INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6” x 9” black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700 800/521-0600
THE EDGE OF CITY
RICE UNIVERSITY

THE EDGE OF CITY

BY
HU LI

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
MASTER OF ARCHITECTURE

APPROVED, THESIS COMMITTEE

Albert Pope, Director
Associate Professor of Architecture

Lars Lerup, Dean
Professor of Architecture

Brian Huberman
Associate Professor of Art and Art History

HOUSTON, TEXAS
APRIL, 1998
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgement</td>
<td>6</td>
</tr>
<tr>
<td>Introduction/Abstract</td>
<td>8</td>
</tr>
<tr>
<td>Inspiration</td>
<td>12</td>
</tr>
<tr>
<td>Experimentation</td>
<td>20</td>
</tr>
<tr>
<td>Construction</td>
<td>28</td>
</tr>
<tr>
<td>Installation</td>
<td>74</td>
</tr>
<tr>
<td>Documentation</td>
<td>82</td>
</tr>
<tr>
<td>Bibliography</td>
<td>96</td>
</tr>
<tr>
<td>Discourse</td>
<td>100</td>
</tr>
</tbody>
</table>
Acknowledgement
Quite a long time ago in Beijing, the extensive contact and friendships with the architect and artist Biao Lu from Kunming and visiting Professor Sang-Hae Lee from Seoul contributed to my earliest interests in the spatial and temporal phenomena in Chinese landscape scroll painting. Several years later, in the Houston’s landscape, a little bit of the dream comes true. It will be hard to imagine the outcome of the project without the clear thought from Albert Pope, who also inspired and encouraged me to really begin the exploration, and to open the possibilities into the digital territory. I am grateful for Lars Lerup, for his invaluable encouragement and enlightenment at the critical moment of the project, and more importantly, after the event. Big debt goes to Brian Huberman, one of the most enthusiastic film maker and professor I ever met, for his consistent critical-eye and warm-heart on the project. The project could not be realized without the generous help from my colleagues at Rice, especially Brian Heiss, Carlos, Kris Nichols, Lucia, Feng Xu and Gloria. During my stay at Rice, Kathleen Roberts, John Casbarian and Hans Krause generously provided help whenever I needed.

All these would not happen without the love, encouragement, and support from my parents.

Finally, as usually, I feel hard to find words for my wife, too many debts.
Introduction/Abstract
In architecture, a theoretical concept can be either applied to a project or derived from it. In my chase, I choose to use the video-construction as the concept, which will be applied to an architectural proposition. Such a distinction cannot be made so clearly when, for example, an architectural intuition is supported by a certain aspect of film and painting theory, and in the process of the development of a project is transformed into a general concept for architecture. Without in anyway trying to fuse the intuitive process of the video-construction with the certainties of scientific thought, the documentation attempts to points out the essential direction of an unfinished experimentation.

This is an experimentation into the methodology of urban design involving the temporal aspect of the urban environment under the condition of the radical spatial and social changes. In the process of the semester long research, a working method is made gradually clear by constructing together the space, event, and movement, thus explore the strong links between memory and the city, its buildings and its people.
Inspiration
"The Renaissance Legacy.
The Vanishing point = Self-Effacement.
The Detached Observer.
The Involvement!

The viewer of Renaissance art is systematically placed outside the frame of experience. A piazza is everything and everything in its piazza.

The instantaneous world of electric informational media involves all of us, all at once. No detachment of frame is possible."

**Marshall McLuhan.** from "The Medium is the Message

**East** Chinese painting is an art of time as well as space. This was implied in the arrangement of the group by movement from motif to motif through intervals; in the extended relationship of groups, movement in time became the most memorable characteristic of Chinese design.

**Emptiness and Transition/Transformation**

"IT is emptiness that fosters interaction, even transmutation, between heaven and earth, and thereby, between space and time. If time is perceived as an actualization of living space, then emptiness, by introducing discontinuity into the temporal process of unfolding, in some way reinvests time with the quality of space, thus assuring the proper rhythm of the breaths and the totality of the relationships. This qualitative change of time into space (which is not a mere matter of a spatial representation of time or of a system of correspondence that only makes it possible to measure one by the other) is essential condition of a true life that is not one-dimensional or of one-sided development."

11
West  "ART, or the graphic translation of a culture, is shaped by the way space is perceived. Since the Renaissance the Western artist perceived his environment primarily in terms of the visual. Everything was dominated by the eye of the beholder. His conception of space was in terms of a perspective projection upon a plane surface consisting of formal units of spatial measurement. He accepted the dominance of the vertical and the horizontal of symmetry—as an absolute condition of order. This view is deeply embedded in the consciousness of Western art."

East/West  OVERLAPPING perspectives, due to movement of position of the body through space create multiple vanishing points, opening a condition of spatial parallax. Perspectival space considered through the parallax of spatial movement differs radically from the static perspectival point of renaissance space and the rational positivist space of modern axonometric projection. A dynamic succession of perspectives generates the fluid space experienced from the point of view of a body moving along an axis of gliding change. This axis is not confined to the x-y plane but includes the x-y-z dimensions manifesting themselves in the other dimensions, gravitational forces, electromagnetic fields, time, etc. Perspectives of phenomenal flux, overlapping perspective space is the pure space of experiential ground.

The Edge of City
GO UP RIVER IN Qingming Festival (1111AD-1126AD)

Hand-scroll Painting, ink and light colours on silk, by Zhang Zeduan

This 5.28 Meters long landscape painting is generally regarded as one of the most memorable paintings in Chinese history. The painting is a description of the urban life of the historical Chinese Captital city. The painter re-present the landscape/urbanscape paning from the rural area outside the city, in the early morning, into the city, unfolded in a linear sequences.

The following pages is the documentation of the still images from an small film project. Here the film camera is employed as the media to experience, explore and interprete this master piece.

The stills were printed at a 4-second interval.
Experimentation
Site 116°05'23"@ 39°56'67"

- 1420's City Wall and Moat constructed to protect the imperial capital city
- 1960's City Wall torn down, replaced by the subway underground and ring-road above
- 1990's Freeway erected

City constantly changes, save for the quiet surface of the moat which reflects all the changes.
FORGETTING/REMEMBERING DEMOLISHING/CONSTRUCTING DISAPPEARING/EMERGING LEAVING/RETURNING
Construction
The structure of the construction window in Adobe Premiere implied the possibility of temporal construction of space, event/memory/image and action/movement. By working under the construction window, these different aspects of urban situation are projected onto each other to evoke the new understanding.

To open architecture to questions of perception, we must suspend disbelief, disengage the rational thoughts of the mind, and simply play and explore. Phenomenology as a way of thinking and seeing can become an agent for architectural conception. Specifically in this project, it begins with information and disorder, confusion of purpose, disjunction between the program and space. Architecture becomes a result of acting on this indeterminacy of unlimited possibilities.

The following pages were an attempt to document the both the thoughts and process of the construction in the Adobe Premiere.
finding the order in the puzzle
old city edge with rural landscape outside the citywall
city wall/ cutting edge _dismantled in 1960s_
emerging temporary shelters parasiting and transforming the courtyard-housing
"Tai-chi" being pushed away from the transforming courtyard
conflict between public and private, single and society
peeping
escaping, remembering
freeway erected, replacing the old city wall
the edge of the city
electronic landscape
proposed dual-surfaces

cement and grass forming the interwoven structure which provides the multi-functional space
old and new

forgetting and remembering
an old bridge/ a new bridge—or two?
a new landscape
subway route-beneath the old citywall
driving is escaping
Installation
The following pages are the re-created documentation of the original installation setup as the presentation of this video project. The installation lasted two hours before it was disassembled and equipment returned.

Location: Farish Gallery, School of Architecture, Rice University

Time: January 16, 1998

Equipment: Two liquid Crystal Video Projector  
Four 21” TV/VCR Combo  
Six one-hour long VHS NTSC videotapes of  
the edge of city  
the event  
the movement  
the space  
the scroll
The following pages are the layout of the still images from the project at 4-second interval.

The original quick-time movie is 320 by 240 Pixels, 10 minutes long, at 15 fps Frame Rate. The movie was edited in Adobe Premiere 4.0 on IBM PC.

Video Resources are:

3DStudio Max 1.2 generated FLC animation files
Digitized Video Footages
Still images
A sound track added later

Media used for the installation is VHS NTSC, transferred from quick-time movie using “Media 100” on Mackintosh System at Rice Media Center.
the Edge of City
The Edge of City
Bibliography
Architecture and Disjunction
Tschumi, Bernard
The MIT Press, 1997
The Manhattan Transcripts
Tschumi, Bernard

Space, time and architecture; the growth of a new tradition. [1967] Giedion, S. (Sigfried)
The Tao of Chinese landscape painting: principles and methods
Wong, Wucius [1991]

Arrest and movement, an essay on space and time in the representational art of the
ancient Near East. [1951]

Groenewegen-Frankfort, H. A. (Henriette Antonia), 1896-
Photography and beyond in Japan: space, time and memory / [introduction] Robert
Stearns; with foreword by Toshio Hara; additional essays by Kohtaro Izawa and Robert
T. Singer. [1995]

The Restless landscape: Chinese painting of the Late Ming period.
Cahill, James Francis

The world around the Chinese artist: aspects of realism in Chinese painting
Edwards, Richard [1989]

Symbols of eternity: the art of landscape painting in China
Sullivan, Michael [1979]

Streams and mountains without end.
A Northern Sung hand-scroll and its significance in the history of early Chinese painting.
By Sherman E. Lee and Wen Fong. [1967]

The poetics of perspective /
Eikins, James [1994]
Through the vanishing point; space in poetry and painting
Marshall McLuhan and Harley Parker. [1968]

The painter’s mind; a study of the relations of structure and space in painting

The cinematic city
Edited by David b. Clarke, Routledge, London 1997

Ideas and Forms
William JR Curtis, Phaidon Press, 1986

Architecture and Cubism
Edited by Eve Blau and Nancy J. Troy, MIT Press 1997

Privacy and Publicity
Beatriz Colomina, MIT Press, 1996
For me, the criticism from the final review is as inspiring as another beginning. So I decide to document the discussions during the thesis review, and hope the discussion among the juries on contemporary urbanism, virtual reality, eastern/western culture, and even “video game” will just become another “Stim”, which may push us to the braver exploration.

Special thanks to Annatina Schneider and Michael Kuchkovsky for their eadenvors.

Juries and Abbreviations

Aaron Betsky.........................AB
Lise Anne Couture..................LC
Rodolphe el Khoury..................RK
Robert Mangurian..................RM
Mary Ann Ray.......................MR

Michael Bell.......................MB
Lars Lerup.........................LL
Albert Pope.........................AP
LC: Better than in color.

LL: I think that the whole fact that the whole thing is not colored, you know the whole Hollywood decisions to color all these movies. It's like you've used the technology to the Maximum without showing it. That in a way is very powerful. I also think that it's so enigmatic. It's in a way, a kind of proof of what one might mean with an architecture thesis. That it doesn't Really have ultimately a kind of totalizing confusion. That it ends up in a kind of place where I as the viewer have to make some of my own decisions about whether you've decided or not, what you think is good or bad. It's really open to me. You are not telling me any of these things. You are telling me something, but it is enigmatic, and I think it's very powerful. I think that the Chi that floats through the whole thing is also extremely well conceived. I like the kind of hint of computer game, where the mass comes out of the corners. I think there is a level of kind of play on what's happening in video that I find very interesting.

LC: Is this meant to exist as a final product, as something that we view in a certain order, or would optimally for you would it be that I could control my own navigation through this space if you could have unlimited technological resources? Because I think this is a very different thing to say you have to experience this in this order, from right to left, left to right. Or whether I could inhabit this world in some other way if technologically that would be possible. The second question I'd like to ask is, the role of the human figure in this, why you included it, maybe even why you included the Tai Chi but at those specific moments, why you decided to put the human figure in there. And thirdly, since I think that this medium allows you to explore the temporal aspects, how you see that in what you've done, there's obviously the kind of narrative of visiting the historical events of the site but then there are also these moments where you have these kind of flashbacks. I think your project is very compelling, but I'd like to address it more definitely.

You've designed the path for the presentation, but that is one of many.

AB: That's where I wonder whether one couldn't begin to have some criticism. The wonderful thing about the scroll is of course the interpretation of the edges. The way there is no edge but that line that moves through it. And I was struck - I mean my favorite part in all of this is, you were conjuring up the densification of the courtyard with these corner objects. And then by the time you get to what Lars talks about as "video game word" that kind of density is a little bit lost. And reminds me, I was just reading an article about video games which one of the simple things which I never thought about which is why do all video games take place in this Blade Runner world, where everything is horrible and everything is in ruins and all this, And its because it takes too much computing power to render the complexity of buildings that we have in everyday life, so we can't show things in ruins or as kind of bunkers. And what I was hoping for as this was developing was that you were going to start conjuring up some of the same density that existed in the courtyard building on the other side of the edge, and that maybe the separation between the courtyard model and the point block tower model was going to start to become a more meandering path, something that would start to interpenetrate each other. When you pan back over the courtyard area and the two towers suddenly pop up, that gave me hope that indeed you were talking about that kind of wonderful Houston condition were you get the big tower next to the small bungalow Which I think is one of the greatest things about the city. So I'm hoping that as you develop this that you might think about breaking down that edge and having it become something that is more interpenetrating.

MB: I think you used the technique of the still and the motion picture in a way to create a kind of epiphany where the singular, the monocular view of the fixed lens actually melds with the moving city, and I think without those, that in some way the interactivity that might be more possible with more technology might be the desired goal, but given the limits f the technology you have your looking for a way in which the singular and collective come together. And I'm not sure that's what you're really intended in but for me that's what came across. I'm just trying to think in terms of what obviously have stretched the boundaries by which an architect can begin to address the temporal but he's kept it still within the lens and the distant observer and I think there's still somewhat traditionally cinematic techniques of trying to have a momentary epiphany where that inability to comprehend motion or mechanisms beyond our own bodies are intuited or super-imposed. So I find it ultimately kind of, beautifully, at times humorous but also intuited, poetic, not particularly, actually up to date in terms of what technology might really be able to do or able to propose in the sense of something like Diana going into epidemiology. You're still kind of behind the monocular lens, and the struggle of the camera to comprehend some things that are beyond its fixed limits but I think it's poetics that actually brings it together.

LL: What strikes me, the reason why I want to leave it unadulterated by too much explanation on your part, is that I think there is a kind of, if Davis mapped the viruses across the universe that we know you are mapping, and I hate to use this word but I think it's probably right, metropolitan subject that encounters these juxtaporations, these enormous differences and manage somehow to kind of straddle them and its really interesting to me that Tai Chi becomes this kind of soothing device that allows me to bridge the discrepancies through this marvelous smooth magnificent movement that makes your internal metabolism have a wholesome life in light of this extremely complex and jarring world that you occupy. There is something very beautiful about this strange parallelism that you have instinctively laid your hands on. This moves me enormously in more than one way. In a way that is ultimately this is one of the things that we cherish very highly in our profession is that we are required to do analysis and we are required to do creative work, I don't think that we are always required to explain the leap.
LL: I think this worked out beautifully.

RM: I have been only once to Beijing for 3 or 4 days and then not really been about the city too much, but I recall that position. When we went to this one place which was at the edge and saw the freeway I guess, a version of it. So you picked a really fabulous, I think the right place. I guess there are other places one could have looked at too. The rubble of the houses that are 150 years old turned upside down and bulldozed, the beautiful red columns sitting there...and it was beautiful to see, when we were there is now a long time ago, 4 years ago, we were wondering why it was being torn apart and how sad I was to have, well for us we hadn't known it, but to have that not be there as a part of the city. It wasn't going to grow and develop in the way that Rome did or European cities did, or even American cities now do. We talk about them being bulldozed and transformed but we don't really do that much of it which we tried at one point. I really... So we were wondering where the visions were going to come from for what's retained and what's not retained or how one is able to put the history or what it had been within the new work. I think for the first time, and I've seen a number of thesis projects that have explored that problem and I see glimpses of it here. I have to say that we for this work have to think for me, Charles and Ray Eames has such a beautiful correlation to that work.

LL: Particularly when you see that last part. The kaleidoscoping images and somehow the algorithm of putting them together which he suggests could be in any way.

LC: The linearity of the scroll is deceptive because images are unlike words in that you can begin to read them in another order than perhaps it was intended, and it is not as regimented as text on a page. And what I liked of your showing us of this text in the digitized image is that you began to pan horizontally and then vertically and then maybe loop around and continua and you demonstrated this facts quite clearly. And so we saw this kind of interesting condition of adjacency would develop and programs would find themselves interwoven. For me what began to become apparent and the potential of this project is the use of the medium to begin to say, yes I have this linearity and I can gain control of it or, deterministic if I want but that I could also allow these moments to suddenly make clear that this linearity is deceptive. Even the linearity of the movement between the center city and the suburbs is not clearly one that makes explicit the historical continuity. There is always this kind of rupture of one moment of time into another. And I think I'd like to see more exploration of that given that the media really lends itself I think very clearly to that type of exploration. Not to say to make it completely incoherent and to make it kind of MTV not at all, I think that very much within the subtlety I don't want to say yes, we have to justify everything analytically, but I think that one of the beautiful things about the scroll painting, what it does spatially, is to allow that kind of subtlety to begin to render a kind of ambiguity to the space and a kind of depth of space temporally.

AB: I'm scared of 2 things here, maybe 3. One is the age old seduction of the medium. It's so cool to be able to do this that we look at that rather than ask ourselves what are we really looking at. And I wonder as we look hard at these images whether they really present images that we might want to live with. Second, I'm really scared by Lars' call for an almost non-invasive way of thinking about design. And the third thing that I'm concerned about is the sense of that the rendering of these places is the equivalent to having done your work as a designer, that the assemblage is what you do. And I would say that there is a difference between a thoughtful assemblage that in assembling reconfigures the pieces, and one that just collects them and lets them be. It sums up that when I look at some of these images some of these paths, they seem to me more like an affirmation of what again I think has been a rather ameliorative attitude in the 1970's especially towards the left over spaces of highways and point block towers and such that we got these wonderful perspectives that architects did showing how people would be playing in these big open spaces and how these big open steps leading down to the waterfront would have lots of kids with balloons tumbling down them. And of course in reality they turned out to be massive, over scaled, empty, all the kinds of qualities that we're now worried about. I would just be concerned and worried about those aspects of the design.

LC: Your taking for granted that this is meant to represent something rather than it is the thing itself, and I interpreted it as it is the thing itself. But maybe a space like that is appropriate in a virtual realm and not in a first reality realm.

AB: I'm doubting whether it can be accepted as such. Once it has been rendered it is if you will, a proposal.

LL: Have you seen the latest poster we did which talked about blurring borders? You are painting a picture of the school which I really hope we are not. We are not a school in which we just turn out designers. We are not a school of ideology, we are a school of thought and many thoughts, hopefully. And I hope this eventually will lead into a better world. I'm not so sure that everything has to be in the same direction that ultimately every project at some end has to have some political commitment to what's right and what's wrong. I cherish embryonic, fresh new things maybe too much, it might be a problem because I think that may be my only hope about not growing old is that always look forward and forgetting the past, so there is something in this that I like very much and that I feel that it is looking in a direction that we don't spend enough time on which is the laconic everyday. We need to look at it quite carefully, not run so fast to how we are going to solve it. On a
totally different note it would seem to me that there are things that are
embedded in Chinese culture that I have touched besides Tai Chi that are enormously interesting
to me. One thing is the propensity of things. There is a notion that is completely absent in our
culture. Things themselves have a kind of propensity, they have their own power, their own will,
their own suggestion. And then you combine that with Feng Shui, there is a path through this. I
can't help that this is a western path that I see. The only thing that prohibits me from seeing it
completely is Tai Chi. I wonder if there is a Chinese way, not Mao's way, but a Chinese way,
maybe an even older way through this maze that would show something that might not so easily
be acceptable to us westerners. That's a sort of challenge to the way you're looking. What I liked
about the scroll was that the ca

mera hesitated, got interested in certain things, and there was a
kind of vibration and there is a way that you look at Chinese paintings which is that the eye is
never fixed, it is always moving. It is always inscribed in all Chinese depictions is the eye
moving, it is never fixed. So therefore the fact that this is often a pedestrian eye here disturbs me
a little, rather I would like to see it be more agile.

MB: I think this is the critical part that is being solved possibly. The contemporary Asian city is
overrun by western mechanisms so we know the discrepancy between culture and economies. In
the scroll, depth-time is a vertical dimension so the flatness of the scroll is affirmed. In the
Chinese axo, depth becomes a vertical dimension. In Grandma Moses paintings, sometimes Peter
Bergen's paintings the way depth as time is actually coplanar with the surface, a strange western
transformation of something like that. Which I think is really powerful and that you pointing to
and where there is a cultural gap there is that mix between the western which is the distant
observer and perspective and the camera and the monocular lens and the Western economies and
the western transformation of an Asian city, and the ancient traditions of an Asian culture's
concept of time. And what I think is intuitively being put together beautifully here is in my mind
the confluence of the two images in bringing the two mechanisms together in a kind of epiphany
of the still and the moving.

AB: I think you should be very careful to justify things to a kind of orientalism by contrasting it
with another culture. I just worry that you guys are throwing out the baby of criticism with the
bath water of building. I agree with all of the wonderful things that can be gained from this but I
still want there to be a moment of going, wait a second, I am looking through my lens or through
my keyboard at this condition and Lars is absolutely right, the loving eye that peruses this
landscape is absolutely fantastic, the acceptance and exploration of it is absolutely great, the
refusal to become to a single point of a perspective of a conclusion was fantastic. But that does
not preclude wanting to change it, maybe not to make a better world, but to interject yourself
subjectively within this. To have a point of view, to have a motivation, to think about the
morality, the ethics, the scale the activity within this. To have yourself not just be a fleeting
conjurer of buildings, but to have someone who actually inserts himself within this, wonders
about it, is scared of it, wants to do something in it. Maybe not make it better, but certainly act
within it, as the sublime landscape when you are amidst these things that you have either conjured or I am
not sure of your ability to do the alternate.

AP: .......You kept saying it and I think the question for Hu Li is he wasn't quite sure what it was.

MB: I wonder about ...... the ghost of super studio. And the privileging of the horizontal plane
And it is what is being explored here. Before you take these positions you have to clearly
understand an environment like this. I think HL had doubts about not only his own, but our own
understanding of this environment such that we wouldn't make these decisions...

AB In your process of understanding you are already acting within it.

AP: That's just a matter of degree. He's more interested in discovering what it is.

RK: I'm sorry but I don't see a lot of discovery here. I am completely overwhelmed by the
virtuosity and the technical proficiency, but these are easily surpassed by the most vulgar of
video games. So I'm actually a bit skeptical about the innovative moments in this project. Unless
there is a position taken with respect to these video games and their precision and their
intentionality and appropriation of the video game, then we are just presented with cliches.
LC: It seems that everyone is talking about this very conventionally as architects. We're talking about the space of representation that we see in the image. You have something also very different here. We don't even have this singular image anymore. What I see is a split screen with 4 sites simultaneously interacting not the singular space of the pedestrian walking.

AB: Fine, but that's what just underscored my response to Albert which is there is no such thing as a neutral representation. It is already taking positions.

RM: What I'm getting at here is, I think you are asking for the possibility of places in the city to calm down. Maybe you could say it's an accident of the technique and the technique then biases the thing. But I would assume you accepted that. In this technique it is not so hard not to have severe jump cuts and quicken the pace.