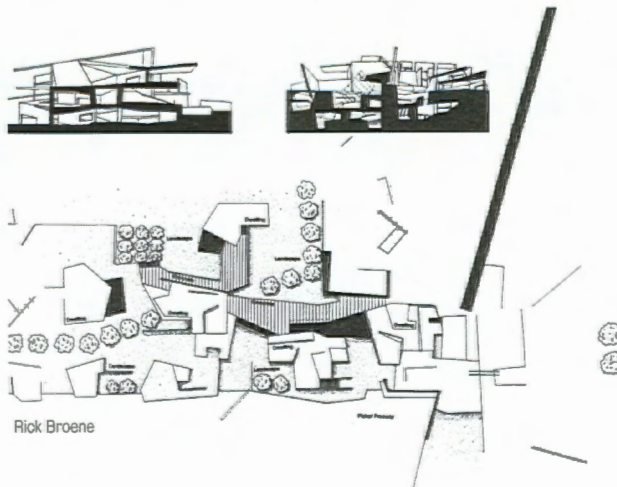
Rick Broene

Simeon Maleh

1. Section cuts through site: concentrated density, multiple layers.
2. How can growth of commerce and the arts be uninhibited while green space is introduced into the area?
3. Fold and lift new landscape so that space is created above, below and in-between the green.
4. How will form be dictated?
5. Use sections of buildings that are tagged to be destroyed by our proposal. Let those forms dictate program.
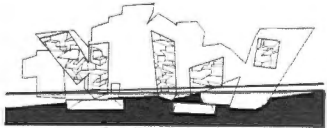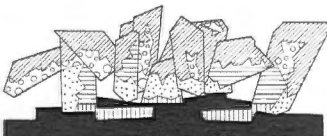

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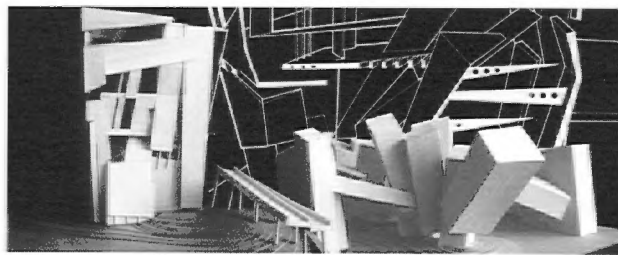Simeon Maleh

5
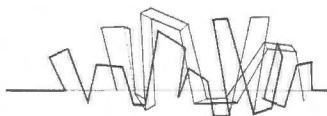
Breaking Ground Plane
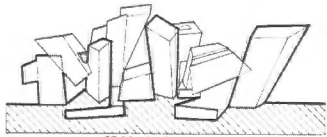
3D Massing Section

Ground Plane Section

Commercial   Leisure   Housing   Retail   Parking

Program Section

Angela Steinke

Angela Steinke

Folding the horizon: new housing and hybrid programs in the downtown highrise center.

Cara Soh

HYBRID COURTHOUSE TYPOLOGY: Engaging The Public Sphere

The disappearing center of the city fabric signifies a change in the awareness of our surroundings. These surroundings are slowly morphing in an environment affected by the importance placed upon the media, consumerism and the multi-functional use of space. Architecture no longer defines the boundaries of what is public and private. Physical boundaries no longer define traditional places of public engagement due to the increased use of media coverage and internet access. Society is becoming dependent upon virtual and impersonal means of communication that are affecting human interaction at an increasing rate.

Traditionally, Americans governed themselves through physical contact within a courthouse at the city center. Within the courthouse, lies a model of social conduct and relationships. It is a symbol that reminds citizens of who they are, where they are and how they relate to each other. At the courthouse, people exist within a defined public structure. Laws are enacted, crime is punished and public discourse is activated.

Re-examination of the courthouse typology's impact on the historic public sphere should be understood and related to the workings of the modern public sphere. Along with the modern public, a modern courthouse typology emerges that embraces the blurring of public and private boundaries. To be able to design a modern hybridized courthouse is to engage the public in defining new possibilities for public space at the heart of a now virtual communication based society.

I. THE TOWN CENTER
The town center once represented a logical and formal structural center that governed the way ideas and rules were established. Through the organization of the town plan, citizens were able to easily reconstruct the unwritten laws of public life directly from the physical environment. J.B. Jackson depicts Optimo City in "The Almost Perfect Town"[1] as an example of a historical and traditional plan based on the courthouse square and its grid system of main streets and avenues. Within Optimo City, there is a logic to how public life is structured. Districts of the town are defined by their relationship to the center of the Courthouse Square.

> All these people are here in the center of Optimo for many reasons - for sociability first of all, for news, for the spending and making of money, the relaxation...For it's around the Square that the oldest and most essential urban(or county) services are established. Here are the firms under local control and ownership, those devoted almost exclusively to the interests of the surrounding countryside.[2]

The courthouse requires values of tradition, respectability and formal manner. The individual is encouraged to take the time to participate in public discourse and events. "Unlike many modern replacements, the older courthouse cannot be mistaken for a supermarket, elementary school or drive-in bank. It is a symbol of community civic pride."[3] Within Optimo City's plan, opinions and support are directed to its physical center. If the architecture of the courthouse can promote civic responsibility, proper civic conduct and influence the design of the surrounding architecture, then the discourse of public events should also reflect the same sense of public interaction. The physical confrontation of architecture and people in a public setting reflects and influences the direction of civic discourse and ideas. These ideas become public knowledge to the individual in the public space.

II. PUBLIC-NESS
The modern courthouse is no longer the physical center of the city and the general public no longer convenes there unless required to. Instead, the modern courthouse does not function alone and accommodates new functions that once existed elsewhere. With the increased use of modern technologies, it may be possible to hybridize this typology without sacrificing its symbolic importance. A re-examination of public and private spaces within the courthouse model involves a study on the interaction and separation of space.

> The public is a sphere of broad and largely unplanned encounter. No individual is sovereign in this sphere, but each, on entering it, renounces the right to dictate the terms upon which he communes and conflicts with others. His projects are subject, not to the discipline of domestic affection, but to the vacillating opposition of adversaries and fools...If a person is to advance in the public sphere it is either in opposition to others, or in agreement with them. The purpose of civil government is to ensure that agreement is the norm.[4]

"Public-ness," however, is a sphere that relies heavily on the collective consciousness of the public. A former sense of "public-ness" found through human encounters and physical contact is outweighed by modern technology and mass communication. The individual can only rely on his or her sense of what public means, which is often a memory. Therefore, "public-ness" is no longer universally understood.

Civic life and civic duties imply an abstract agreement that dictates how citizens conduct themselves within the public sphere. Individuals within private spheres are able to enact laws based on personal preferences and morals while structure within the public sphere is an agreement founded upon a multiplicity of heard and unheard voices. As a democracy, the American public relishes the fact that "public-ness" is defined by the voice of the people. But when these voices take on a form such as print, radio waves and television, the solidity of their arguments can easily become impersonal.

The tangibility of "public-ness" decreases with increasing virtuality. Even if communication through technology makes political and social ideas more accessible to the general public, little value is placed on a barrage of anonymous voices afforded by the accessibility of the internet. No longer able to grasp the representation of voices, who becomes heard and who does not? Hearing becomes selective and the public voice is no longer a collective endeavor when discourse does not occur within a physical environment.

> The individual retreats into that lonely apartment in the tower block which, being surrounded by no public world with which to contrast its inner isolation, cannot achieve the true security of private life. The private and the public are alike objective forms of moral order, but in this "decontaminated" world there can be no objective order. All is subjectivity, the isolated and unjustified "I want," built upon itself in a thousand repetitions.[5]

The language of our physical space no longer influences the language of ideas and the contamination of these ideas becomes ambiguous within private life.

III. MODERN INFLUENCE

Blurring the boundaries separating the public from the private affects the organization and structure of thought on public issues. It is epitomized by mass communications' increasing reach into the domestic sphere. Televised court cases replace the physical court room. In private, the individual receives this information, but is unable to respond to the general public. A lack of public discourse results in an unstable collective opinion.

The modern courthouse, therefore, is viewed as an institution that upholds public law but does not include the public in terms of active participation and interrupts a running dialogue. With the increasing rate at which technology aids communication, the dialogue of ideas becomes disjointed. This disjunction develops with the use of fax machines, memos and paperwork, and deprivation of public interaction disrupts continuity of thought. If there is no need to participate within the public space, the idea of public thought dematerializes. How does society engage physical presence in the public sphere? At the same time, how can the virtuality of public discourse present itself in a physical form?

The courthouse as an institution is still intact ideologically but its physical presence remains a shell of the historic symbol. The bulk of process, argument, deliberation and consensus is dispersed through an electronic space.

> An isolated individual, cut loose from the sociality of urban life, separated from the world by the pixilated screen. The utopianist discourse offers a fantasy of escape through virtual cities that, in an Althusserian sense, offer to let people live an imaginary relationship to their real conditions.[5]

The virtual realm creates "placeless" environments that dislocate the boundaries of public and private realms. In fact, public events contaminate the private arena, but not vice versa. "Public-ness" occurs through the media and radiates from the public place throughout the private spheres of our lives. As the city becomes more globalized, the need for a center disappears. The center may not be necessary for the distribution of social and political issues, but it is necessary to engage the public. Public interaction must occur within a physical place.

> A community is bound by place, which always includes complex social and environmental necessities. It is not something you can easily join. You can't subscribe to a community as you can a discussion group on the net. It must be lived.[7]

The virtual community erodes the sense of physical place but also increases the accessibility of communication. Even if physical presence takes the form of wide screen monitors and home theater systems, the idea is abstracted from senses and not physical form. The physical evokes memory of space and culture. Why not create and infuse a new memory into the public sphere? The courthouse/town center should remain a symbol while its civic importance is carried on in the development of a modern hybrid that restructures the program of a courthouse/public forum.

IV. THE COURTHOUSE

> Courthouses offer an extraordinary opportunity for architects because they provide possibilities architects love to deal with: spaces that are both ennobling and soothing. Courthouses - like churches, synagogues, and hospitals - test the full measure of architects' talents to deal with people in states of extreme vulnerability. They require the making of spaces that are symbolic, that stretch back through time and attempt - with a sense of stability and durability - to reassure troubled minds and to raise the ideal of a world that aspires to a higher order of meaning and beauty.[8]

At the same time, issues such as technology, expanding functions and the current state of the judicial system, especially its meaning to the public, are raised in terms of redesigning the courthouse typology. Expansion of programs deemed appropriate by city governments such as police stations, post offices and city halls are limited. These programmatic expansions remain within the realm of the "public" institution. At the local level, the public has access to district courts responsible for rulings in criminal, social and civil disputes. Here, the public engages in matters that concern the public itself.

Technically, public participation within the judicial process is limited to jury duty and restricted tours. For valid reasons concerning the safety and privacy of judicial proceedings, restrictions are imposed. Understandably, security becomes a vital issue not only for the judiciary staff but also for the general public. Accessibility to the judiciary staff is also important for the judicial system to work efficiently. Often, this causes a distinct separation of the private sphere from the general public and professional public sphere. It is in the courtroom where the two spheres overlap.

The complexities of the required courthouse program prohibit contamination of public space within the judiciary realm. If the typology and organization of public space can be juxtaposed within a modern courthouse hybrid, how is it possible to determine public and private spheres? At the heart of public action lies the influence of dialogue that occurs within an enclosed environment. Merging the public and private spheres of the individual with the public and private spheres of the courthouse creates a larger sphere of public discourse.

V. THE HYBRID COURTHOUSE

The development of the courthouse hybrid occurs by engaging individuals in the public realm. The public realm may not be able to penetrate through the physical boundaries of the judicial realm but it may be able to incur discourse within the hybrid sphere. Here, individuals are no longer isolated within their homes. They are lured into an environment that promotes discourse, opinions, agreements, conflict and advancement.

Attempts to involve the public in contemporary courthouse design include cafes, day care centers and exhibition space that remain secondary to the courthouse itself. If the amount of public engagement increases, would public inclusion promote greater participation? Design of the hybrid does not stem from the physical courthouse but from increased public interaction within the building.

The role of virtual technology is the means by which the physical boundaries between the public and the judicial areas can be overcome. Media coverage informs and educates the public not only in their own homes but also provides otherwise inaccessible functions to the hybrid. Information provided within the hybrid opens up the private functions of the courtroom and can be accessed from the public spaces.

If public engagement through a hybridization of the courthouse typology has the capability of engaging "public-ness" within a public sphere, then communication within an environment is facilitated not only by the hybrid courthouse but is also formed by public discourse.

While engaging the public sphere through hybridizing the courthouse typology, the issues of "public-ness," a courthouse's nostalgic importance as the town center and modern influences on the public leads toward a discussion about why the transformation of this typology is warranted. Acknowledging the relationships between public voice within private life and the individual within public space calls for a transformation of the courthouse typology by accepting virtuality in order to expand the sphere of public discourse. If abstraction of public issues can be received in the private domestic sphere, why can it not also be accessed within the public sphere? In doing so, an individual's opinion can become collective through the process of public deliberation and discourse. The collective physical presence of the public validates the process of a hybrid courthouse that engages the public sphere.

Bibliography

Anderson, Benedict. *Imagined Communities: Reflections On the Origins and Spread of Nationalism.* New York: Verso, 1983.

Beniger, James R. "Mass Media and Public Opinion: Emergence of an Institution," *Change in Societal Institutions.* New York: Plenum Press, 1990.

Committee on Environment and Public Works. *Investigation of the Federal Courthouse Construction Program: Majority Staff Report.* Washington: U.S. G.P.O., 1994.

Conzen, Michael. *The Making of the American Landscape.* New York: Unwin Hyman, 1990.

Crang, Mike. "Public Space, Urban Space and Electronic Space: Would the Real City Please Stand Up?" *Urban Studies,* 2000.

Fitzgerald, Randall. "Must Federal Judges have Palaces?" *Reader's Digest,* Aug 1995: pp. 138-142.

Form, William. "Institutional Analysis: An Organizational Approach," *Change in Societal Institutions,* 1990.

Glazer, Nathan. *The Public Face of Architecture: Civic Culture and Public Spaces,* 1987.

Gorney, Carole M. "The Case Against Litigation Journalism," USA Today, 1994: p. 122.

Goodsell, Charles T. "The Statehouse: Elite Space in Conflict," *Journal of Architectural and Planning Research,* 1998.

Gragg, Randy. "Monuments to a Crime-Fearing Age," *The New York Times Magazine,* May 28, 1995: pp. 36-39.

Gruzen, Jordan. "Courthouse Design: 'Awesome' and Functional," *The American City & County,* 1992.

Habermas, Jurgen. *The Structural Transformation of the Public Sphere.* Massachusetts: The MIT Press, 1999.

Hall, Peter Geoffrey. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century.* New York: Blackwell, 1988.

Handler, A. Benjamin. *The American Courthouse: Planning and Design for the Judicial Process.* Ann Arbor: The American Bar Association, 1973.

Ichniowski, Tom. "Courthouse Architecture Makes a Big Comeback," *Engineering News Record,* June 15, 1992: p. 29-30.

Ichniowski, Tom. "Courthouse Design: Growth Field Forms a Sure Market," *Architectural Record,* March 1996: p. 98.

Jackson, J.B. "The Almost Perfect Town," *Landscape,* 1952.

Lawson, Simpson. *Courthouse Design: The First International Conference.* Washington, DC: The American Institute of Architects, 1993.

Link, David. "Storyville: Turnign Every Issue into a Drama is Warping Public Policy," *Reason,* 1995: p. 26.

Lyndon, Donlyn. "Public Buildings: Symbols Qualified by Experience," *The Public Face of Architecture: Civic Culture and Public Spaces.* New York: The Free Press, 1987.

Margolick, David. "What are Law Students Doing Watching Groucho, Bonzo, and 'Wanda'?" *New York Times* (Late New York Edition), 1993.

Means, Mary. *A Courthouse Conservation Handbook.* Washington, DC: The Preservation Press, National Trust for Historic Preservation, 1976.

Mumford, Lewis. *The City in History: Its Origins, Its Transformations, and Its Prospects.* New York : Harcourt, Brace & World, Inc.

Nadel, Barbara A. "Designing for Security," *Inland Architect,* 1997.

Nesmith, Lynn. "International Conference Explores Courthouse Design," *Architecture,* 1992.

Pare, Richard. *Courthouse: A Photographic Document.* New York: Horizon Press, 1978.

Phillips, Todd S. "Designing Justice for All," *Architectural Record,* March 1999: pp. 105-107.

Polo, Marco. "Robson Square and Law Courts," *The Canadian Architect,* March 1994: pp. 44-45.

Rowe, Peter G. *Civic Realism.* Cambridge, MA: The MIT Press, 1997.

Scruton, Roger. "Public Space and the Classical Vernacular," *The Public Interest,* 1984.

Tijerino, Roger. "Civil Spaces: A Critical Perspective of Defensible Space," *Journal of Architectural and Planning Research,* 1998.

Zelinsky, Wilbur. *Nation Into State: The Shifting Symbolic Foundations of American Nationalism.* North Carolina: University of North Carolina Press, 1988.

1. J.B. Jackson, "The Almost Perfect Town," p. 5.
2. Ibid., p 5.
3. Mary C Means, *A Courthouse Conservation Handbook,* p 7.
4. Roger Scruton, *Public Space and the Classical Vernacular,* p 1.
5. Ibid., p. 18.
6. Mike Crang, *Public Space, Urban Space and Electronic Space: Would the Real City Please Stand Up?,* p 305.
7. Ibid., p. 306.
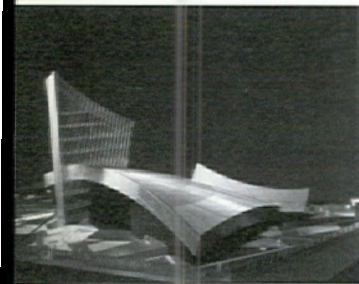8. Simpson Lawson, *Courthouse Design: The First International Conference,* p 4.

Daniel Libeskind   Twentieth Century Conflict and the Future
IMPERIAL WAR MUSEUM OF THE NORTH

World   Conflict   Shard   Museum

The Concept of Shards

The Imperial War Museum of the North, dealing with the conflicts that have shaped the Twentieth century and that will continue to shape the future, is supported by a broad vision. The building must bring together culture and regeneration, craft and design, in order to give the public a striking emblem which in an instant illuminates both tradition and the new.

As Paul Valery pointed out, the world is permanently threatened by two dangers: order and disorder. This project develops the realm of the in-between, the interest, the realm of democratic openness, plurality and potential. By navigating the course between rigid totalities on one hand and the chaos of events on the other, this building reflects an evolving identity open to profound public participation, access and education. The museum is therefore a catalyst for focusing energies, both entrepreneurial and spiritual and moulding them into a creative expression. If Henry Adams were writing today he would add to the Virgin and the Dynamo, the museum, for it is the cultural dynamo transforming the past into the New Millennium. The importance of this act of construction is underscored by the re-creation of the entire Trafford region - urban regeneration, job creation and tourist spending. But beyond the demands for integration and quality, the IWM-N will offer substance for the imagination and the daring of the unexpected. The IWM-N will provide new answers to all programs, invent new connections between the building and its surroundings and become an instantly recognizable, memorable place of encounter.

The IWM-N is fundamentally based on this world - the contemporary world shattered into fragments and reassembled as a fundamental emblem of conflict. These fragments, shards or traces of history, are in turn assembled on this site and projected beyond it. An entirely new landscape will offer an environment in which the participatory experience of the public would begin long before the visitors enter through the actual doors. The building exists in the horizon of the imagination and is visible across the strategic points of the city and its surroundings. The building is a constellation composed of three interlocking shards.
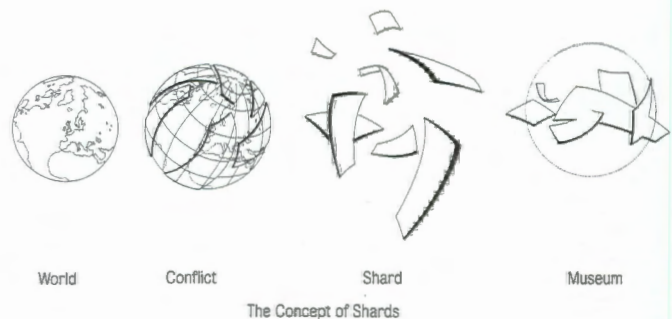
The Earth Shard forms the generous and flexible museum space. It signifies the open, earthly realm of conflict and war. The Air Shard with its projected images, observatory and education spaces, serves as a dramatic entry into the museum. The Water Shard forms the platform for viewing the Canal with its restaurant, cafe, deck and performance space. These three shards together: Earth, Air and Water concretize Twentieth century conflicts that have never taken place on an abstract piece of paper but have been fought on dramatic terrain by the infantry, in the skies by the airforce and battled with ships in the sea.

This composition and constellation of forms, functions and relationships, both centers and complements the entire area in which the project is situated; forming a center out of the disparate places around it. The Lowry Centre, Manchester United Football Fields, the Manchester Ship Canal and transportation system are brought together in a new perspective for the pedestrian and for those coming to the area by car. The IWM-N can be observed from various vistas and at the same time provides new views from within itself of the surrounding panorama; a panorama which becomes part of the museum experience and holds the story of the people of the northern region. The museum spaces respond to new concepts of exhibition by showing in a concrete and visible form how the personal histories of the people of the North are woven into the fabric of Twentieth century conflict. What makes the IWM-N unique is the integration of architecture, exhibition design engineering and a vision of history and the future. The building is of simple construction with low-maintenance costs, is efficiently used, ecologically responsible and has a sensitive security awareness. The proposal articulates a new vision of a museum whose impact will bring new life and potential to this emerging area.
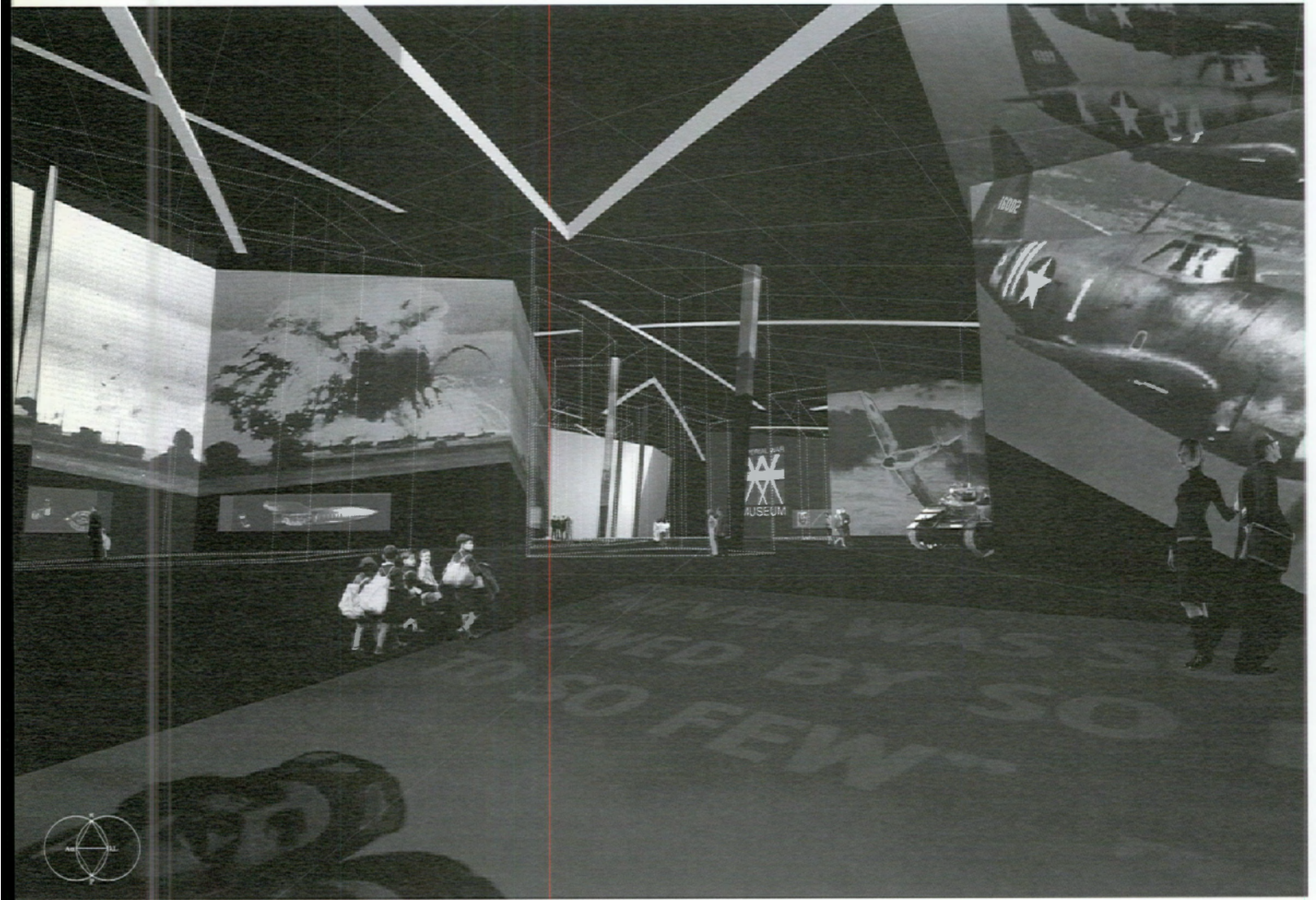
Site Plan
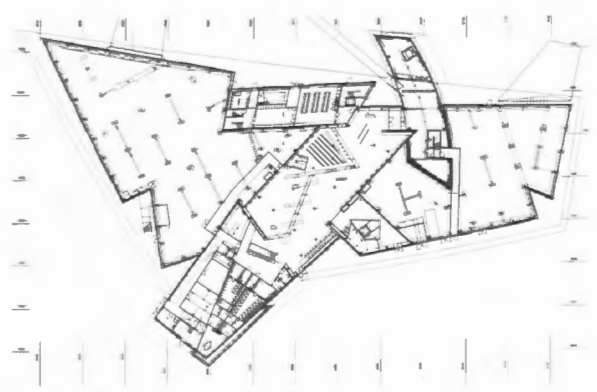
Entry Level Plan
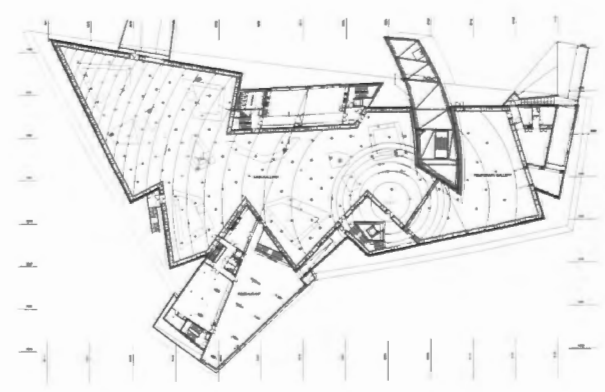
Main Gallery Level Plan

Gallery Rendering

139

Client:	The Trustees of the Imperial War Museum, London, England
User:	The Imperial War Museum of the North
Architect	Daniel Libeskind, BDA with
Associate Architect:	Leach Rhodes Walker
Project Architects:	Marcus Aerni, Wendy James, Martin Ostermann with Stefan Blach, Gerhard Brun, Christopher Duisberg, Lars Fischer, Lars Gräbner, Jeanette Kao, Susanne Milne, Daniel Richmond, Alex Trumpf
Project Management:	Gardiner and Theobald Management Services
Structural Engineers:	Ove Arup and Partners
Services Engineers:	Mott MacDonald
Quantity Surveyors:	Turner and Townsend
Exhibition Design:	Event and Real Studios
Planning Supervisor:	Gleeds Health and Safety
Main Contractor:	Sir Robert McAlpine, Ltd.
Competition:	July 1997
Construction:	2000-2001

Model Photographs by Torsten Seidel
Construction Photographs by Chris Duisberg
All images courtesy of Studio Libeskind

UNIVERSITY ELEMENTARY SCHOOL

Kevin Daly & Chris Genik

with Richard Weinstein and Edina Weinstein, landscape design
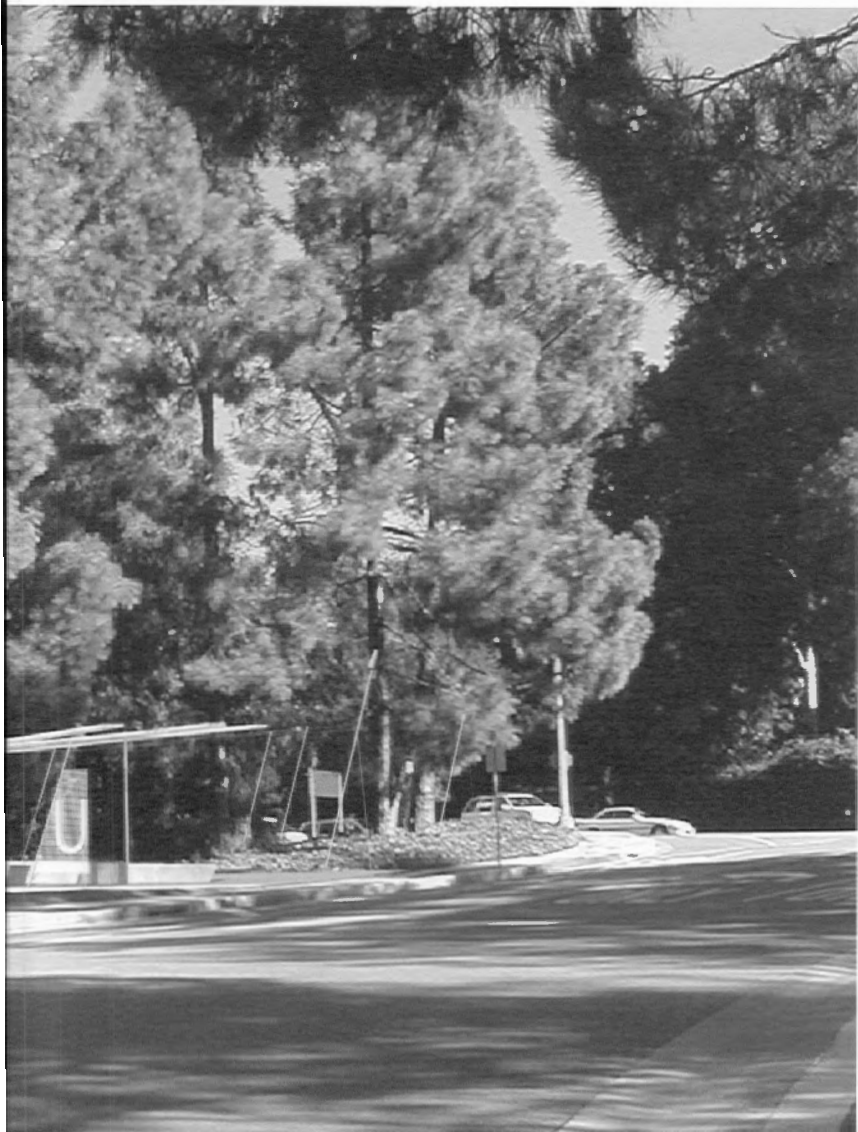
Kevin Daly and Chris Genik are collaborating with a team of educators and designers to invigorate the landscape around the Corinne A. Seeds University Elementary School on UCLA's campus. Daly, Genik developed a series of tension wires spread across the landscape to connect children to the school from the drop-off and pick-up zone. These canopies are thought of like a cat's cradle; as the toy is passed from child to child, the canopies pass the children from the drop-off to school and back again.

Donors select concrete pigments and glass aggregates that will be poslished and exposed as the bench surface

Precast concrete retaining benches
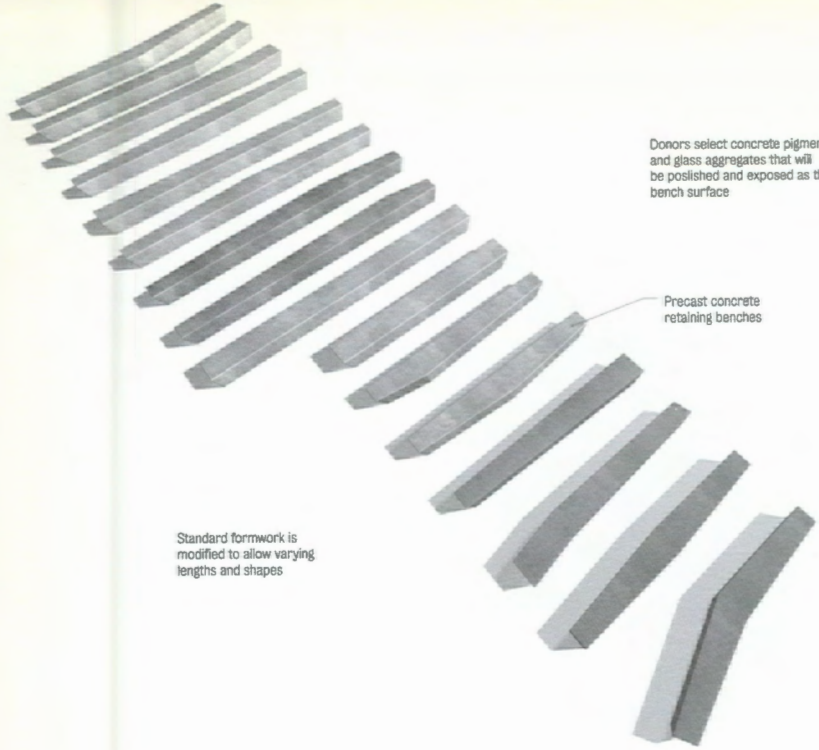
Standard formwork is modified to allow varying lengths and shapes
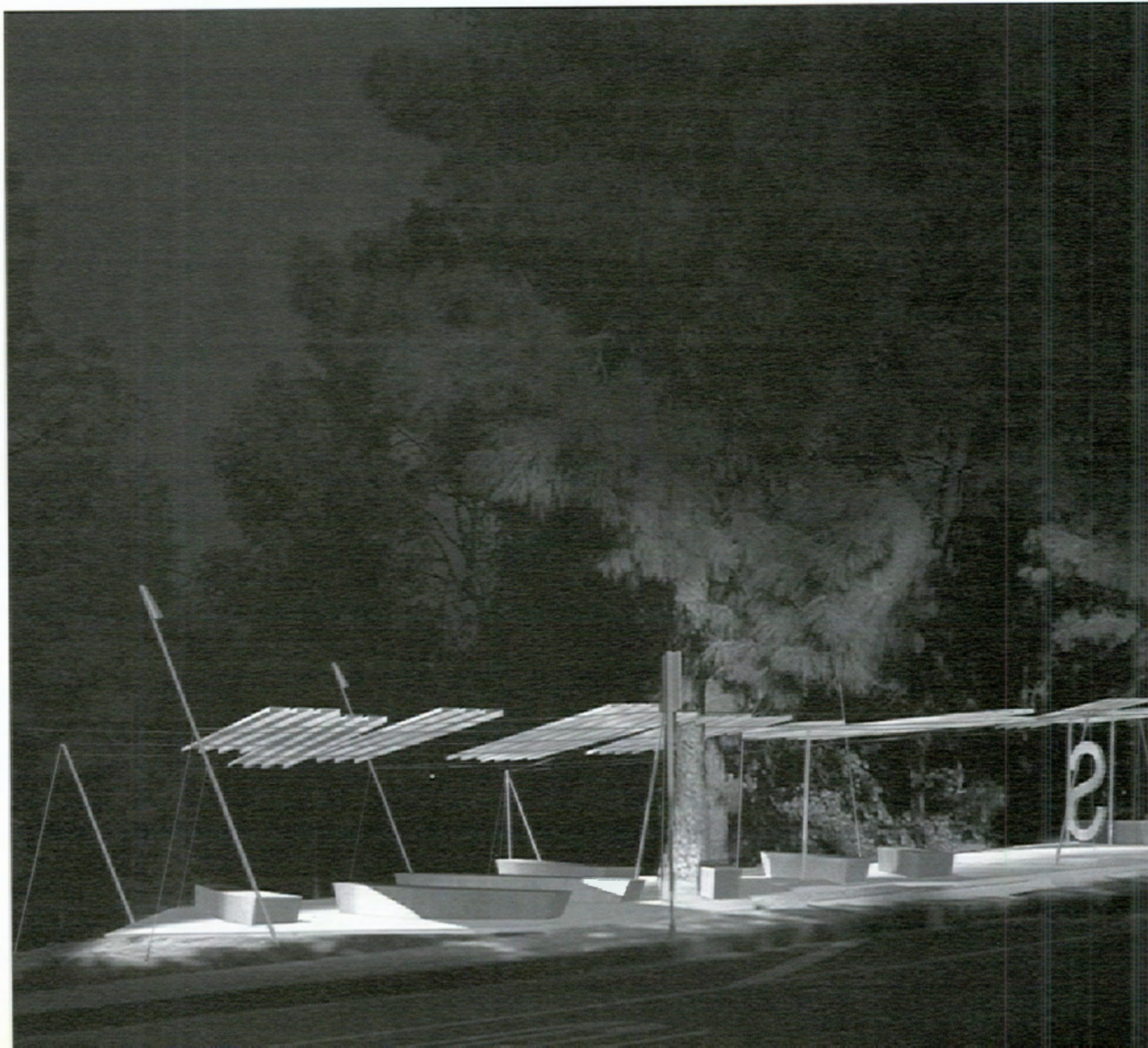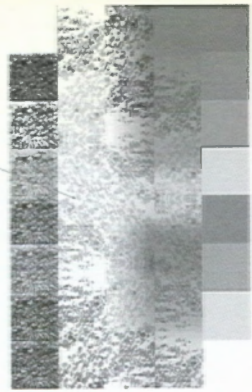
Corrugated stainless steel canopies

Area illumination

Spider web network support cables

Signage/Trellis

Uplights for canopy

Permeable paving

Cast benches for kids & backpacks
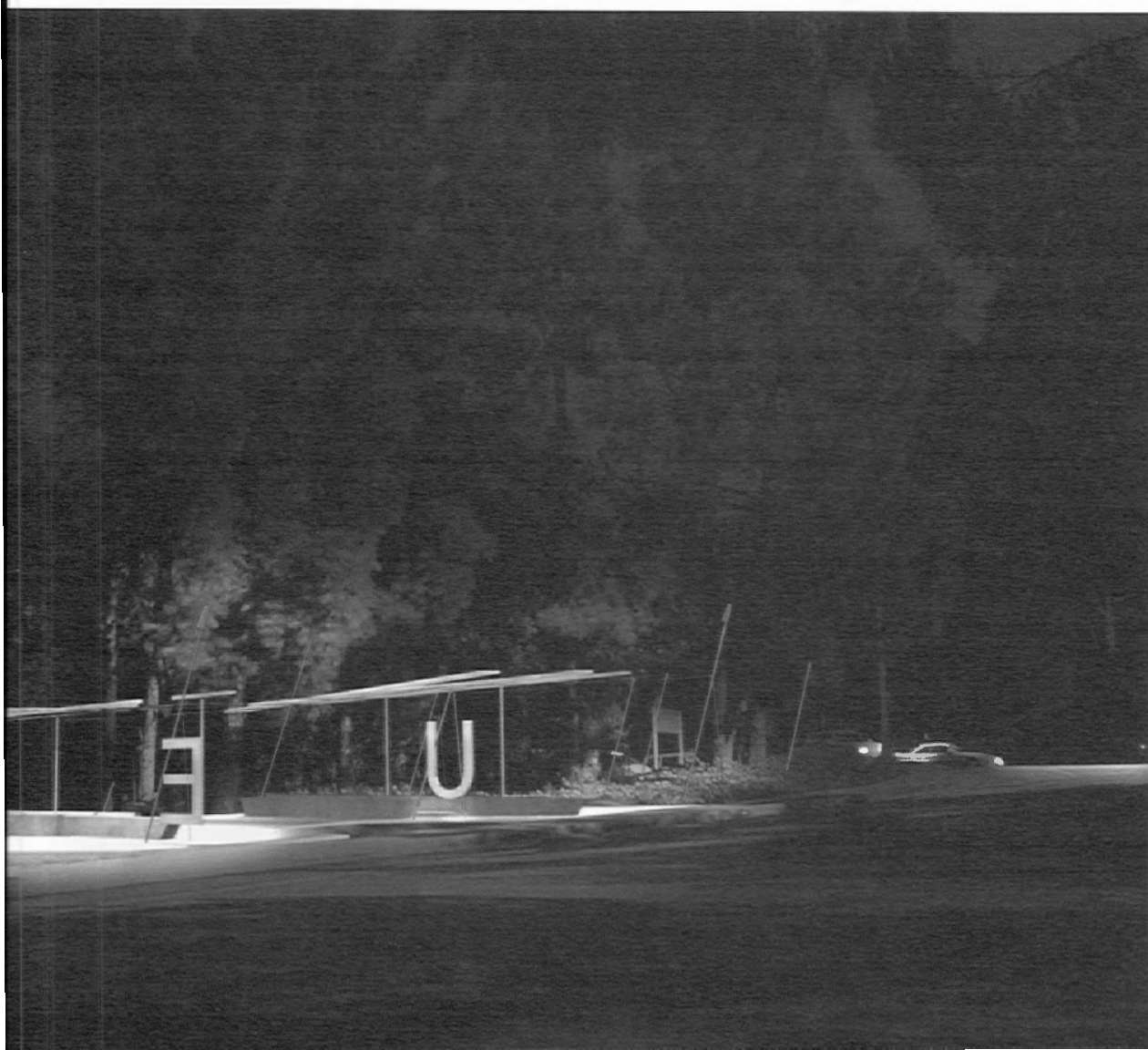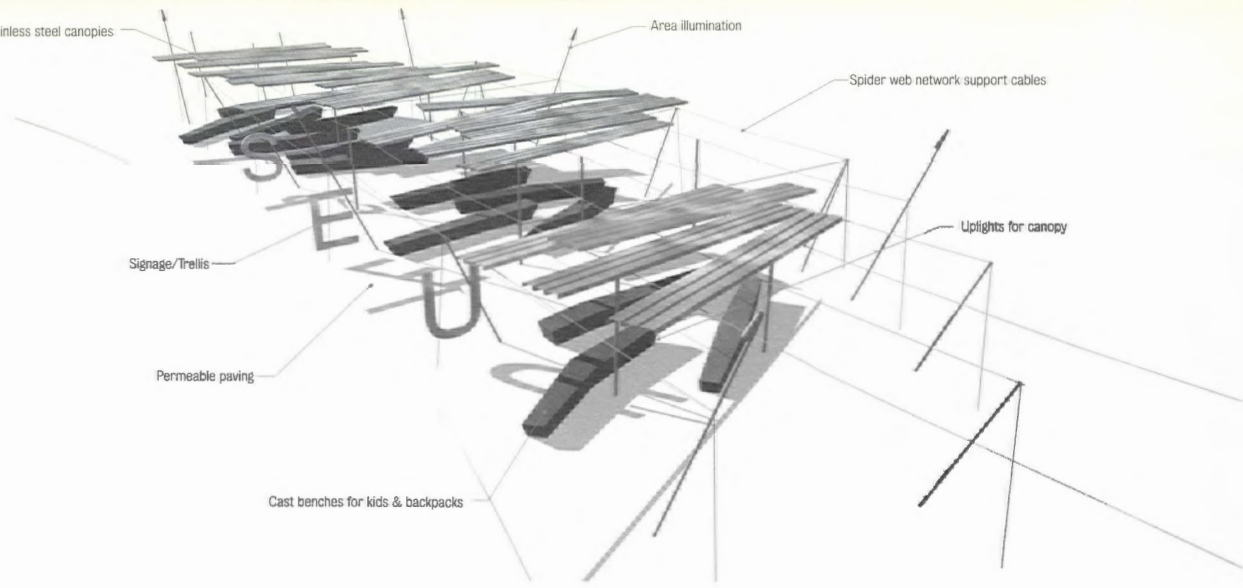
These canopies are primarily a strategy to recover landscape on this crowded university campus where the allocation of land is at a premium. Consequently, the lace structure is integrated into the existing landscape of pine trees. The compression posts that hold the tension structure double as light fixtures. The roof is of corrugated stainless steel and acts as the bridge of a guitar keeping the tension structure in alignment.

All images courtesy of Daly, Genik

SCHOOL GROUNDS
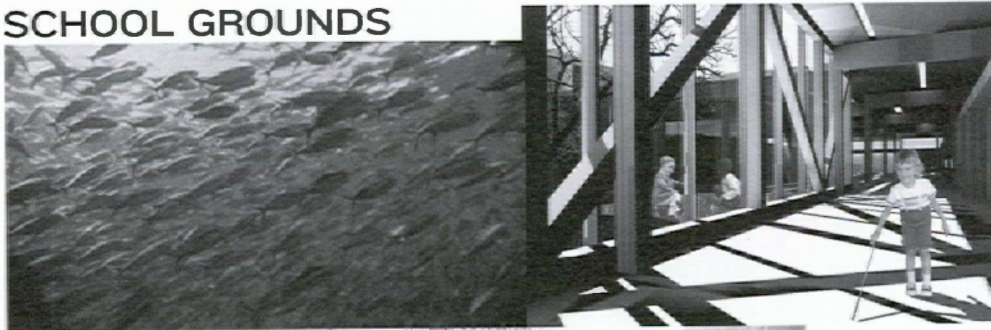
Olivia Hyde
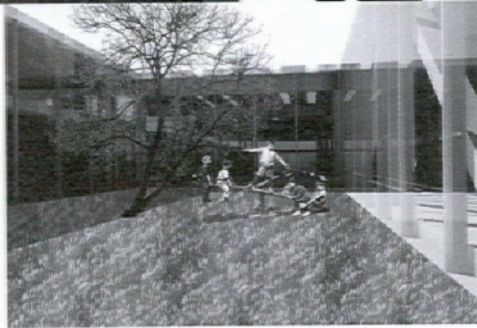
The Chicago Public Schools Design Competition was entered in partnership with Craig Borum, Karl Daubmann and Mireille Roddier as Ground Design. Ground Design submitted entries for the competition's two sites, North and South. The South Site entry won through to the second round (from 115 entries). It is now in competition with three other schemes.

North Site Competition Entry

Background

The front cover of the Chicago Public Schools Design Competition Program includes the following quote from Robert Stern; "These schools are as important to their neighborhoods and to the city as any mansion. These are landmarks, imposing but not overwhelming representations of a city's commitment to quality education that give their predominantly poor neighborhoods pride and a sense of place. These are the everyday masterpieces, architecture in the service of democracy."

Educational research and theory of recent years has led to the formation of a strong movement amongst educators and parents called the "Small Schools Coalition." The premise of this group is that smaller schools of approximately 300 students, particularly at the elementary level, create better environments for students. This downsizing, however, poses financial constraints. In order to be viable, such schools must be grouped to allow for the sharing of library, sports and other facilities. This grouping is further encouraged by the current expectation that the design of schools be flexible enough to allow for their use by the wider community outside of school hours. Such uses might include adult education programs, community centers, fitness centers, etc.

The program describes its goals for the competition as the production of "innovative and architecturally significant new buildings...[that]...seek solutions for creative ways of designing larger-than-ideal school buildings for what we know works best – small schools". As special needs students are anticipated to form up to twenty percent of the student population, the program requires that the schools be fully accessible by the disabled. The competition provided two sites, one in the north and one in the south of Chicago. Both sites are located in poor income bracket, racially mixed areas. The competition asked for a grouping, on each site, of three "small schools" into a larger whole.

Approach

Prior to seeing the sites or engaging the program, our interest lay in developing a design approach that could apply to the design of any "small-schools" type school. In other words, we wanted to develop a prototype "small school" that could adapt to any site. To prove its efficacy, the approach would be shown to work on both the north and south sites of the CPSDC program. The defining image for the approach was derived in part from the competition's program sub-title: "big shoulders, small schools." From the outset we visualized the school buildings as comprised of a protective and unifying envelope or "field" around a series of semi-autonomous pavilions, like the protective embrace of a parent around a group of small children.
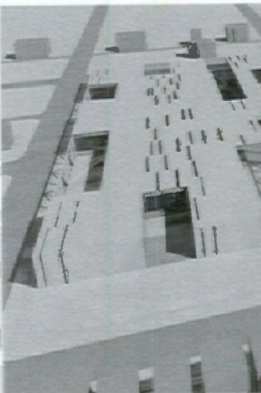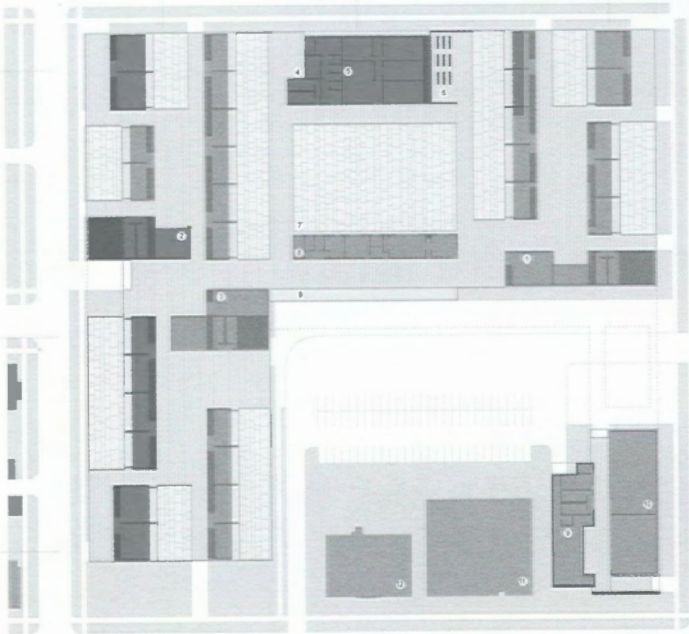
Our exploration of the possibilities of this image led to an inquiry on the behavior of complex systems, in particular that of a school of fish. In these groups, each fish defines itself and a key space around it such that the whole can adapt en-masse to the specifics of its site such as the sea floor, the face of a rock or a current. We began by breaking down the program into elements such as clusters of classrooms, the gym, administration, etc. We thought of these elements as a kit-of-parts whose assembly would follow a simple set of rules. The rules needed to be loose enough to accommodate the specific constraints of any site but sufficiently restrictive to ensure the expression of a clear typology. The schools could then "design themselves" adapting to their site parameters like the school of fish.

SITE PLAN

SCALE 1" = 50'

SITE SECTIONS SHOWING RELATIONSHIPS BETWEEN ENCLOSED, SEMI-ENCLOSED AND EXTERIOR SPACES
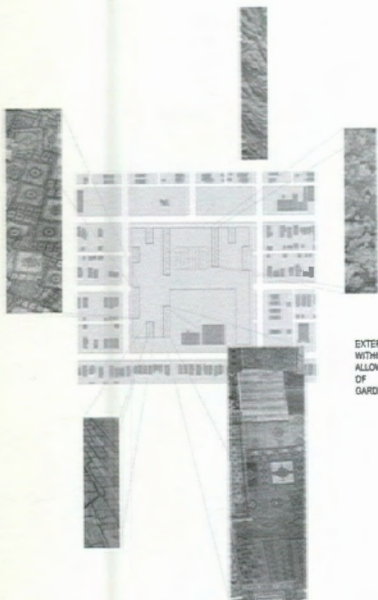
EXTERIOR COURTYARDS SET WITHIN BUILDING ENCLOSURE ALLOW FOR THE ORGANIZATION OF DISTINCT LANDSCAPE GARDENS
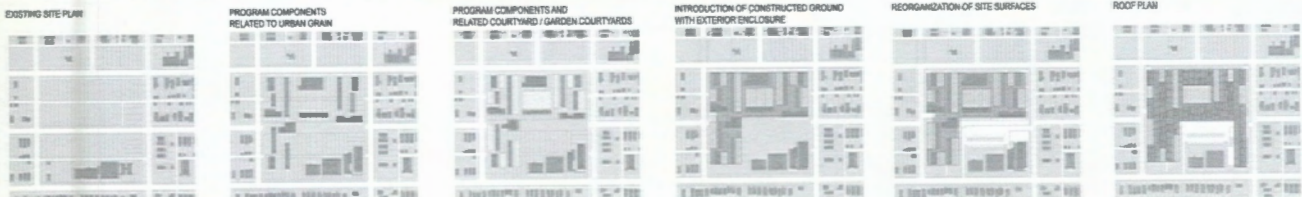
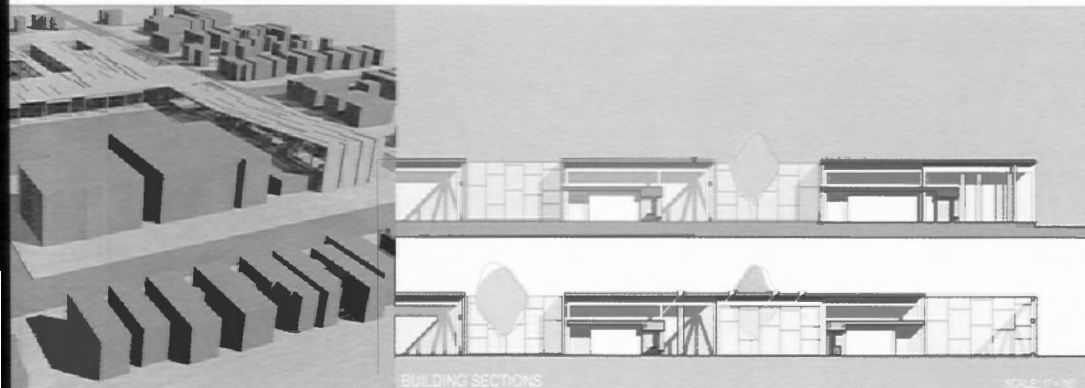EACH CLASSROOM IS LINKED WITH A COURTYARD

BUILDING COMPO

SITE PLAN KEY

SITE DIAGRAMS

| EXISTING SITE PLAN | PROGRAM COMPONENTS RELATED TO URBAN GRAIN | PROGRAM COMPONENTS AND RELATED COURTYARD / GARDEN COURTYARDS | INTRODUCTION OF CONSTRUCTED GROUND WITH EXTERIOR ENCLOSURE | REORGANIZATION OF SITE SURFACES | ROOF PLAN |

SCHO
CHICAGO PUBLIC

South Site Phase One Competition Winning Entry

BUILDING SECTIONS

SCALE: 1" = 16'

DOUBLE SKIN FACADE CREATED BY LAYERS OF GLASS ENCLOSURE AND CLASSROOM WALLS

BUILDING STRUCTURE IS COMPOSED OF PRE-CAST CONC. COLUMNS, BEAMS, AND INSULATED ROOF PANELS

CLASSROOMS AND COURTYARDS DEFINE SHARED GATHERING SPACE WITHIN EACH SCHOOL

WINTER GARDENS: CAPTURE PASSIVE HEAT FOR THE CLASSROOMS AND CREATE A LINK TO COURTYARDS
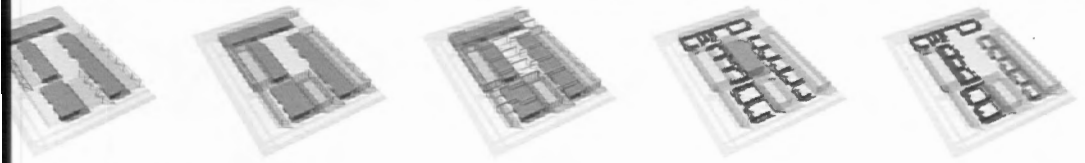
SCHOOL ORGANIZATION

GROUNDS
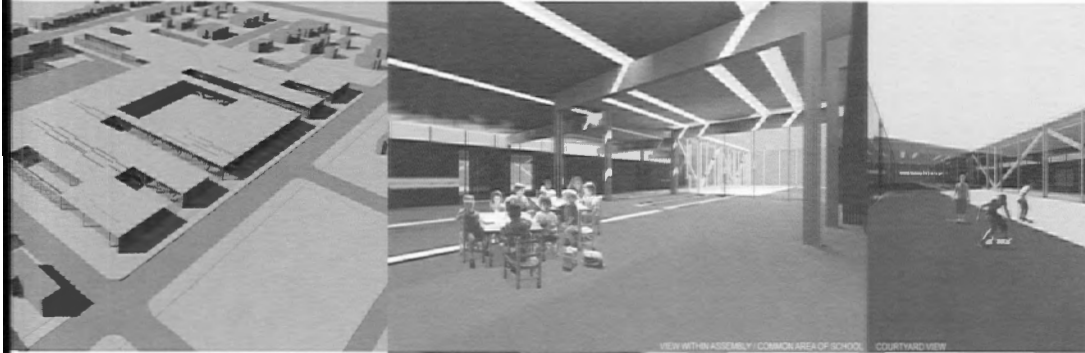
VIEW WITHIN ASSEMBLY / COMMON AREA OF SCHOOL

COURTYARD VIEW
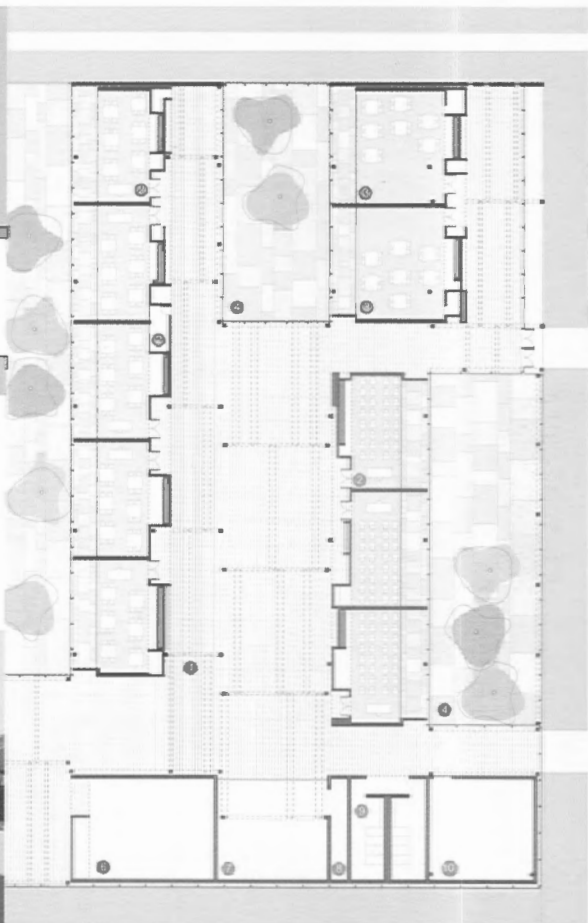
SCHOOL A

- ASSEMBLY
- CLASSROOM (ELEMENTARY)
- CLASSROOM (PRE-K + KINDERGARTEN)
- COURTYARD
- CONFERENCE / VIEWING
- DISCOVERY CENTER
- ART CLASSROOM
- STORAGE
- RESTROOMS
- UTILITY ROOM

Detail Sections from North Site

Once we were presented with the locations of each site, this approach seemed to gain in strength from an analysis of the surrounding urban grain. The footprint of the pavilions within the site's parameters read as an extension of the single-family dwellings that make up the majority of the surrounding areas. This was particularly the case on the south site, which is comprised of a perfect double block. The housing loosely defines gardens, paths, the pavilion's assembly areas and routes around the schools. In order to establish and affirm the urban block identity and maintain a streetscape, the protective envelope was designed to run along the boundaries of the site. In addition to giving the street life and activity from its close interaction with the school, this approach inverts the classic pattern of the school building nestled within open school grounds, which in these areas would require fencing, gating and patrol. Instead, the grounds become nestled within the protective envelope, like cutouts from a pastry. Furthermore, we hoped the school could contribute to the safety of the streets in the area without raising difficult security issues within the school.
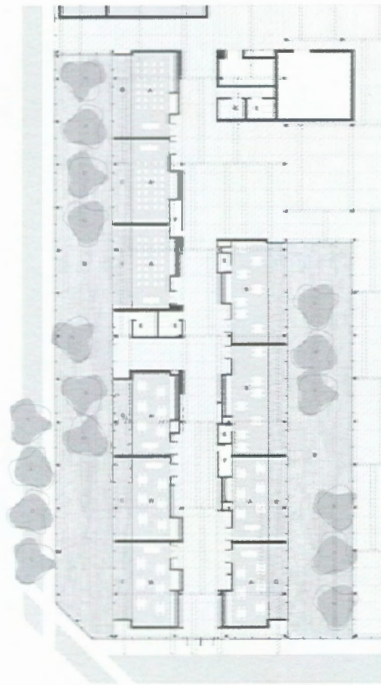

Detail Plan from North Site

In thinking about the protective aspects of the envelope, we were referring not only to its security role but also to its environmental role. It is comprised of an insulated roof and double-glazed skin that provide passively heated and cooled spaces within. This has a two-fold advantage of reducing the heating and cooling load on the pavilions inside (and the construction costs since all weatherproofing is taken care of by the outer skin), while allowing for most of the net/gross area to be only passively maintained. This is significant in terms of long-term energy savings. This passively heated and cooled space becomes an open "field" or "ground" over which the pavilions of program (the kit-of-parts) and the open spaces (the cutouts) are dispersed. The rules dictating the dispersal of open spaces evolved from an understanding of the relationships we wished to establish between each type of space.

Like the fish in its school, which maintains a space around itself, we saw the program elements requiring a specific relationship to the external and passively maintained spaces to define them. First, we felt that each classroom should have direct access to an open-air space. These spaces become courtyards that link together groups of classrooms. They provide a play area, light and ventilation to the rooms and surrounding areas. To maintain the double skin, access to the courtyards is via a glazed interstitial zone or a "winter garden." By locating each court so that at least one face gives onto the building periphery, the courtyards become a means of emergency egress. Each small school is broken down into groups of three or four classrooms with an adjacent courtyard. These are then grouped to form a shared assembly area within the protective envelope. Access to all pavilions and external spaces is possible without going beyond the boundaries of the enveloped area. In keeping with the idea of a "field," movement is free both within each school and between the three schools. The zoning of shared facilities and of a shared open playground is site dependent.

Materials and means are currently evolving to the constraints of a tight budget. The outer skin is to be a simple modular curtain wall system incorporating clear, solid and translucent panels. The roof is panelized pre-cast concrete that allows for a system of skylights by the omission of panels. We are currently looking at soft wall finishes for the pavilions for sound absorption and the easy display of student work all around the school. Wall and floor finishes may express through their texture different rooms or areas of the schools to aid the blind. Landscaping of the courtyards will be expressive of a variety of environments from wooded to meadowed, lush to dry, hard to soft, becoming an educational resource for all the schools. Environmentally, we are seeking ways to maximize heat gain in winter and minimize it over the summer. These include the "folding down" of the solid roofing over the south facing walls or the creation of south-facing overhangs and the provision of opening panels in the outer skin to encourage ventilation through convection in the summer months.

We feel that public buildings of this type have a more than usual responsibility to their staff, students and communities, to be as generous, as thoughtfully evolved, as sympathetically detailed and as well made as budgets can allow. They are landmarks but landmarks that should hold their strength as much in the comfort, health and well-being they can engender in their users as in their urban architectural presence. They are masterpieces of the everyday. We hope for the chance to make one real.
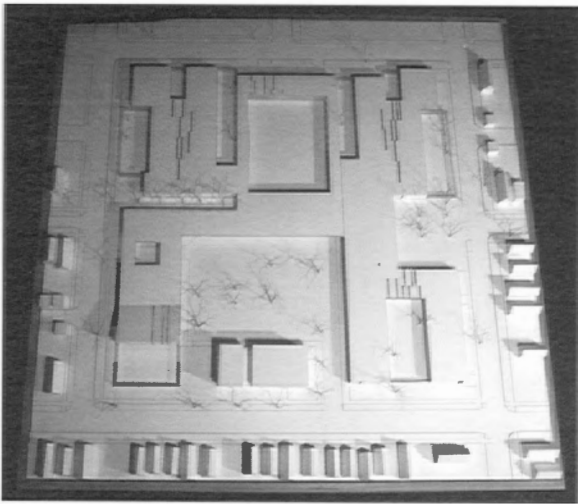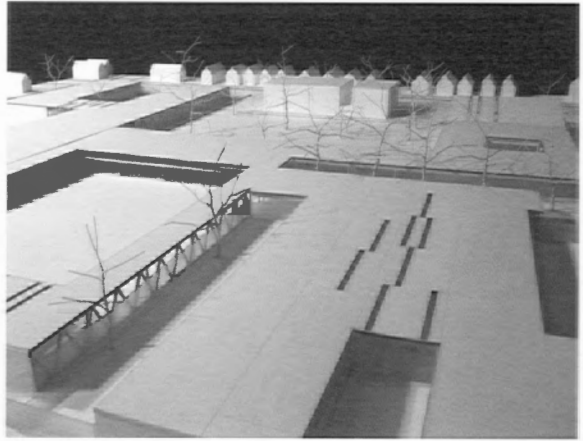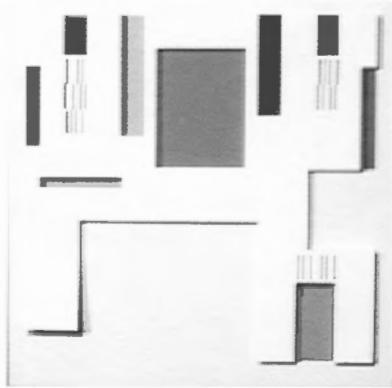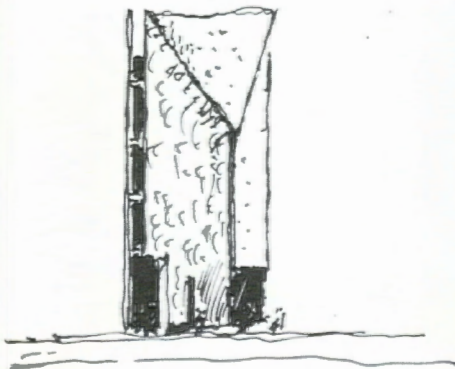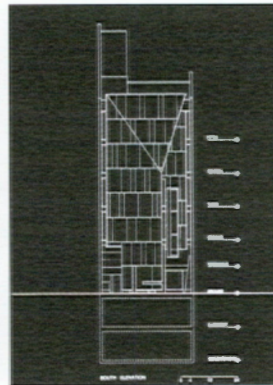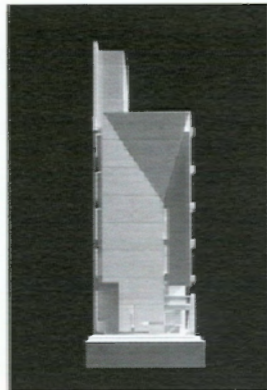
South Site Phase Two Models

INSIDE TO OUTSIDE   Tod Williams & Billie Tsien

Museum of American Folk Art, New York

In matters of creativity, architects are drawn to conditions of center and edge. We seek centers because we are problem solvers acting in the present and operating within a cultural and architectural heritage. Our unobtainable goal is truth. Our possible goal is eloquent resolution.

We are drawn to the edge through restlessness, emotion and curiosity. Our desire is to extend our horizons.

Solving problems (or finding centers) cannot be accomplished without a sense of the perimeter, the limit and the edge. Probing horizons requires turning one's back on the center. Nearly all of an architect's energy is devoted to solving the problem, seeking the center. Patient (or impatient) creative search requires an appreciation of the duality, if not the tension, of center and edge.

The design of the facade for the Museum of American Folk Art (MAFA) in New York can be understood as an example of both seeking the center and pushing the limit. We do not like to think of ourselves as facade makers. As architects, we want a building to enrich experience rather than affix an image. However, an important part of the brief from the museum was to create an image and that necessitated a strong facade. MAFA has been housed behind a small storefront within a large commercial building in Manhattan for over thirty years and has had no visual identity. The site of their new building is forty feet in width. Facing 53rd Street, it will be surrounded on three sides by the Museum of Modern Art (MOMA). MOMA's addition, designed by Yoshio Tanaguchi, will be thirty times the size of MAFA. Thus it is essential to the Director and Trustees of MAFA that the new museum have a significant facade addressing 53rd Street.

Folk Art, or art created by untrained artists, is still very much in the process of being identified. It is above all a personal and idiosyncratic art made by extraordinary/ordinary people. Our museum design needed to speak to the individual and the ordinary. It demanded a strong creative solution as the adjoining street (53rd between 5th and 6th) contains works by Eero Saarinen, Cesar Pelli, Edward Durrell Stone, Philip Johnson, Kevin Roche, Goodhue and Cram as well as the future MOMA addition by Tanaguchi.

Our concept for MAFA's facade is the abstraction of a mask and an open hand. The "face" is a center and the "hand" is a limit. The facade is primarily opaque so that light from the south does not overwhelm or damage the art within. It is also canted to catch shafts of light entering the canyons of 53rd Street in early morning, midday and late afternoon. Slot windows between facets allow visitors glimpses of the street life below.

In concept and in construction the facade is a contemporary screen, much like any stone or metal clad building enclosure. The principal weather barrier and the vapor barrier are independent of the cladding, enabling the outer face to act as a first line of defense against the weather.

It was essential to our concept that the opaque material for the facade be both ordinary and extraordinary. It was important that the material be reflective to catch light, yet be warm in tone, in order to address the personal and often warm tone of Folk Art. After considering site cast concrete and realizing that it is more absorbent than reflective and also impractical to cast in midtown Manhattan, we turned to aluminum. Darcy Miro, a young artist, inspired us with her silver jewelry. Later, she made cast aluminum plates and helped locate foundries where we might explore and cast the facade panels.

The cast aluminum was dull in finish and not warm in color. Matt Baird, our project architect, investigated alternative metals. Through his research we selected a type of white bronze called Tombasil that has all the appropriate properties. It is reflective, warm in color and has been used for firehose nozzles, propeller fittings and tombstone lettering. Thus, it has excellent strength and weathering characteristics. Its high copper content of 57% makes it an expensive metal costing about $1.20 per pound. Our fabrication costs are relatively low because

Recast "rocks"

Casting on concrete

Casting on Sand

Tallix Foundry casting process:

Billie Tsien and Tod Williams working sand surfaces

Tamping/tooling

Coating suface with carbon alcohol

we are casting the material at the Tallix Foundry in Beacon, New York in an open cast method (heating the material to 2000 degrees and pouring it directly onto a concrete or steel plate to cool). The resulting pour receives the imperfections of the surface on which it was cast. A steel surface produces a flatter finish, showing the liquid flow of the metal and a concrete surface produces a cratered and coarse finish.

With all panels cast, although not yet assembled and set on the facade, we cannot truly judge the result. Yet the intention to create a structure that is at once ordinary and extraordinary seems intact. MAFA's facade, in the tradition of architecture and construction, will produce an original facade pertinent to the client's desires, the program and the context. On budget and capable of withstanding the elements, there is little doubt it will perform. Although unique in its material and composition, the facade is about the limits of its formal properties and performance. It is very much about centering.

The development of the MAFA facade and our experiments at Tallix have stimulated our curiosity. Tallix has also rediscovered new ways to use traditional materials and casting methods. They too are excited and curious about the possibilities of the material and about exploring new ways to use the foundry.

Recent "play" at Tallix has allowed us both to extend our limits.

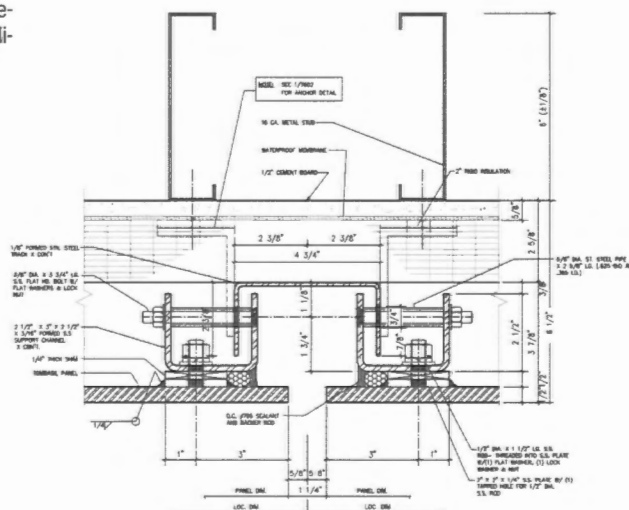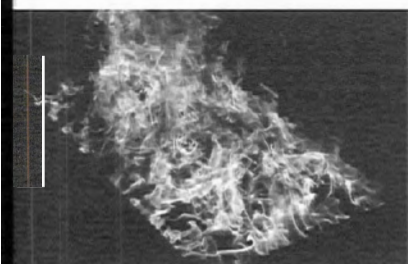All images courtesy of Williams + Tsien

Mock-up Assembly
1/3 Full Scale

Detail of MAFA test panel assembly
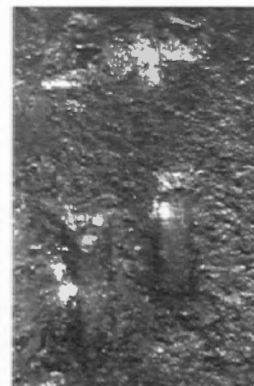

Panel Connection Detail

Sand is super heated to accelerate settling of resin impregnated sand mix

Peter Sylvester, foundry foreman with molten Tombasil in cauldron

Wood form aflame with molten metal cooling

Cooling of the open cast

Removing impurities after cast is opened

BIOGRAPHIES

Yousif A. Albustani is a registered architect with professional and teaching experience in the USA and UK. He is currently a Lecturer at Taubman College at the University of Michigan teaching graduate design studios and structures. He has also taught at Washington University in St. Louis and University of Illinois-Chicago, the Architectural Association and Royal College of Arts in London. He received a B.S. in Structural Engineering from the University of Texas-Austin, M.Sc in Structural Engineering from the University of Michigan and M.Arch with distinction in design from University of Illinois at Urbana-Champaign. He was a senior architect in the office of Zaha M. Hadid in London-UK and is now running his own architectural practice.

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Robert M. Beckley is a Professor of Architecture and Urban Planning at Taubman College at the University of Michigan. He received a B.Arch from the University of Cincinnati and a M.Arch from the GSD at Harvard University. He taught at the University of Wisconsin-Milwaukee prior to coming to Michigan in 1987 where he served as Dean from 1987 to 1997. His professional work has included award-winning urban design and civic projects.

Alexander Briseno receieved a B.S. in Architecture in 1996 and a M.Arch in 2001 both from Taubman College at the University of Michigan. He has also attended Southern California Institute of Architecture in Vico Morcote, Switzerland. He has worked as an architectural, graphic and web designer for Integrated Architecture in Grand Rapids, SmithGroup in Detroit and Duda/Paine Architects in Durham, North Carolina.

Elizabeth Keslacy received a B.S. in Architecture from Taubman College at the University of Michigan in 2000. She was an editor of Dimensions Volume 14 and is currently working for Biddison Architecture + Design in Farmington Hills, Michigan.

Brian Carter is an architect and a Professor at Taubman College at the University of Michigan where he was the Chair of Architecture from 1994-2001. Prior to taking up the Chair he worked in practice with Arup in London. He is the author of several books, including one on Frank Lloyd Wright's buildings for Johnson Wax published by Phaidon Press in 1998. He was also the curator of the exhibition "Eero Saarinen: Between Earth and Sky" which has been shown internationally.

Kevin Daly & Chris Genik are the two principles at Daly, Genik, an award winning architecture firm based in Santa Monica, California. Chris Genik delivered the 2000 ACSA Keynote Lecture at Taubman College at the University of Michigan.

Karl Daubmann was the 1999-2000 Oberdick Fellow and is currently a Lecturer in Architecture at Taubman College at the University of Michigan. He directed the 2000 Prague Spring Studio. He received a B.Arch from Roger Williams University and a postgraduate degree in architecture with a concentration in design computing from MIT.

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Henk Döll is a founding partner of Mecanoo and a graduate of the Technical University of Delft. He has lectured internationally and taught at Delft, the Berlage Institute and the Academy of Architecture in Amsterdam. He was a Distinguished Visiting Critic in the Graduate Program in Architecture at the University of Michigan in Fall 2000.

Craig Dykers is a founding partner of the international interdisciplinary architecture and landscape architecture practice Snøhetta, in Olso, Norway. He received a B.S. in Architecture from the University of Texas, Austin in 1985. He has served as Diploma Adjudicator at the Architectural College in Oslo for the past three years and is a member of the Norwegian Architecture Association (NAL).

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Lars Gräbner is currently an Adjunct Lecturer at Taubman College at the University of Michigan. He holds degrees from Universitat Hannover, Germany and the Royal Academy of Fine Arts, Copenhagan. He worked at Studio Libeskind and has taught at ETH Zurich, Switzerland and the Staatliche Hochscule fuer Gestaltung, Karlsruhe, Germany.

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Adrianna Jordan received a B.S. in Architecture in 2001 from Taubman College at the University of Michigan.

Coleman A. Jordan (ebo) is an Assistant Professor at Taubman College at the University of Michigan. He holds a degree from Ohio State University and a M.Arch from Clemson University and has conducted research at the Arkitektskolen i Aarhus and the Royal Academy of Fine Arts in Copenhagen, Denmark. Awarded the W.E.B. DuBois Fellowship at Harvard for 2001-2002 he will continue to pursue his research based in Ghana, West Africa, on spaces of martyrology and the Black Atlantic.

Sze Tsung Leong and Chuihua Judy Chung are founding principals of Content Design Architecture (CODA Group) in New York. Leong received a B.A. from UC Berkeley and a M.Arch from the GSD at Harvard University. Chung received a B.A. from Smith College and a M.A. and M.Arch from the GSD at Harvard University. Leong and Chung are co-editors with Rem Koolhaas and designers of the Harvard Design School Guide to Shopping (Taschen, Fall 2001).

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Daniel Libeskind, originally trained as a musician, studied architecture at the Cooper Union in New York (1970) and architectural history and theory at Essex University (1972). He is principal of Studio Libeskind which he opened in 1990. Libeskind is a Professor of Architecture at Karlsruhe Hochschule fur Gestaltung, the Louis Kahn Chair at Yale University and the Cret Chair at the University of Pennsylvania. His recent honours include the American Academy of Arts and Letters Award (1997), the Berlin Cultural Prize (1997), election to the European Academy of Science and Arts (1997), the German Architecture Prize (1999) and the Goethe Medal (2000).

Sadashiv Mallya received a B.Arch in 1998 from Sir JJ College of Architecture, Bombay and a M.Arch in 2001 from Taubman College at the University of Michigan. He has worked as an architectural designer in India and the United States. Winner of the Young Architect's Ecotel Redesign Award in India, he also won the 2000 AIA Huron Valley Student Design Award.

Rahul Mehotra studied at the School of Architecture, Ahmedabad. He graduated with a Master's Degree in Urban Design, with distinction, in 1987 from the GSD at Harvard University. The office of Rahul Mehrotra Associates was founded in 1990. In 1995 he founded and has been a principal in The Bombay Collaborative. He is the Executive Director of the Urban Design Research Institute (UDRI). He is the author of many books, including co-authoring *Bombay - The Cities Within* which covers Bombay's Urban History from the 1600's to the present. His most recent publication is *The Architecture of the 20th Century in the South Asian Region*. His built work includes the LMW Corporate Office in Coimbatore, an Orphanage for Children of the World in New Bombay and the D.J. Institute of Management in Coimbatore and an extension to the Prince of Wales Museum in Bombay. Rahul Mehrotra was a Visiting Professor in the Graduate Program in Architecture at the University of Michigan in 2000.

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Martha Skinner is currently a Lecturer at Taubman College at the University of Michigan. She received a B.Arch from the Cooper Union in New York in 1995. She recieved the ID Annual Design Review, Best of Category Award: Concepts in 1998, and Sun Shelter Competition, second prize from the AIA Young Architects Group, The Van Alen Institute and the Hudson River Park Conservancy in 1997.

Cara Soh received a B.S. in Architecture in 1998 and her M.Arch in 2001 both from Taubman College at the University of Michigan. She has worked at Quinn Evans/Architects in Washington DC.

Billie Tsien received a B.F.A. from Yale University in 1971 and her M. Arch from UCLA in 1977. In the period from 1971 to 1975 she was a painter and teacher. She has taught at the Southern California Institute of Architecture, Parsons, Yale, Harvard GSD, the University of Texas at Austin and the University of Pennsylvania. Recently she shared with Tod Williams the Louis I. Kahn Chair at Yale University. She has worked with Tod Williams since 1977 and they have

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John Wagner received a B.E.D in architecture from Miami University in 1996 and a M.Arch in 2001 from Taubman College at the University of Michigan. He has worked as an architectural and graphic designer for City Architecture in Cleveland, Ohio.

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the Cooper Union from 1974-1989 and has held visiting professorships at a number of schools of architecture since the mid 1980s. In 1982 he received an Advanced Fellowship from the American Academy in Rome. His work has been honored by the New York Chapter of The AIA with over 12 Distinguished Architecture Awards. Tod has served on the Architectural Advisory Committee for Princeton University, the New York City and National AIA Awards Committees and as Director of The Architectural League. In 1992 he was made a Fellow in the American Institute of Architects. He is currently the Eliel Saarinen Professor in the Graduate Program in Architecture at the University of Michigan.

ACKNOWLEDGEMENTS

LECTURE SERIES

FALL 2000

Thomas Phifer
Erick Van Egeraat
Rahul Mehotra
Mikko Heikkinen   The Eliel Saarinen Lecture
Daly Genik   ACSA Keynote Lecture
Chris Leubkeman
John Norquist
Julie Bargman

WINTER 2001

Robert Bullard   The Martin Luther King Jr. Lecture
4th Annual Syposium on New Urbanism
    Regional, Environmental, Social + Architectural Justice
    Peter Calthorpe/Alex Kriger/Stefanos Polyzoides/Michael Sorkin
Glenn Murcutt
Michael Shuman
Rick Joy   The Guido H. Binda Memorial Lecture
Francoise Jourda The John Dinkeloo Memorial Lecture
Shim-Sutcliffe The Charles & Ray Eames Lecture
Rafael Moneo   The Raoul Wallenberg Lecture

PUBLICATIONS

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MAP 8 Gigon + Guyer
MAP 7 Mack & Merrill
MAP 6 Mecanoo
MAP 5 Tod Williams Billie Tsien
MAP 4 Thompson and Rose
MAP 3 TEN Arquitectos
MAP 2 Allies and Morrison
MAP I RoTo Book

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Studio Granda Dreams and Other Realities
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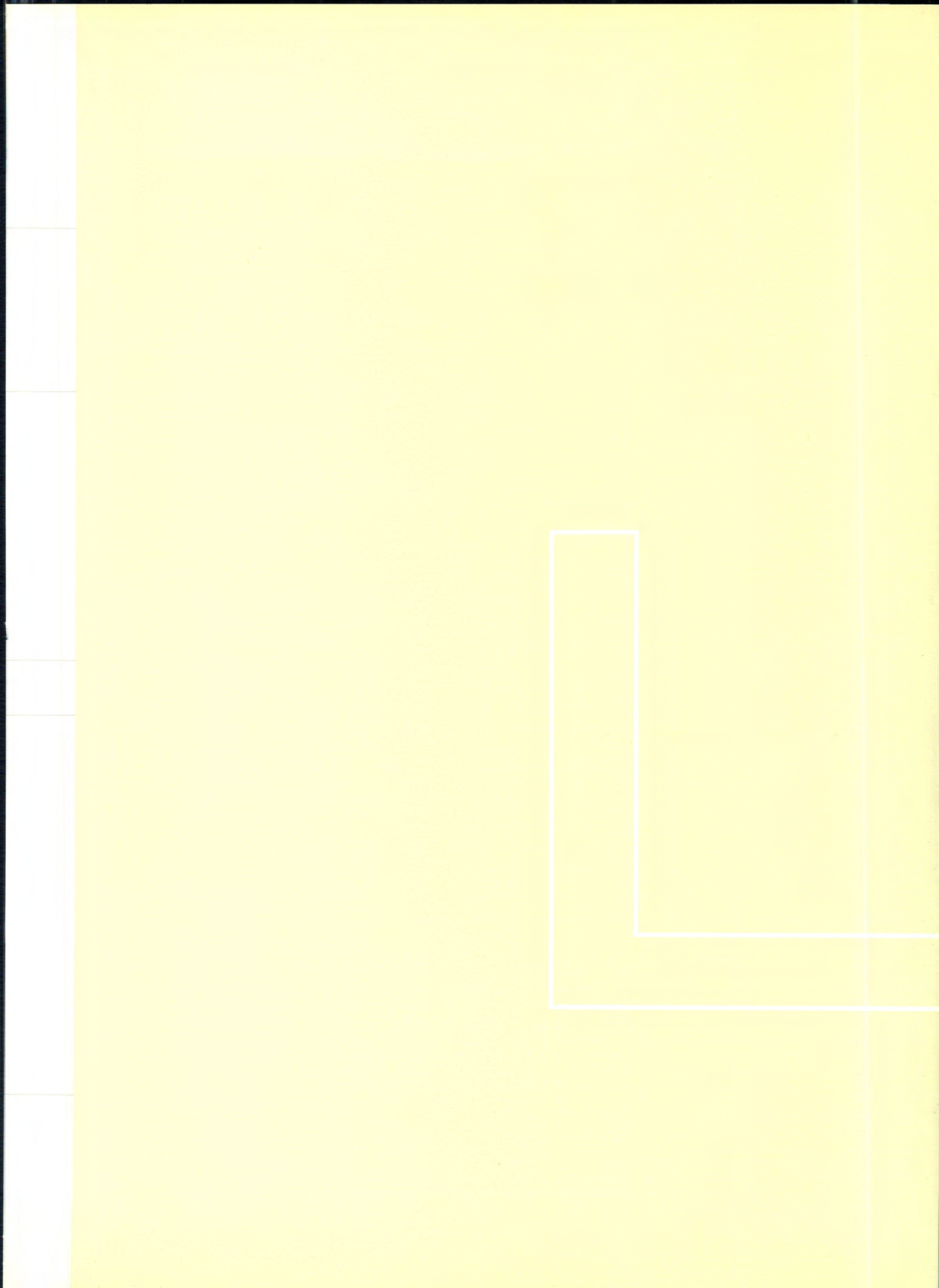
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