



EPsn  
461

Immersive Architecture:

Unfolding space through  
real virtuality

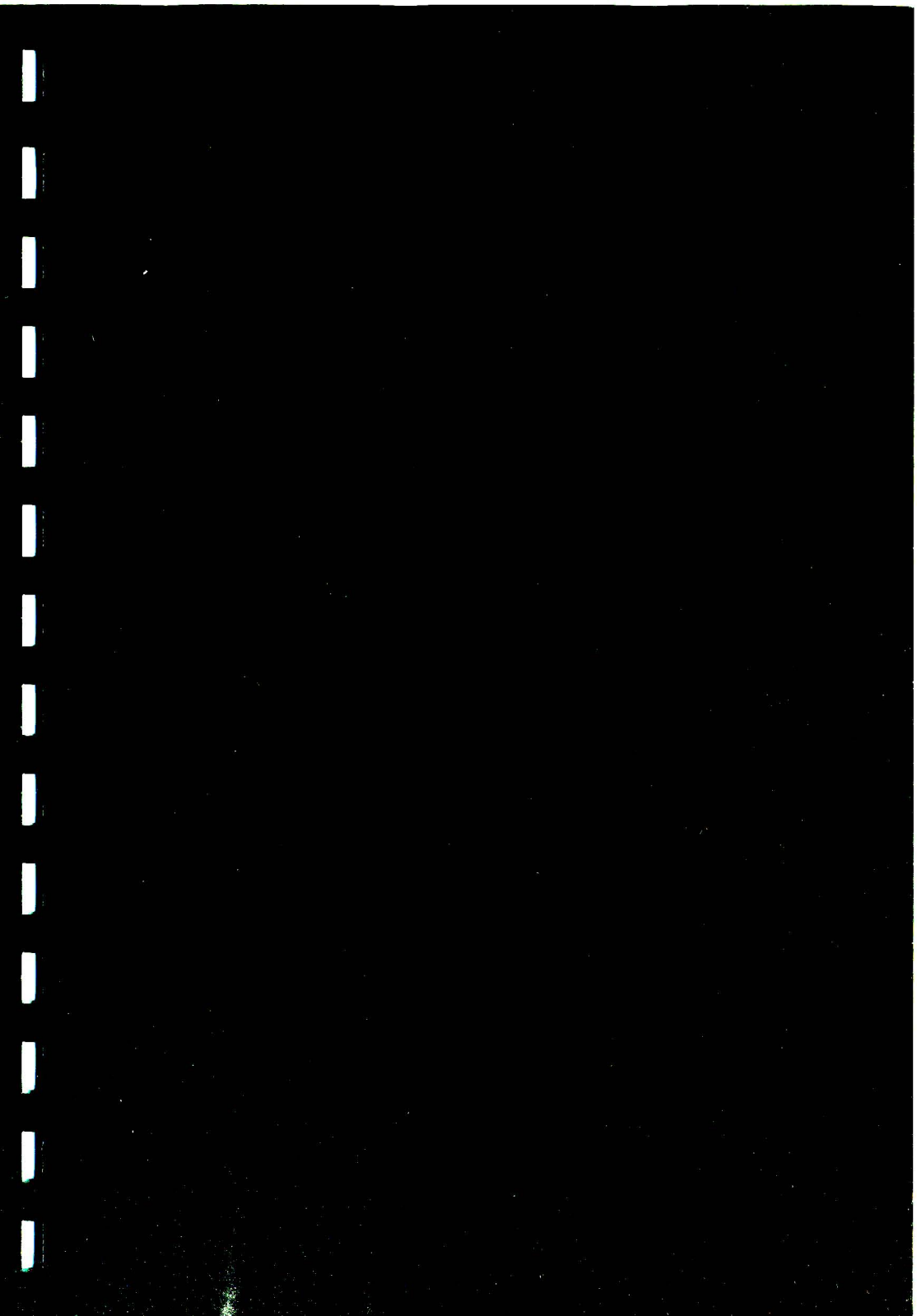
**SPACE**

**THROUGH**

**VIRTUALITY**

**UNFOLDING**

**REAL**





American University Of Beirut - FEA  
Dept. of Architecture and Design  
Fall 2007-2008

AS08 Design Thesis I

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# ARCHITECTURE



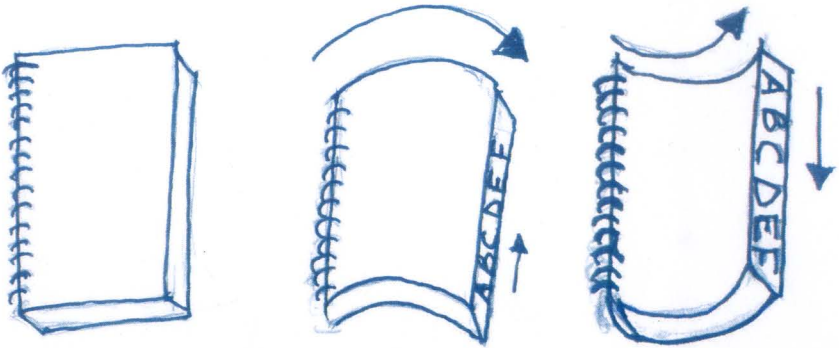
How to look at walls



## How to read the title

To read the title hold all the pages between your thumb and four fingers and curve them pushing your four fingers to the inside. The first part of the title will appear within the thickness of the sheets.

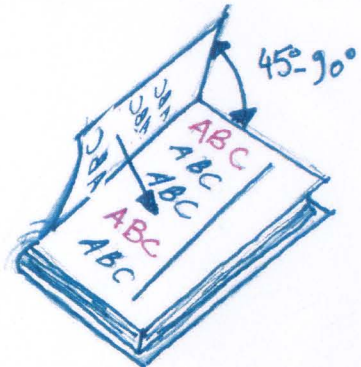
To see the other half of the title do the same with the other side:



## How to read the subtitle

Hold the three first sheets in angle between  $45^\circ$  to  $90^\circ$  in relation with the black frontal cover on which half of the title is written.

The black cover will reflect the words written on the opposite sheets filling the gaps between the words and completing the subtitle.



## Abstract

This report starts with a simple observation: the undeniable existence of virtual bodies. How can we create an architecture that accomodates for these virtual bodies while reconciliating these bodies with our "physical" one?

The manifestations of virtuality in our daily life is mostly linked to the globalization, media and consumerism that use virtuality in order to maintain a cycle, which I call the time cycle. My aim through this project is to break this cycle.

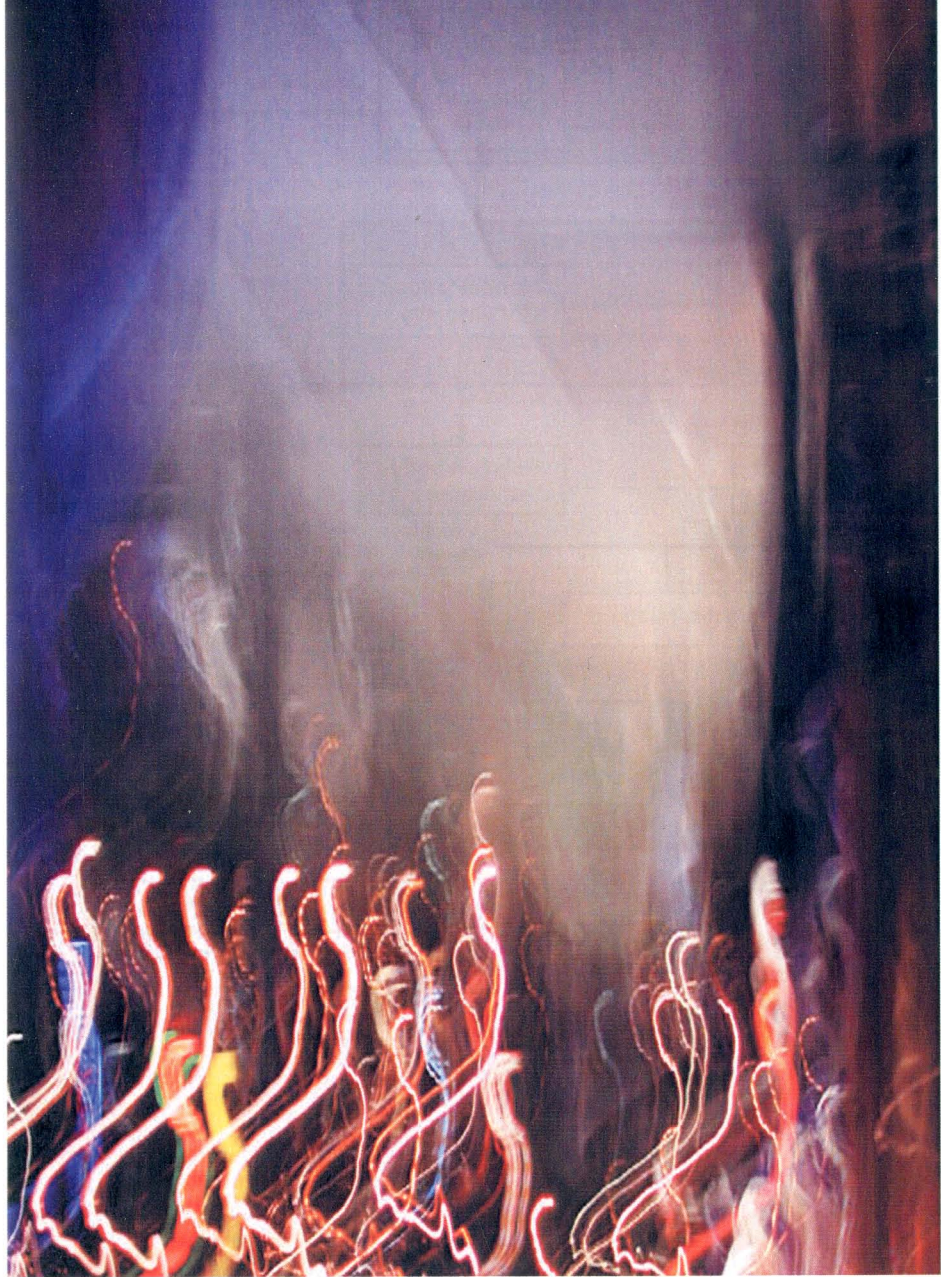
Through the analysis of some digital and architectural cases to which we associate virtuality, I extracted a certain recurrent relation, which is that of the body and environment.

Deleuze definition of virtuality if applied in a specific way, gives the possibility to break the cycle while multiplying this relation.

The actualization of these relations are called real virtuality.

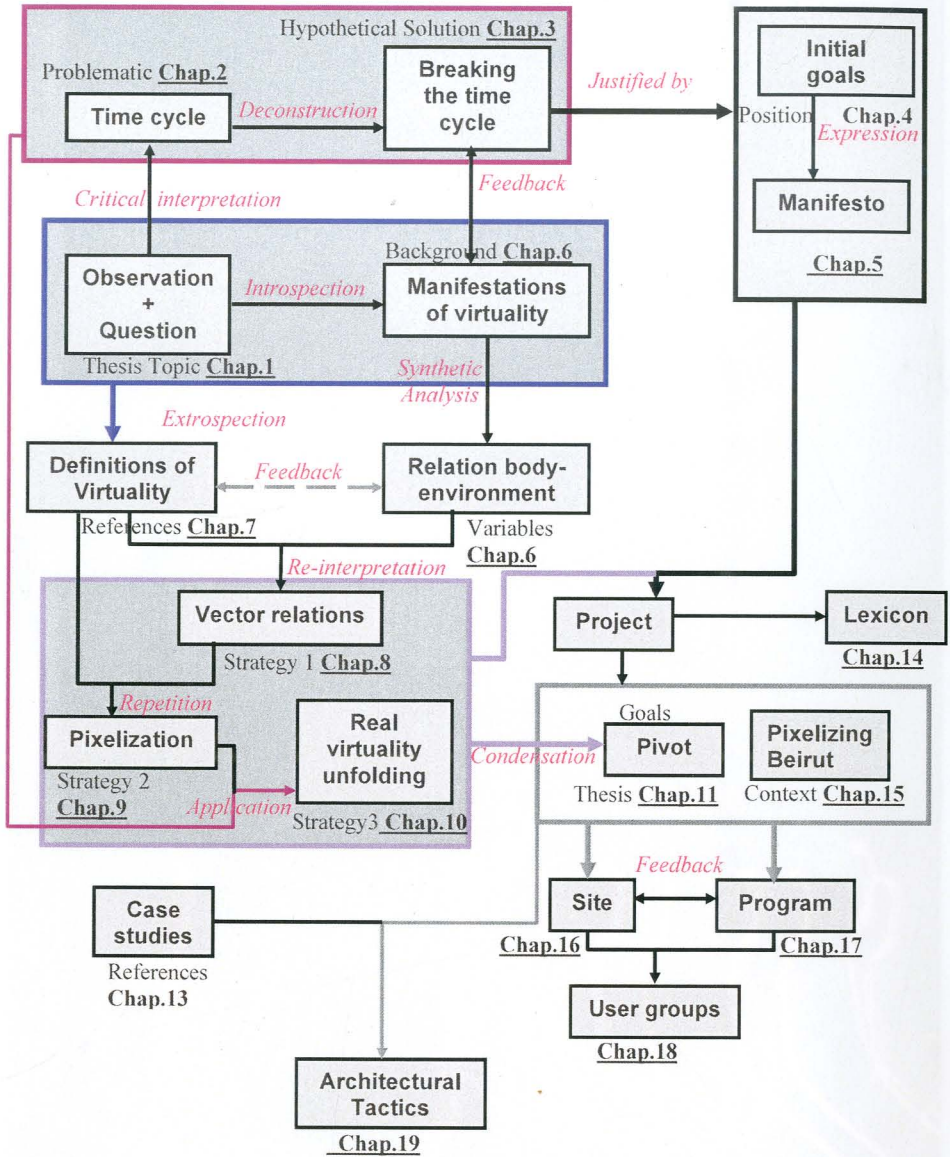
Through another strategy which is pixelization, we can maximize the effect of real virtuality while abstracting the different realities related to the body and the environment. It is this abstraction that allows us to escape the time-cycle and reappropriate our virtual bodies.

Through real virtuality, the project becomes an endlessly revolving pivot that relates the infinite co-existent realities.



# Thesis Map

ARCHITECTURE



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## Living with Virtual Bodies

Facing the shop window of Gucci I see my own reflection on the glass, and I see my face exactly overlaying the model's. The model is wearing a long silky golden dress, and suddenly for a short moment of time I can see, but really see, myself in this dress. Am I really sitting behind this glass, seeing myself watching myself, feeling pleased and charmed by the amazed look of my own gaze? Am I the one who is looking or the one who is being looked at? It's getting really messy in my head. One thing is sure, I really suck in these old jeans...







## Living with Virtual Bodies

We cannot deny anymore the existence of our virtual bodies, Nor can we deny the fact that they are certainly not created by our own will or imagination, they escape to our control and are shaped by factors that are in a way imposed to us. The distance between our physical body and our virtual ones is increasing, we are no longer multiple, we are fragmented.

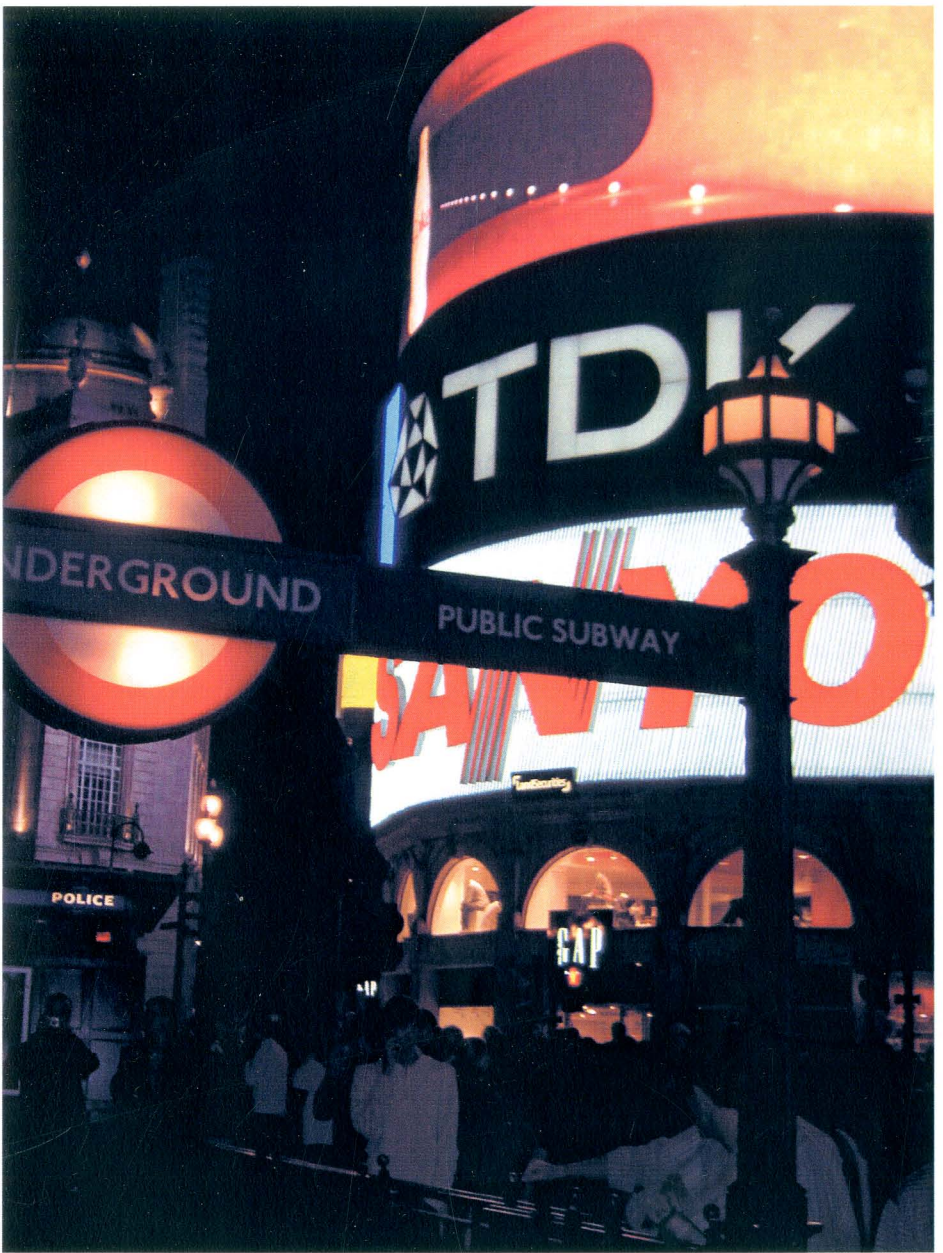
How can I create an architecture that accomodates for these virtual bodies, while at the same time reconciliates those bodies with our physical one?, Reunite all the bodies while keeping their multiplicity and the richness of their diversity? How can I merge 2D spaces, mainly inhabited by virtual bodies and 3D spaces more directly related to "our physical reality", creating a third dimensional space?

Let's start by zooming out to a bigger frame, the coming chapter will attempt to answer the following question:

**1-Why do we feel separated from or not controlling our virtual bodies?**

**2-How can we reappropriate those bodies?**





## Unreachable Present

The notion of virtuality illustrated in the precedent example is always accompanied by the feeling that the present is not lived "in the present", for what it is, it is always a projection of the present in another time, a time that might be the future, or any other parallel, undefined time stuck between different realities.

The following diagram is an attempt to express the multiple "moments" we pass by without necessary living the present:

**See myself seeing  
myself  
in the dress**

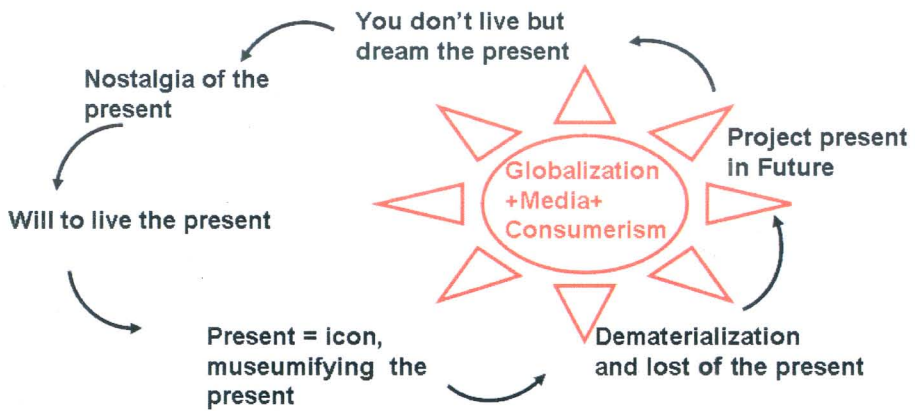
**realizing  
distance between  
projection and  
actual body**

**Looking at the  
dress in the  
shop  
window**

**See myself  
in the dress**

**Immersion in the act  
of looking, moment is  
only about looking at  
the dress**

**See my own  
refelction on  
the glass**





Unreachable  
Present

For each step let's  
go into more details  
and see how it can be  
expressed more explic-  
itely:

**The will to live the present:**

Inherent will in anyone of us since we are within time, no matter what we do, at the moment when we are doing it, we are doing it in the present.



**Present becomes an Icon, museumifying the present:**

In the attempt to freeze the present, the present museumifies itself, we can clearly see this in corporate architecture, or in an architecture that involves many layers of decontextualizations such as in Dubai.



**Dematerialization and lost of the present:**

The present becomes an image, the sign is more important than the architecture itself, the whole architecture becomes a sign.



**Project the present in the future:**

This projection happens through Utopia or Dystopia



**Dreaming the present**

Corresponds to the moment when you realize the gap between the actual state and the projected one



**Nostalgia of the present**

Is a reaction to the previous step and is expressed by the feeling of emptiness, and is followed by the quest for new values

Virtuality in this diagram is more about the relation that links each step than about each step on its own. The feeling that we cannot really control our different bodies at the different steps of the cycle comes from the fact that this same cycle is maintained by three contemporary phenomena.

Unreachable  
Present

**Globalization:** Because it creates cultural mixes and clashes and blurs all the identities and tempo-spatial references.

**Media:** that create new environments, produce so many images that affect our perception of the direct environment and transform our memory in relation with the produced images, and confront constantly our physical body to virtual bodies.

**Consumerism:** creates new needs to our physical body by manipulating its identification to virtual ones.

All of the three use the same strategy which is **immersion**, immersion being in this case the creation of a whole environment into which we are plunged.

JAPON

# Une décadence sociale illustrée

Une société sous surveillance. Des jeunes qui reçoivent un préavis de mort et qui n'ont plus que vingt-quatre heures à vivre. Tels sont les ingrédients d'une bande dessinée à succès qui traduit le malaise de la société nipponne.

SHUKUYANAMI (extrait)  
Inyo

La sonnette d'une maison retentit brusquement en pleine nuit. "Je suis M. Fujiwara", annonce la femme qui sonne à la porte. M. Fujiwara se présente à une heure pour lui remettre... "Je suis votre sous-maitre. Dans le but de votre mort". Aux termes de la loi sur le mariage, les enfants de la Loi sur le mariage doivent être inscrits dans le registre national. Le préavis de mort est envoyé à l'âge de 18 à 24 ans. Les individus sélectionnés reçoivent un préavis de mort vingt-quatre heures avant leur mort.

Inyo est un manga qui paraît dans l'édition de janvier 2003 de Shogakukan. Il décrit les jeunes frappés par l'avis de décès et leur vie pendant les vingt-quatre heures de leur existence. En tant que journaliste, j'ai pu visiter les bureaux de Shogakukan et j'ai pu voir les personnes qui travaillent dans les bureaux de Shogakukan.



LE MÔ  
"SH  
DE

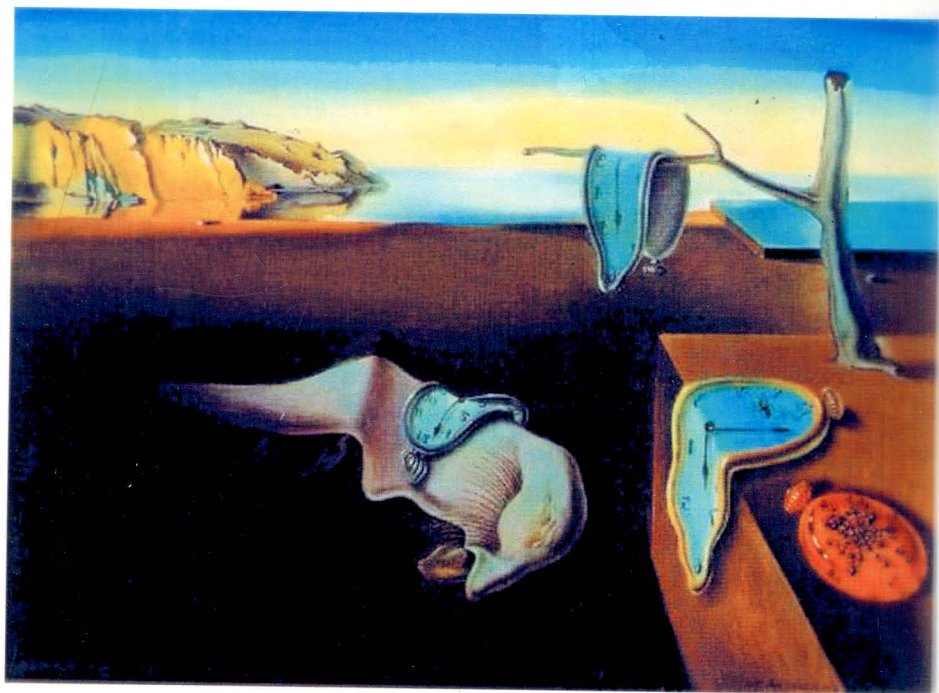
Inyo Koda n'a pas pu être sauvé. A l'époque, je me suis dit que l'avis de décès est la vie d'un individu, soit sacrifié au nom de l'intérêt national, soit remis au nom de l'intérêt national, soit tout le monde mourra par le danger qui précède. Les gens sont également préoccupés par leur avenir, et c'est pourquoi ils se débattent dans une société extrêmement contrôlée, le lecteur sera certainement intéressé par ce livre. C'est pour cette raison que j'ai voulu l'écrire. Je pense que c'est un livre qui sera apprécié par les gens de tous les pays. Je pense que c'est un livre qui sera apprécié par les gens de tous les pays. Je pense que c'est un livre qui sera apprécié par les gens de tous les pays.

La rédaction de ce livre a été dirigée par Inyo Koda.

établissement  
écritures  
d'...

"Moi le président de l'école, j'ai un esprit communautaire."  
Shogakukan  
Président directeur de Shogakukan





# Persistence of Memory

**DALI**

# Breaking the Cycle

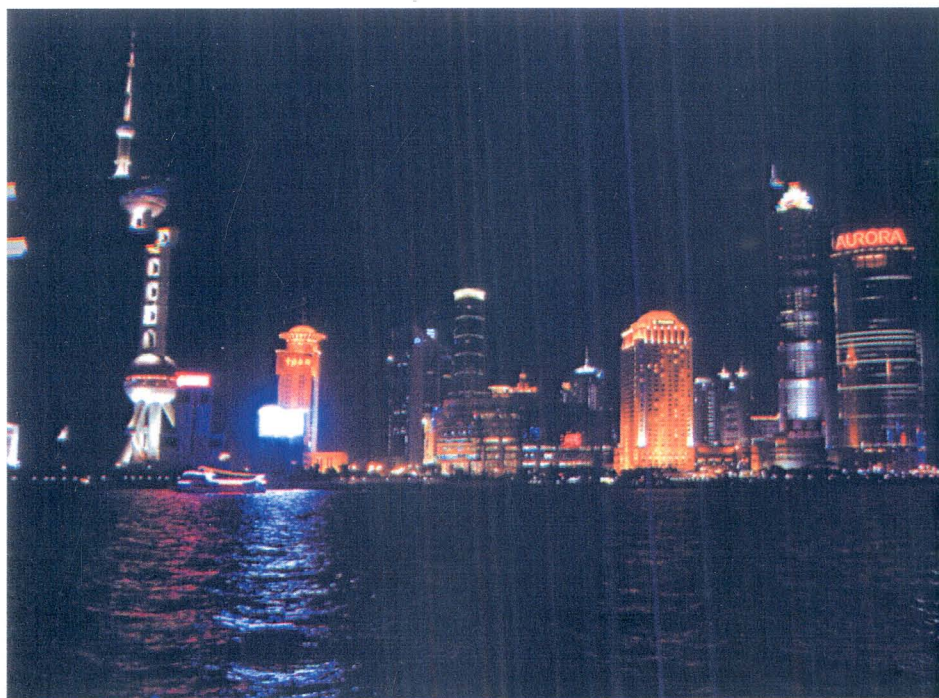
## Reaching a Time through Immersion

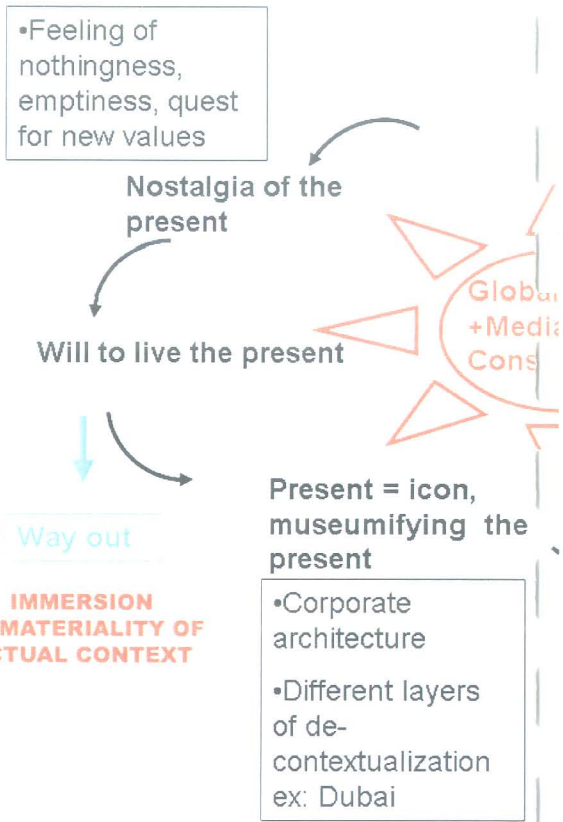
The first obvious move to do in order to reappropriate our virtual bodies is to break the cycle, using the same tools that globalization, media and consumerism use to maintain this cycle: **Immersion.**

The will to live the present and the projection of the present in the future are the steps that we can consider as the two extreme poles of the cycle.

Both are inscribing an immersion in a specific time. Going more in depth in each of these steps rather than falling back in the cycle can be a solution to the cycle problematic.

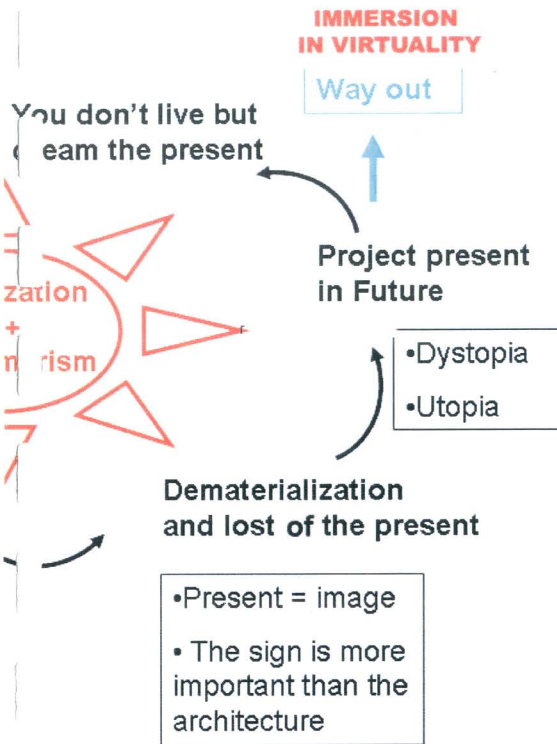






**Immersion in the present** would mean in terms of architecture an environmental building that takes in consideration the weather changes, the movement of the sun, the topography, the existant vegetation, etc...

**Immersion in the virtuality** would be the total dematerialization of the architecture, it would simply be an architecture that cannot exist in the physicality of the tactile material but rather an architecture made of numerical matter.



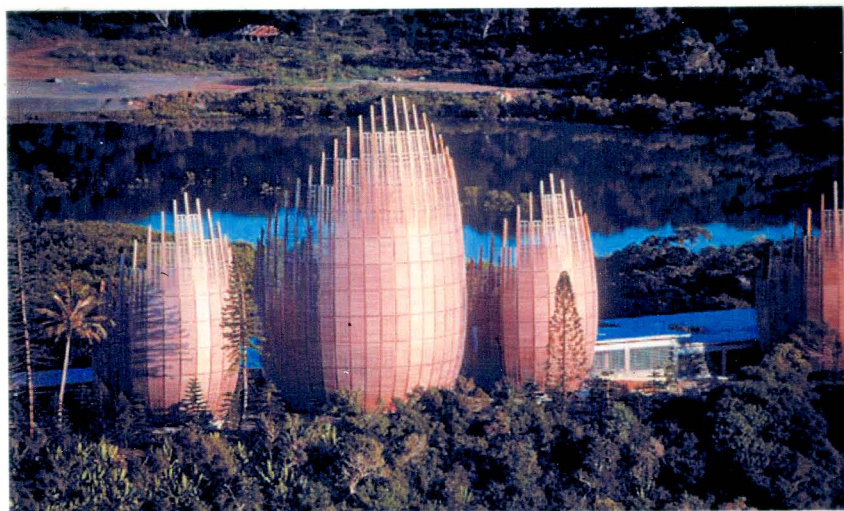
*“The outdoor performance spaces, the traditional ceremonial grounds and the complex of buildings located at the tip of the peninsula (accommodation, canteen, workshops) reflect this concern and blend closely with the natural contour of the land.*

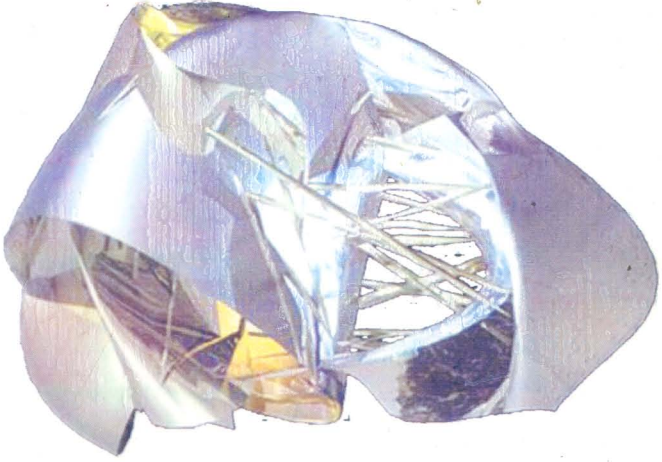
*Inspired use was made of the natural flora of the site, with the addition of a great variety of native New Caledonian species. Stately mature Araucaria pines were transplanted to the site, and a “Kanak Pathway” was created, a journey through a profusion of native species winding through most of the site, designed to give the visitor a glimpse into the symbolism of plants in Kanak culture”.(2)*

(2) [www.adck.nc](http://www.adck.nc)

**Renzo Piano**

Tjibaou Cultural center in New Caledonia





# Marcos Novak

## Transarchitecture

In his article “real virtualities”(1), Marcos Novak describes what he calls liquid architecture, or transarchitecture. In a closed room, a stereo linked to a model cutting machine emits music. When people enter the room, they move in rhythm with the music, a movement sensor registers their movements and sends them numerically to the model cutting machine that transforms the numerical data into cutting movement, and a model is continuously being created. The physicality of the model as well as the movement of people feedback the music that is changed accordingly etc...

Here the architecture is in continuous change, it is an infinite architecture, it can only exist virtually. It is immersive because it resends the actual into the virtual.

(1) Marcos Novak, virtualités réelles, transvienna, [www.archilab.org](http://www.archilab.org)

## Objectives

**Maximize the effect of virtuality as to transform it into a creative element rather than a manipulative one**

**Break the cycle maintained by globalization, media and consumerism through immersion**

**Re-appropriation of the virtual bodies**

**Reconciliation of the physical body with the virtual bodies**



*“Materiality is defined as the intersection of two opposed categories: on one hand the totally abstract (...)and on the other hand the ultra concrete”*

Antoine Picon (1)

## Manifesto

**An architecture that deals with the reality of the body and its senses but that does not deny the existence of the body as an image**

**An architecture that lets you see yourself seeing**

**An architecture that is fluid enough to be in continuous change, but stable enough to be anchored in its context**

**An architecture that explores the world of virtuality to better redefine its materiality in the reality**

**An architecture that results from a dialectic between The 2D and the 3D worlds**

**An architecture that offers to the user a full potential of life and dreams but that also confronts the user to his/her own mortality**

**An architecture that is undeniable through its versatility, and ephemeral in its presence**

**(1) Picon, Antoine “Architecture and the Virtual: Towards a new materiality”**

Is an architecture dependant of a physical context and a virtual architecture really incompatible?

The following examples, from theme parks to science fiction movies passing by digital arts and internet, blur the limits between the “physical” and the virtual and push us to requestion the definition of “reality” and that of “virtuality”, while revealing different means of IMMERSION.



# Gates To Virtuality

## The Word

The word creates a reality, it actualizes an idea, a feeling, a thought. But also by actualizing, transforms and limits, its sets a specific meaning that has limited interpretations.

The image does the same. When a word and an image deliver contradictory messages, virtuality emerges from the clash between the different realities they represent.



*Ceci n'est pas une pipe.*

# MAGRITTE



## Gatees To Virtuality Disneyland

According to Baudrillard, Disneyland virtual, in the way it uses reality:

*"The Disneyland gos beyond the imaginary by engaging in the process of capturing all the real worl to integrate it into a synthetic universe. as a result, this synthetic universe takes on the form of a vast reality show where reality itself becomes a spectacle", " It is not only interested in erasing the real by turning it into a three-dimensional virtual image with no depth, but also sekks to erase time by synchronizing all the periods, all the culture in a single scenario"(1)*

Another way of seeing virtuality in Disneyland other than relating it to the "fakeness" of reality as Baudrillard does, would be in the multiplicity of "bodies" it offers.

In fact, what Baudrillard did not mention in his articles, is the notion of immersion, a notion that interests us since it is the main strategy of the proposed solution (breaking the cycle through immersion), and is essential to the process and construction of this thesis.

(1) Keane, Stephen Laurence "Baudrillard and the Disneyworld Company"  
Theme parks in the United States, shaping the American Landscape







IMMERSED

## Gates To Virtuality Disneyland

If immersion literally means “an environment into which we are plunged”, than Disneyland is the place of multiple immersions. It offers a palette of environments that through their meticulously “realistic” decors, immerse the visitor who becomes in his/her identification to the environment totally unseparable from it.

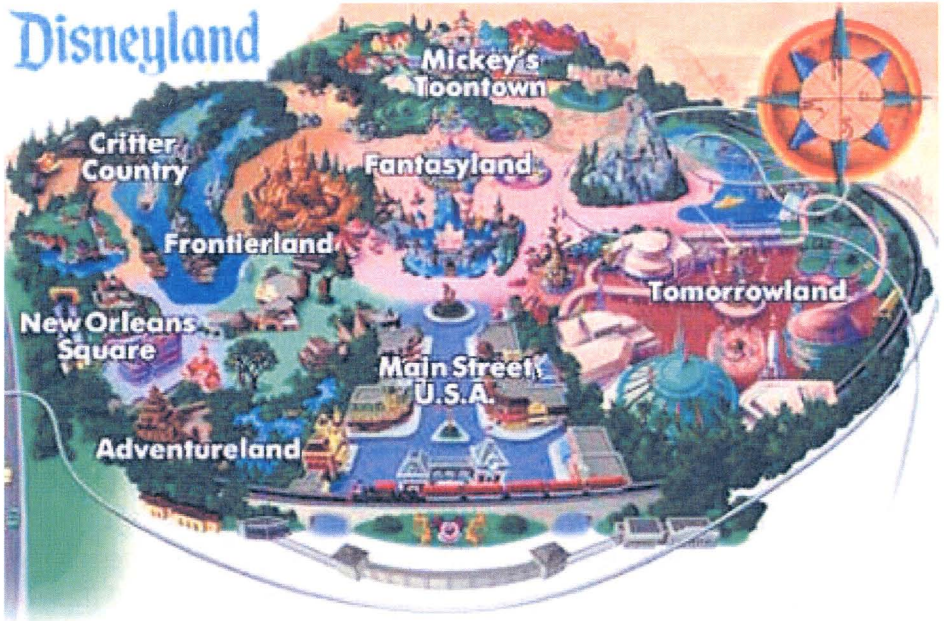
In other words, to enjoy the “reality” of Disneyland you have to become part of it. In order to believe in the reality of your body, within Disneyland, you have to believe in the reality of the environment.

When you go to Adventureland, you “really” become an Indiana Jones’ movie character, leaving for a moment the image of your “real” physical body and all the images that are associated to it.

In his book “travels in hyperrealities” Umberto Eco states that it is the fact taht the visitor takes part of the scene, that makes the scene so real.



# Disneyland



IMMERSED

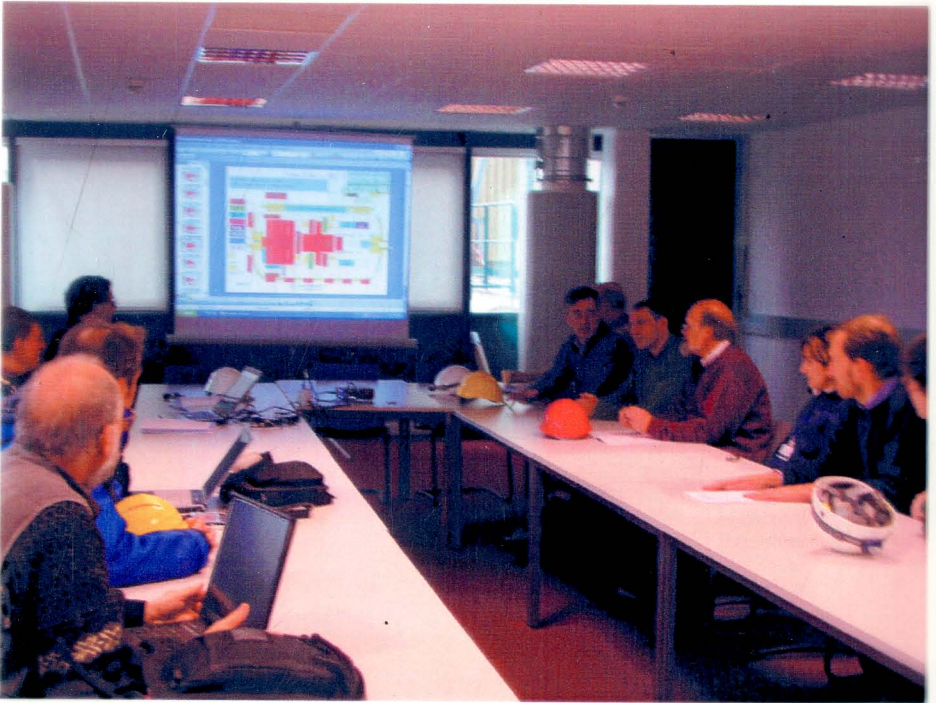
## Gate To Virtuality

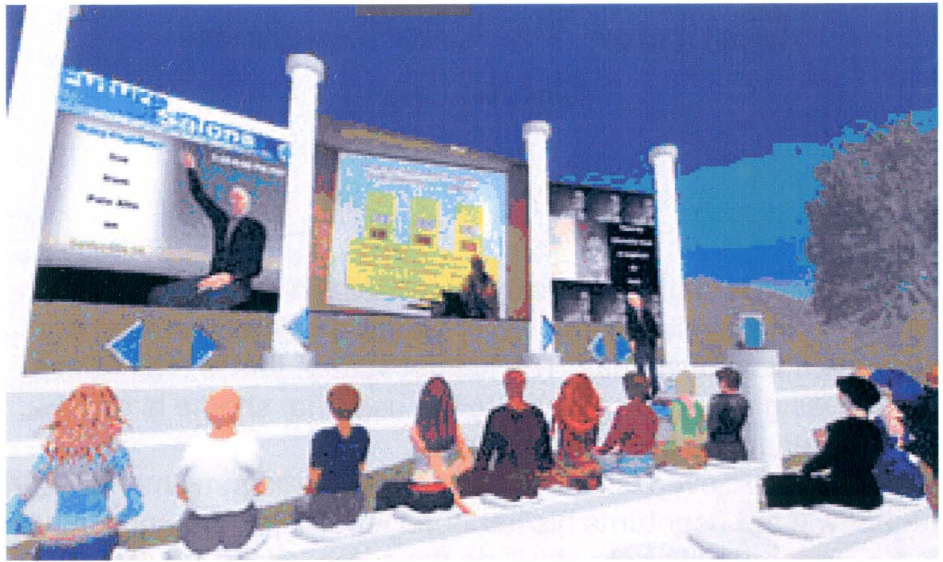
### Second Life

Stephan Doesinger is an architect who launched an architectural competition in second life (an internet program where you literally live a second life, with a body, house, job etc...). In the article "l'architecture virtuelle ne se contente plus de répliquer le réel"(1), he argues that a space cannot be "real" anymore if it does not acknowledge its virtual part through mediatization: *"It seems that everywhere when the physical space and the media space merge or intersect, new spaces emerge. I call them « Bastard Spaces »", "Even the public space is a bastard space. It is a media construction. A space is no more a space if it is not « mediatised » . The same is valid for people"*

In Second life, immersion happens through the screen that becomes an interface between the physical world and the digital one. The only material that links the two bodies, the physical to the virtual is the money. In fact, in second life, you earn and spend money.

(1) Lechner, Marie "L'architecture virtuelle ne se contente plus de répliquer le réel" Ecrans Libération





UNIVERSITY

# Gates To Virtuality

## Ephemere

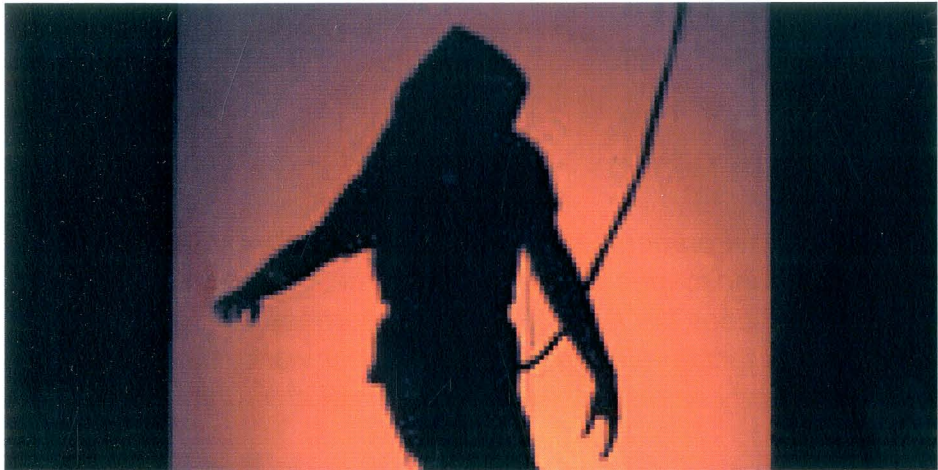
Ephemere is a digital art exhibition realized by the artist Char Davies. In this exhibition the visitor wears a helmet that runs uninterrupted flow of images. The helmet screen that is really close to the eyes give the impression to the user that she/he is completely overlapped by those images.

The space perceived is in total harmony with the movements of the body. If the user turns his/her head left or right, the movement of the camera in the helmet will do the same, giving the illusion that the user is actually in this space.

The movement of the images also follows the breathing rhythm of the user.

The exhibition also "exhibits" the user that is experiencing the helmet, by projecting the image of his/her body on a screen while showing on an opposite screen the images that are running inside the helmet, thus making apparent the relations between the movements of the body and those of the projected images.





IMMERSIVE

Gates To Virtuality  
Ephemere

*“ Virtual environments such as Char Davies’ provoke self drift in unknown landscapes where the demarcation line between illusion and real does not have the same clearness”,*

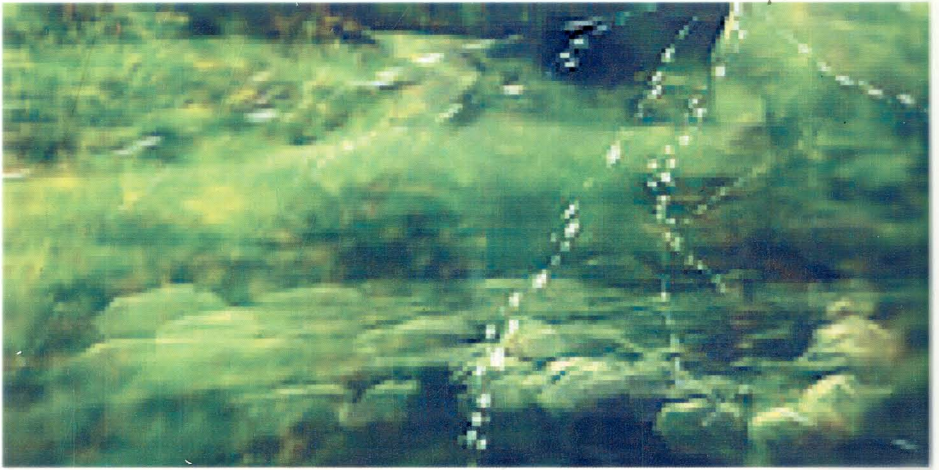
*“Deprived of tactile relation with the exterior world, I stop perceiving my body as distinct from the artificial environment it occupies”*

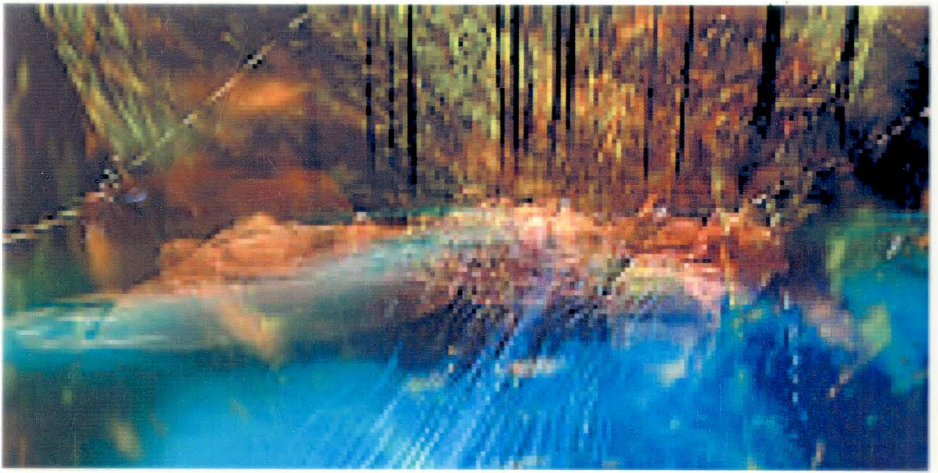
*“I can’t think anymore I want, images have subsituted my thoughts”*

*“I don’t know if I am in the space or if the space runs through me”(1)*

In Ephemere, during the Immersive experience, the users don’t seem to be able to differenciate anymore the physical from the image, their own body from the virtual environment, it is a complete merge between “virtual” and “real”.

(1) Dot, Tuer “La seconde nature de la simulation” Le reflet de l’organique dans le monde virtuel par Char Davies





## EPHEMERE

**CHAR DAVIES**

IMMERSIVE

# Gatees To Virtuality

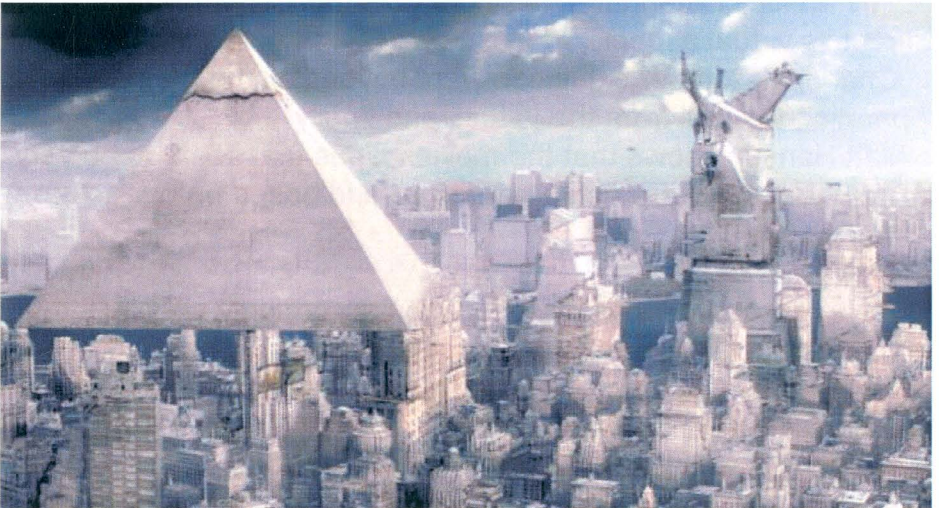
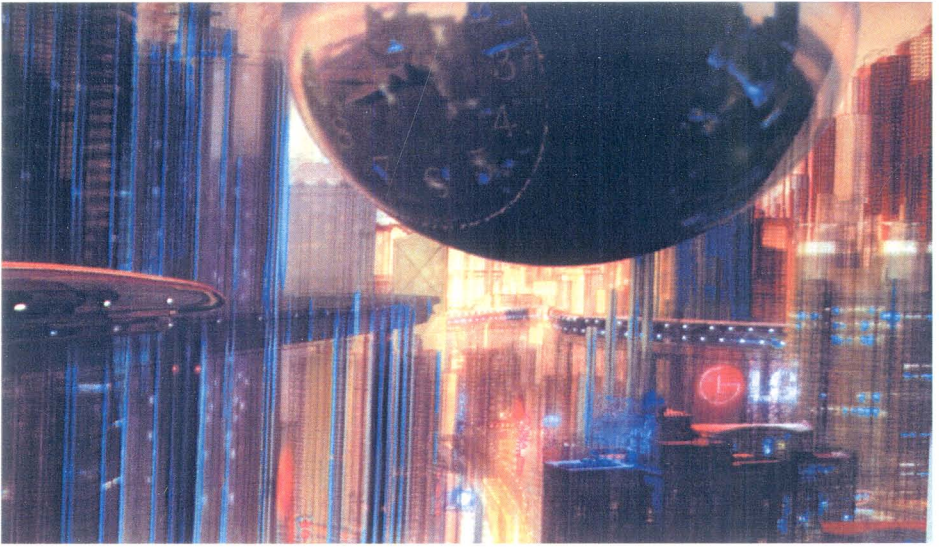
## Sci-Fi movies

The attractive strength of science fiction movies relies in their capacity of transforming the familiar into unknown and vice-versa. The making of these kind of movies is a long process of image manipulation, from pictures of existing settings, to their transformation and translation into 3D models of "futuristic" models.

*"The worlds created by science fiction cinema - whether full-blown fantasy or fiction a few degrees separated from the facts of the real world- have always been more about our present than the future they purport to predict"* Matt Hanson (1)

In fact the main strategy used in the science fiction movies is the use of familiar signs and codes from different periods and different places, and their transformation and integration into a whole "new" environment, that induces a feeling of déjà-vu.

(1) Hanson, Matt "Building Sci-Fi moviescapes" The science behind the fiction-Rotovision- edited by Leonie Taylor 2004



# Gate To Virtuality

## Synthetic analysis

In none of the precedent examples is the limit between virtual and real clear.

In fact, if Baudrillard sees the real as the "original" and links the virtual to everything that is simulation, reproduction etc...,

The architect Stephan Doesinger does not conceive reality without its virtual aspect,

Char Davies in her exhibition went beyond all the boundaries separating the real from the virtual, and finally

Matt Hanson shows that the moviescapes that seem to be very far from the reality are actually inspired and based on our actual context.

If we redefine our proposed solution accordingly we have to admit in a way that immersion in actual context cannot be without immersion in virtuality and vice versa without denying however that this relation of confrontation or interface creates a "third" reality that we will assume to be a **real virtuality**.



# Assumption # 1

Immersion in actual context  
+  
immersion in virtuality  
=  
**immersion in real virtuality**

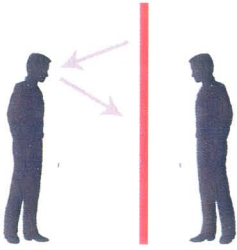
IMMERSIVE

## Gates To Virtuality

### Synthetic analysis

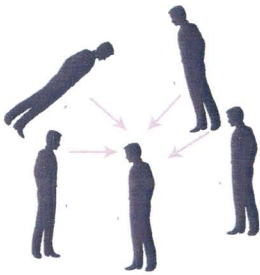
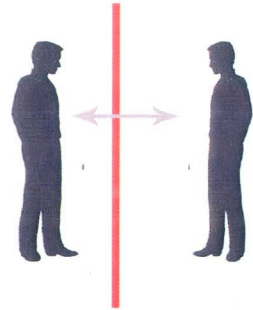
The degree of immersion during the experience is proportional to the degree of awareness and consciousness of the virtual body. The less one is immersed, the more he/she can feel the limits between the physical and the virtual body.

Immersion in these examples happens through different ways and involves different kinds of relations between the body and the environment and their respective images as shown in the following diagrams.



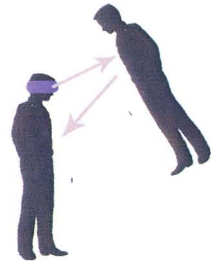
The sci-fi movies uses our mental images of the environment and body, modify them and retransmit them to us in a new form, which transform our perception of it. The main immersion tool is the screen that acts as an image feeder.

In Second life, the screen is more than a projection surface, it becomes an interface between the physical body and environments and the "virtual" ones. It is through the mouse and the buttons that we manipulate the virtual bodies that live in second life.




The immersive power of Disneyland resides in the fact that it is our physical body itself that is inhabited by the virtual body. The transformation of the body is related and depends on the transformation of the environment.

Even more than in Disneyland, Ephemere completely blurs the limits between the virtual and the physical body and environment, Since the helmet reduces to the minimum the limit between the virtual images and the mental ones. Everything becomes confused and the user cannot but requestion him/herself on the materiality and the reality of his/her own body and environment.



IMMERSIVE



## Gates To Virtuality

### Synthetic analysis

If added to the precedent assumption, the initial time cycle will be modified would be a cycle of relations between body, environment and their respective images that can be interrupted at any of its steps.

**Immersion In  
Real Virtuality**



**Image of the wanted  
body is the actual, physi-  
cal one, clash between  
the physical and the pro-  
jected body**

**Immersion In  
Real Virtuality**



**Living in the projected image of  
the body but still stuck in the ma-  
teriality of the physical one**

**Immersion In  
Real Virtuality**



**Body is a pro-  
jected image  
in a projected  
environment**

**Body in harmony  
with environment  
and their respec-  
tive image.**



**Immersion In  
Real Virtuality**

**Immersion In  
Real Virtuality**

**Freezing the body and  
environment in their  
actual state, prevent-  
ing them from evolu-  
ing with immediate  
present**

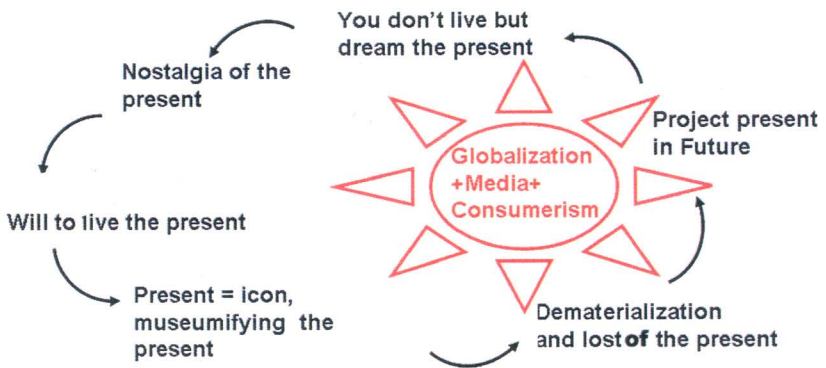
**Immersion In  
Real Virtuality**



**Body becomes an  
image, environment  
loses its materiality**

Virtuality is connected in a way to the multiple body-environment relation

## Assumption # 2



## Gate To Virtuality Recapitulation

The following chapters will have:

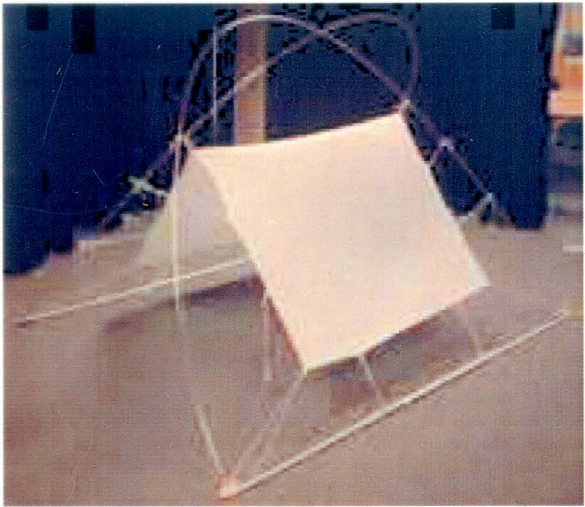
**1- to confirm the validity of assumption #1:**  
Immersion in actual context + immersion in virtuality  
=  
**immersion in real virtuality**

**2- to confirm the validity of assumption #2:**  
Virtuality is connected in a way to the multiple  
body-environment relation

**and specify the nature of this connection**

**3- Validate the hypothesis that immersion in real  
virtuality can be a solution for the cycle problematic  
and define how it can lead to the break of the cycle.**

And this, by finding a definition of virtuality that would clarify its relation to reality, and that would relate in a way to the assumptions #1 and #2 .





**Jonathan Green, Holger Schnädelbach, Borianna Kol-  
eva, Steve Benford, Tony Pridmore,  
Karen Medina, Eric Harris, Hilary Smith, Camping in  
the digital wilderness: tents and flashlights as  
interfaces to virtual worlds , short talk CHI 2002,  
ACM Press, Minneapolis, USA**

**Screen Tent for babies**

65

**IMMERSIVE**

# Virtualities

## Aristotle-Virilio-Baudrillard

According to Aristotle, the virtual and the real are from different orders, the virtual being the potential, and the real the actual which does not correspond to the interpretation of virtuality in the precedent examples.(1)

Virilio sees virtuality as a new reality that will eventually erase and replace the reality we are living in. This definition does not explain to extend can we deny the physicality of our bodies(2).

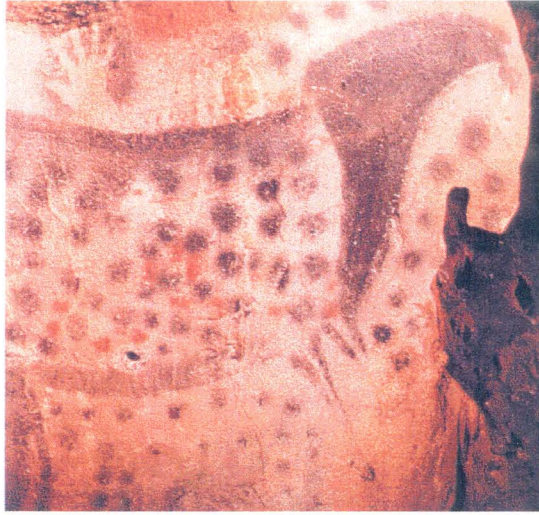
Baudrillard (1) defines virtuality as the collapse between the real and the fake, but his definition is based on the "realness" and "fakeness" of the materiality only.

To deconstruct this definition, we could simply argue that the "realness" of something relies more in its *raison d'être*, in the intention behind it, more than in its materiality.

(1) Goodrich, Alan "Definition of the word Virtuality"

(2) Beckmann, John "The Virtual Dimension: Architecture, representation and crash culture" Princeton Architectural Press, New York 1998





According to Baudrillard, the reproduction of the Lascaux caves annuls both its own reality and that of the original one. We can agree with this if we limit the thinking to the materiality of the lascaux caves i.e : the painting but the reality of the intention behind the lascaux caves, which is the transmission of certain traditions through the painting is maintained thanks to this same reproduction

IMMERSIVE

# Virtualities

Deleuze

For Deleuze, virtuality is the infinite relation that exists between different realities:” *it is real without being actual, but as such posses an actuality, it exists in such a way that it is actualized by creating its own lines of differentiation from itself, virtuality as opposed to possibility concieve variations through differentiation*”

the notion of virtuality cannot be concieved but in relation to other concepts. From all the different concepts I have chosen the five that are the most relevant to the process of the argument concerning real virtuality. (1)

(1) Telkan Orhan “Virtual realities and real virtualities” Thesis , Department of Graphic Design, Institute of fine arts, Bilkent university, May 2002

**Difference- Differentiation:**

*Because virtuality multiplies the relation it erases all notion of references, and difference is not perceived anymore as contradiction or negation, while differentiation becomes infinite.*

**Multiplicity:**

*Is "the logic of sense and event", secures a vagueness that operates on a precision by inventing differentiation, procreating through unexpected ways*

**Duration:**

*Is thought as a movement of time opening itself to a spatialization. Space and time become indistinguishable but provided with different actualizations within the rhythm of differentiation*

**Body:**

*Body is different of the being because it is always becoming of a multiplicity in relation to other bodies, it characterizes the individual in terms of relative states of motion (speed and slowness), always affecting or being affected by other bodies*

**Event:**

*The events give birth to the actualization of things, it is an episode within the continuous movement of virtuality, the origin of it is the movement, it introduces an abstraction that interpretes time and space as conceptions conditioned to the problem of event*

# Virtualities

Deleuze

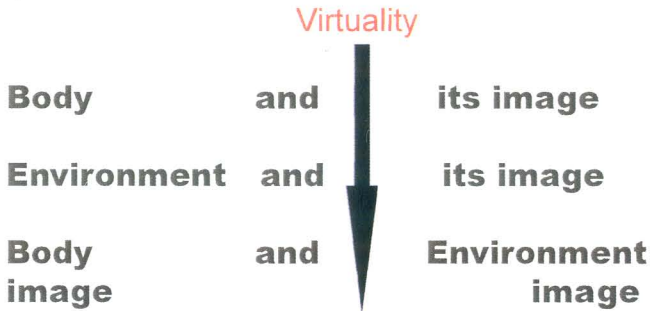
In what way does this definition of virtuality help us validate our assumptions:

1-Immersion in actual context + immersion in virtuality  
= immersion in real virtuality

has to be slightly modified, since Deleuze considers **virtuality as a RELATION between realities**, than the world of images (in all its meaning image as mental image, physically projected, or as a sign, asymbol) that has been previously associated with virtuality can be considered now simply as another reality, than **it is the relation of the world of images with the world of three dimensionality that becomes virtuality** and it is **the actualization of this relation, that we will call real virtuality.**

2-Virtuality is connected in a way to the multiple body-environment relations- define the nature of this connection

If virtuality is the relation between different realities than we can establish the following relations that will be the vector relations of the project:



with the key definition element which is multiplicity. In other words the actualization of multiple relations between those realities, will lead to real-virtualities.

This virtuality will be actualized through the use of different degrees of transparencies, and spatial flexibility

**How can real-virtuality be a solution to the time cycle problematic while at the same time serve the initial objectives and help redefining them?**



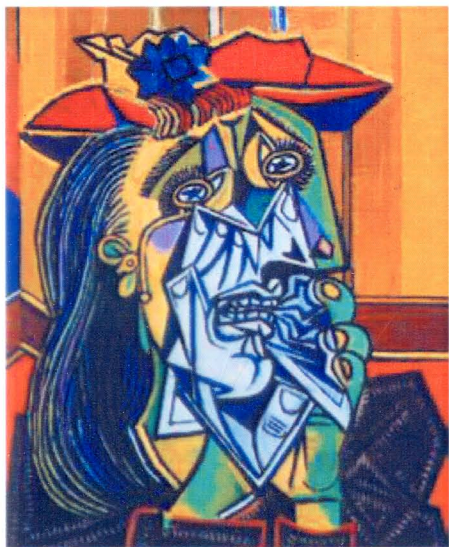
# Real virtualities

as actualization of different realities  
in art

Cubism in painting and science fiction in comics are good example of real virtuality illustration.

The cubism by mixing different angles of vision has transformed the interpretation of space within the frame of the painting but also its perception in three dimensions.

While artist such as Enki Bilal expresses in very rich way the critical relation one can have with his/her multiple bodies.



# PICASSO



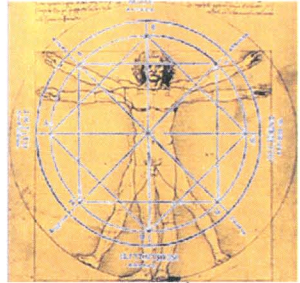
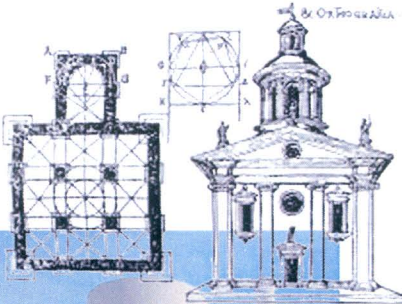
**ENKI BILAL**

# Real virtualities

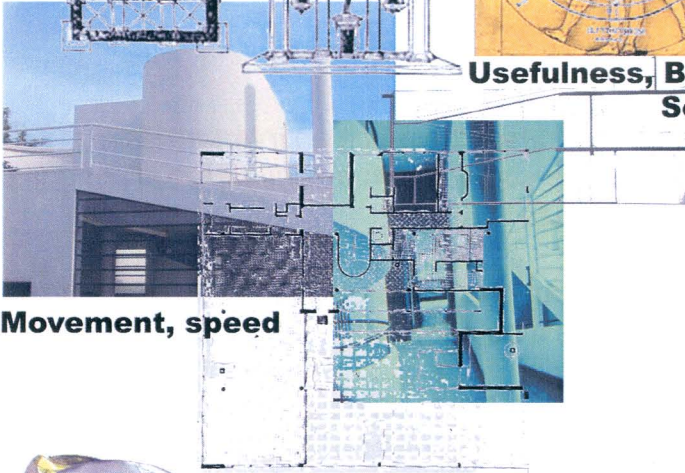
as actualization of different realities  
in architecture

From Vitruvius architecture to the virtual architecture of Marcos Novak, the relation to virtuality is more or less the same. In fact, Vitruvius based his architecture on the golden dimensions, which are very abstract notions, and Marcos Novak creates an architecture that cannot be inhabited by our physical bodies.

It is Le Corbusier that started inserting in his architecture the different dimensions and speeds of the body.



**Usefulness, Beauty, Solidity**



**Movement, speed**



**Virtuality**

**IMMERSIVE**

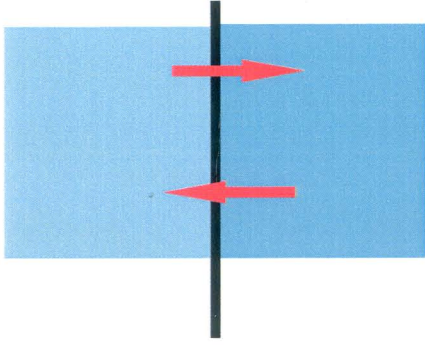
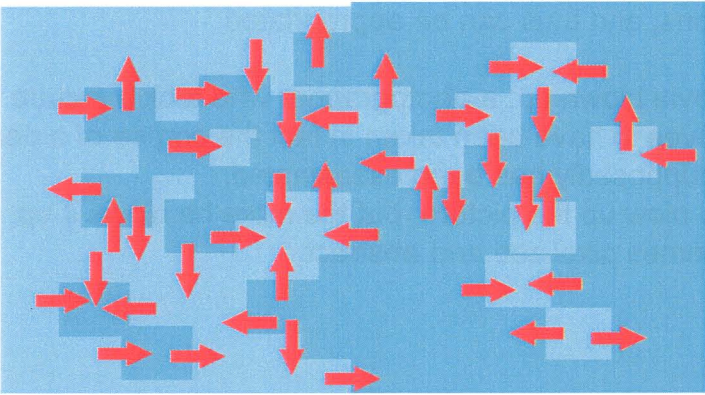
# Pixelization

a tool for exchange

*"two pure presences experience an interpenetration within each other and become subjected to a continuous exchange of their substance."*Deleuze

If we think about pixelization at the levels of the pixels as units, we can see it as a tool that maximizes exchange, multiplicity and variations.

By multiplying and defragmenting the boundaries to the infinite, pixels create an infinite number of realities and thus of relations between them, meaning of virtualities



IMMERSIVE

# Pixelization

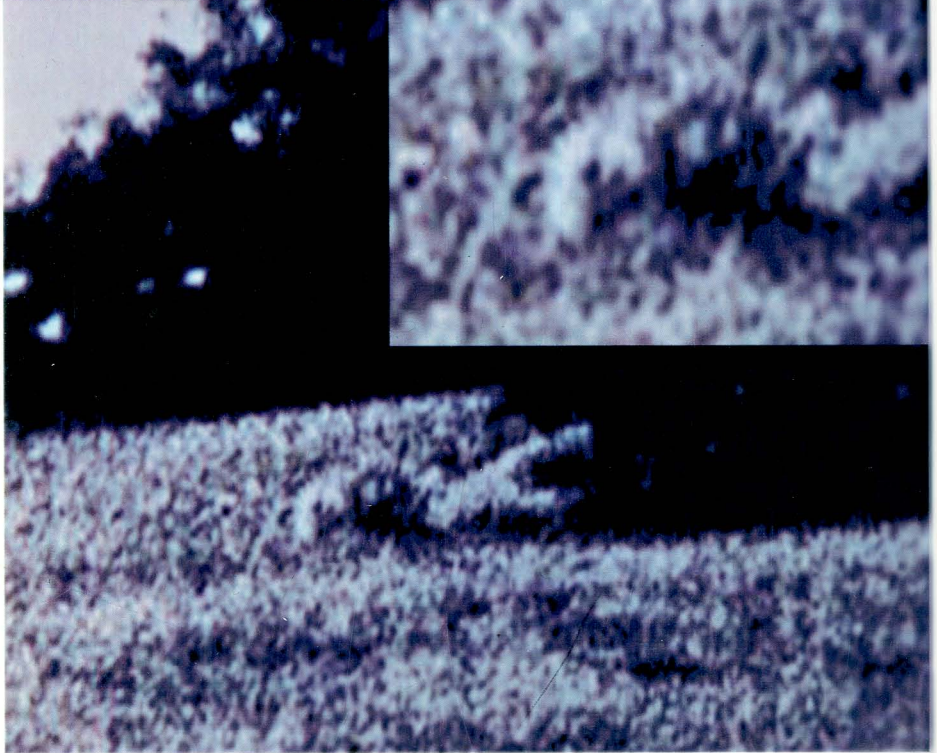
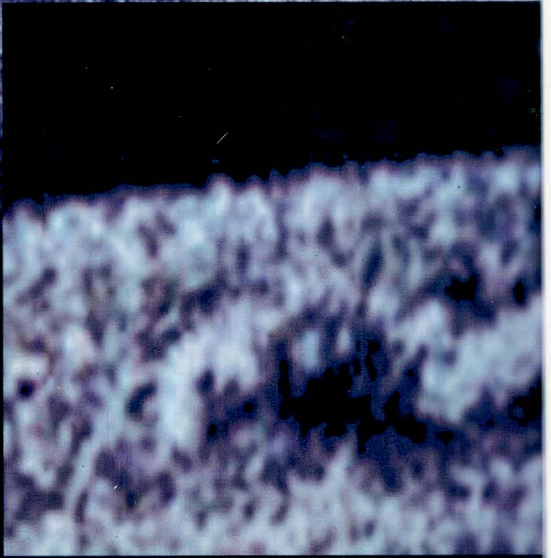
a tool for abstraction and appropriation

The act of pixelization by itself reduces the clearness of an image and thus abstract it.

When an image is more abstracted it becomes open to many interpretations, and thus can be appropriated.

In the movie blown up, a photographer who took a picture in a park believes to have been taken in fact the corpse of a dead man, who supposedly has been assassinated. He starts to blow up the picture, but the more he blows it up, the more it becomes pixelized and abstract.





## BLOW UP

IMMERSIVE

**ANTONIONI**

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# Real virtualities

## Unfolding

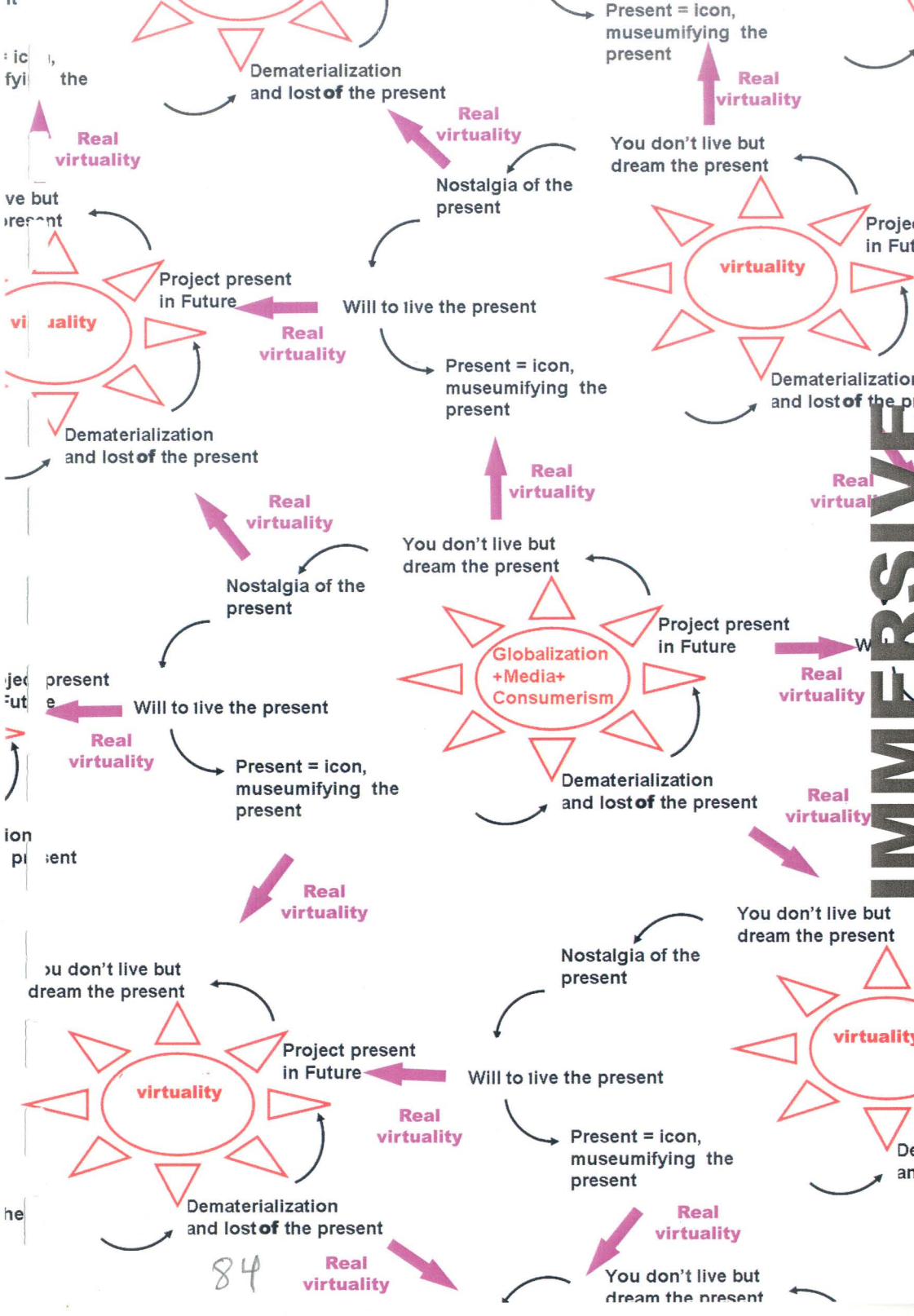
If we apply the data extracted through the research, on the cycle, we obtain a cycle that originally was maintained by globalization, media and consumerism, that loses its impact as a one prison reality, through its infinite multiplication.

Since virtuality is about relation between different realities, then at each point, the relations can be multiplied and actualized thus generating a new cycle maintained by virtuality itself.

**The arrow linking the different realities, is a real virtuality, or the actualization of those relations, the arrows are events in the whole process of unfolding, they are a condensation of all the different steps and relations within a four dimensional space. That is how real virtuality breaks the cycle.**

**It is this specific connection that define my project.**





## The Pivot

**My project is a connection between different realities, it is not like any connection, it is an endlessly revolving pivot that takes you from one reality to another in a continuous way, making all the bodies virtual and physical always in communication, forming an event in the city, which is itself formed by infinite events.**

**The project is a gate that links all the co-existent infinite realities.**

**It does not impose a specific reality, but rather through pixelization of the spaces creates an abstraction that gives you the possibility to construct your own space.**

**It is an on- going process of spatial construction**

## The Goals

- 1- Raise the awareness about the existence of virtual bodies by creating multiple relations between them and the physical body**
- 2- Give hint about the co-existence of multiple realities in opposition to the restrained reality of the time cycle.**
- 3- Abstract the spatial relations between these different realities in order to facilitate the appropriation the space**
- 4- Immerse the user in the project to allow him/het to construct his/her own space**

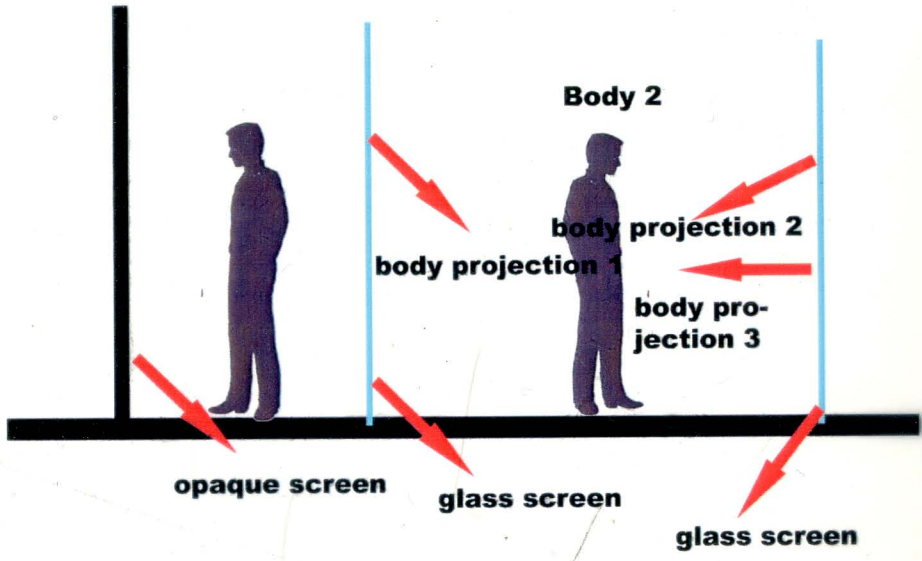
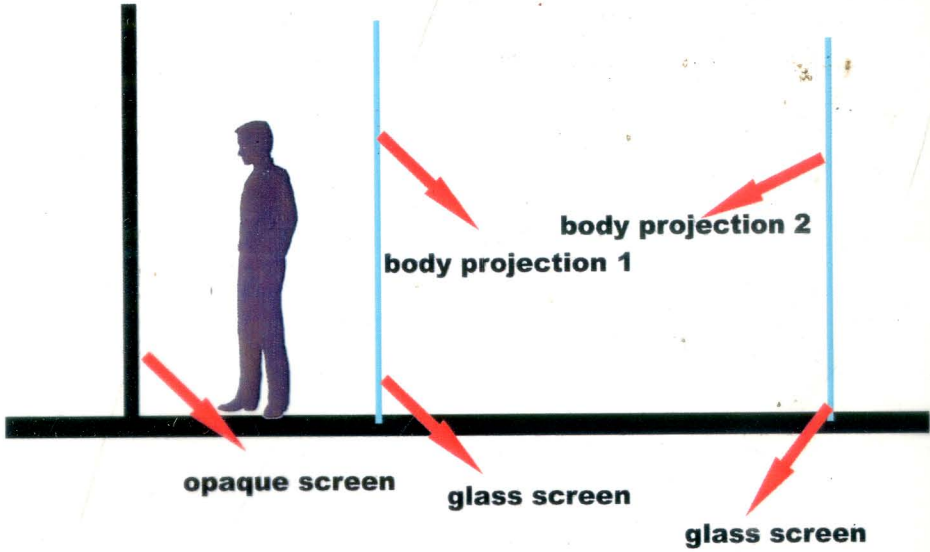
# Moments of real virtualities

## Playtime

In the following examples we will  
see architectural moments that  
create real virtualities









IMMERSIVE

When the woman opens the glass door, we see the image of the Eiffel tower reflected on it. Here there is a double game on the notion of image, since the Eiffel Tower is the image of Paris par excellence.

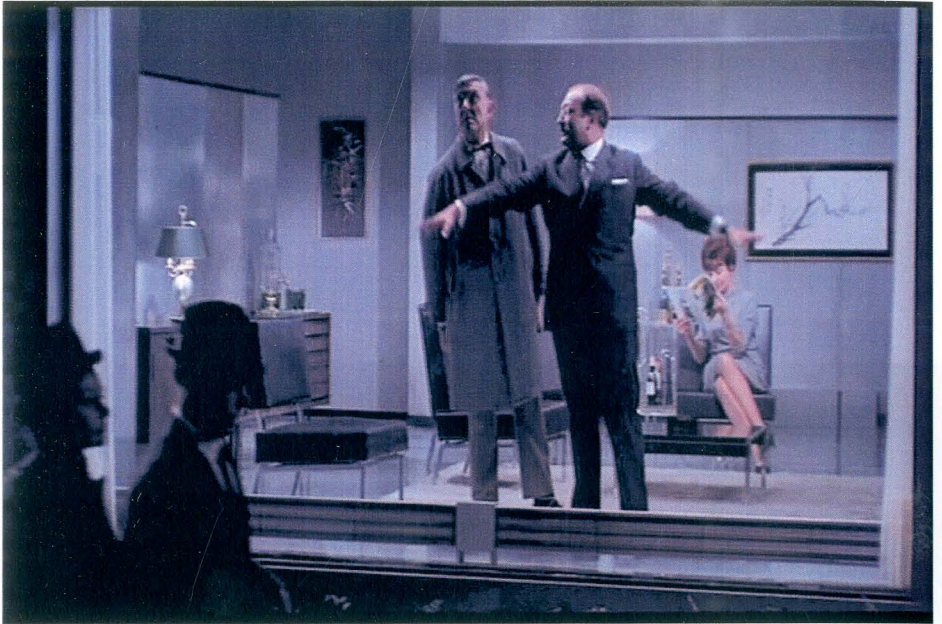
The limits between inside and outside are blurred since we don't know if the body is seen through the glass or if it is reflected.





IMMERSIVE

In this picture notice that we cannot really know where is the inside and where is the outside, since the whole movie plays on the reflections, any object or person that we see can be in fact the reflection of this same object or person



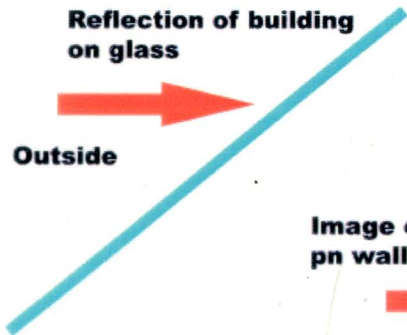
People inside the house are watching television, however the glass facade acts also as a screen through which their life can be watched, the same way they are watching television, the space becomes an image.



**Reflection of building  
on glass**



**Outside**



**Image of building  
on wall**



**Inside**

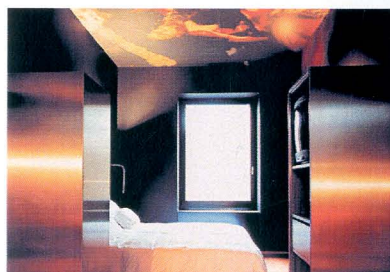
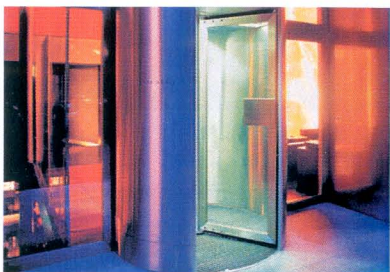
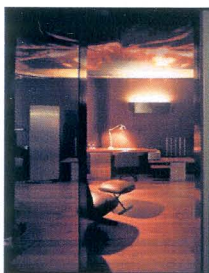




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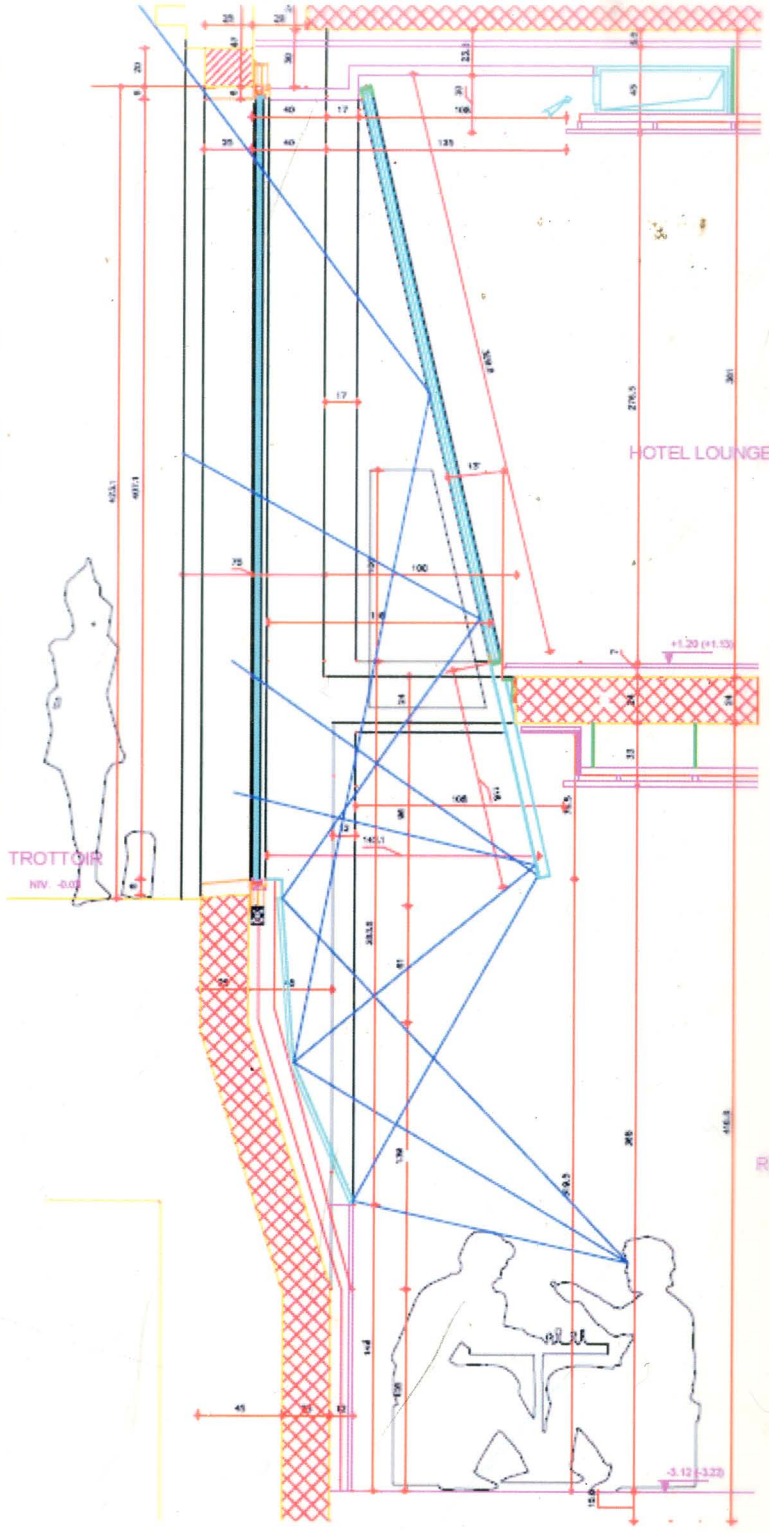
Moments of  
real virtualities

Jean nouvel—the hotel





<p>PROJET: <b>SECTION TRANSVERSE ARBRES SYSTEM DE STREET FACADE - HOTEL LOUNGE -</b></p>	
DATE: 25.11.08	SCALE: 1/20
<p>PROJETANT: <b>DR. ALI, INGENIEUR</b></p>	
<p>PROJET: HOTEL LOUNGE -</p>	
<p>PROJETANT: DR. ALI, INGENIEUR</p>	
<p>PROJET: HOTEL LOUNGE -</p>	
<p>PROJETANT: DR. ALI, INGENIEUR</p>	



RESTAURANT

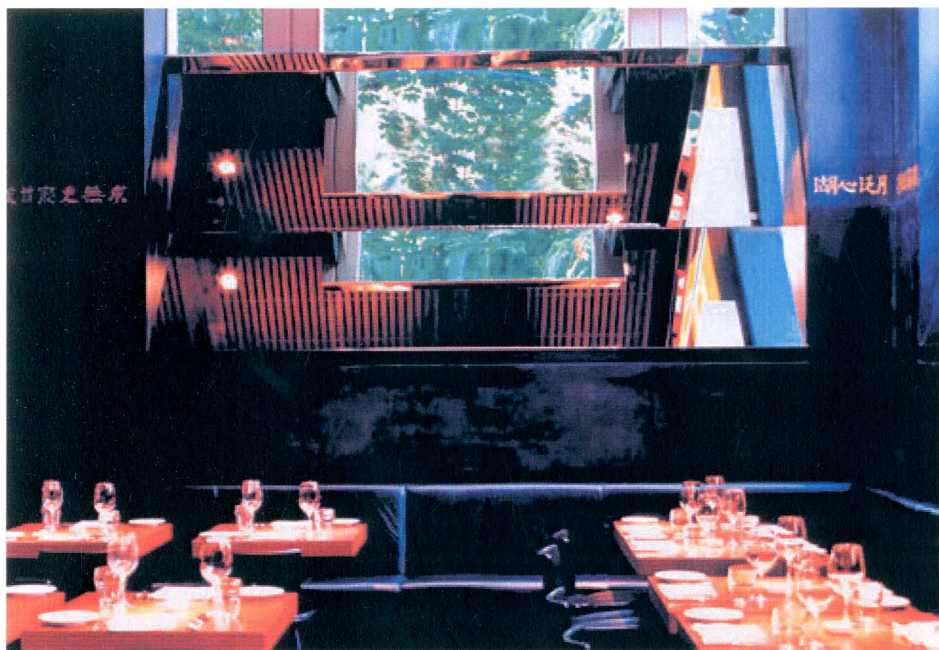
HOTEL LOUNGE

TROTTOIR

NIV. -0.00

-3.12 (-3.28)

+1.20 (+1.53)

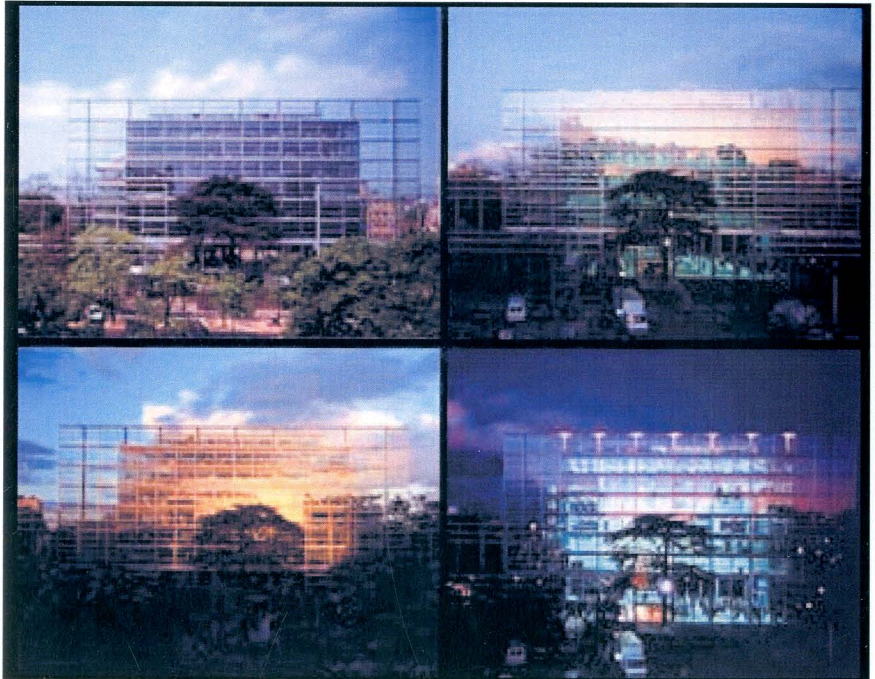


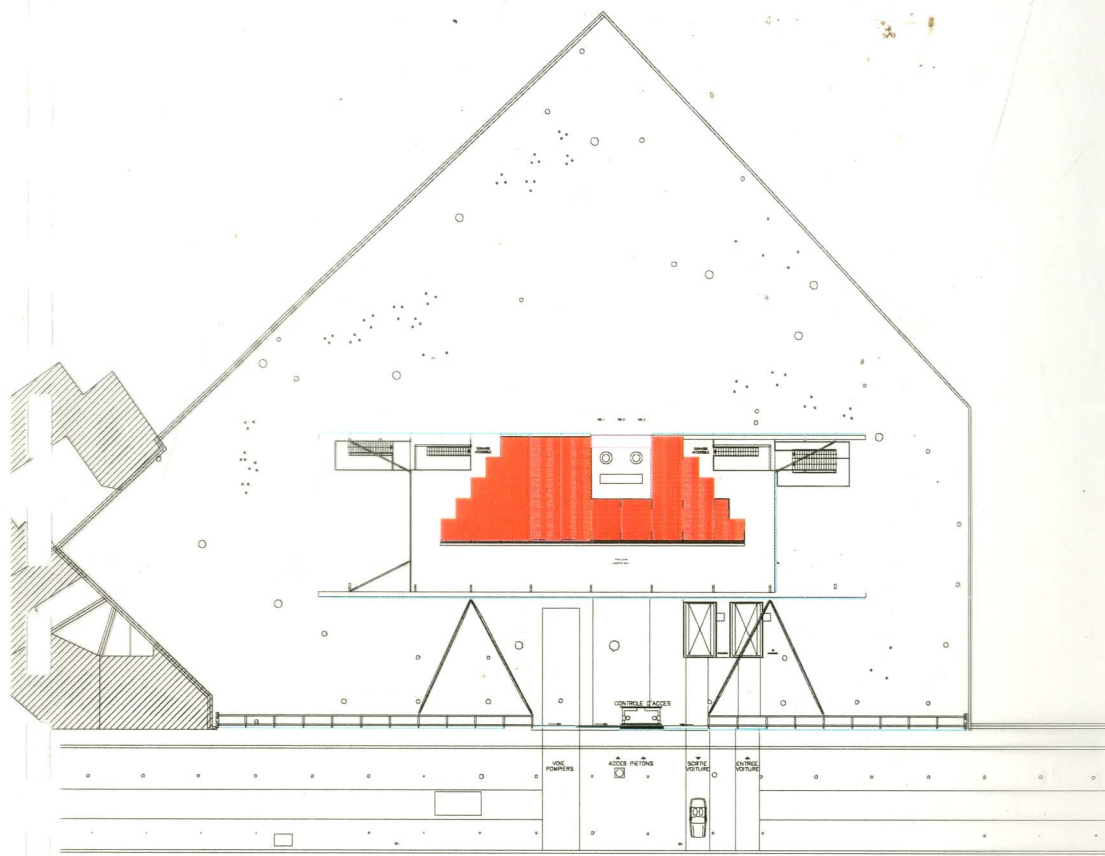
IMMERSIVE

*"The phantom of the park in its transparency. An architecture which game consists of blurring the tangible limits of the building and making useless the reading of a solid volume in a poetic of evanescence. When virtuality attacks reality, the architecture more than ever, has to have the courage to assume the image of contradiction"* Jean Nouvel

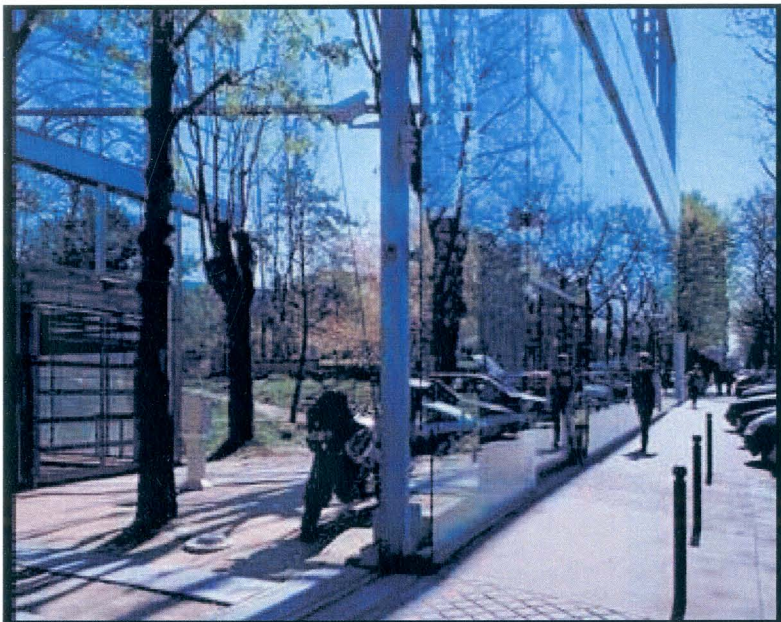
Moments of  
real virtualities  
Jean nouvel-Fondation

cartier





BOULEVARD RASPAIL





THE ASSOCIATED PRESS

FOR THE  
SIX



THE PROMETHEUS PROJECT



**Immersion:** according to de-  
leuze the extension  
of consciousness, this project  
is immersive since it abstracts  
the space in order to let the user  
project his/her mental image of  
the space and thus extending  
their consciousness outside  
their body.

## LEXICON

**Virtuality:** multiplicity of rela-  
tions between different realities,  
it expresses itself through dif-  
ferentiation and difference, body,  
event, multiplicity and duration.

**Pixelization:** action of both  
maximizing the exchange be-  
tween different realities by  
multiplying their common limits,  
and abstracting these relation to  
allow appropriation

**Real Virtuality:** actu-  
alization of the multiple  
relations between different  
realities

**Pivot:** The project itself is an endlessly revolving pivot that connects different realities in a 4 dimensional space that constitutes an event

**Virtual Body:** The potentiality of the relation between two different realities of a body.

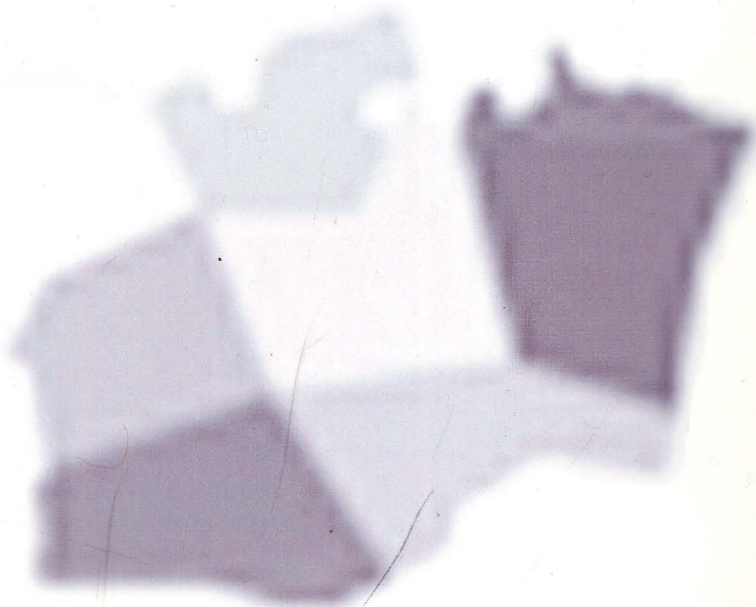
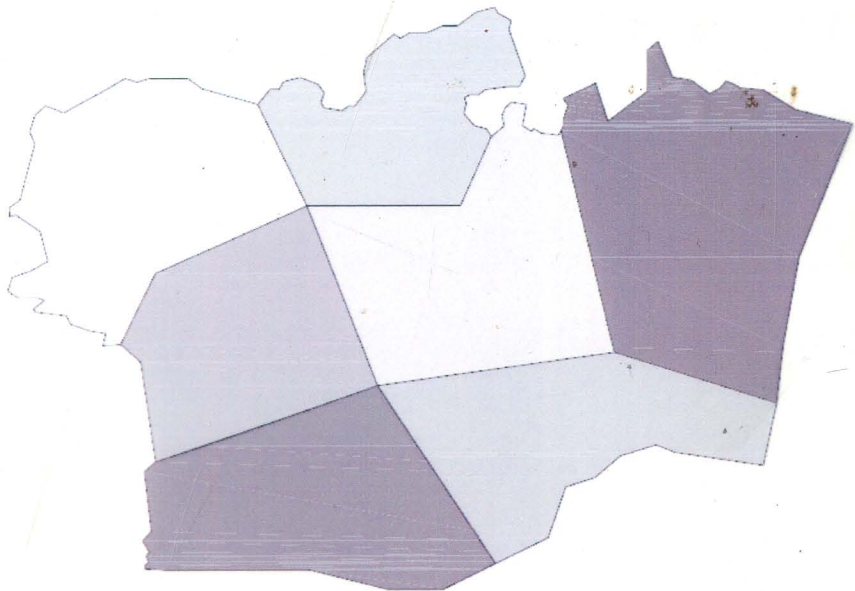
**Vector relations:** are the main relations on which the project is based and consist of the infinite relations between the body, the environment and their respective images

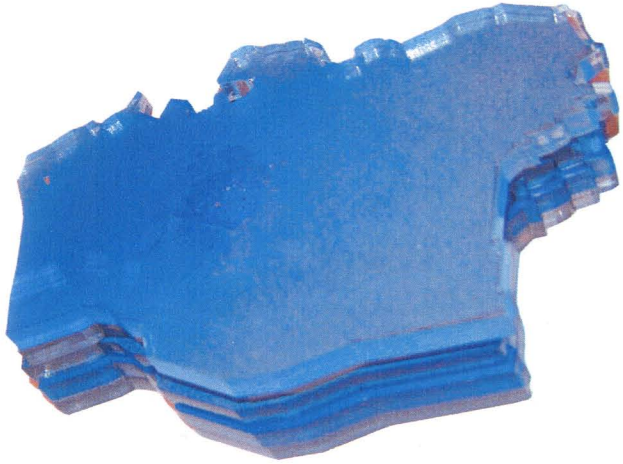
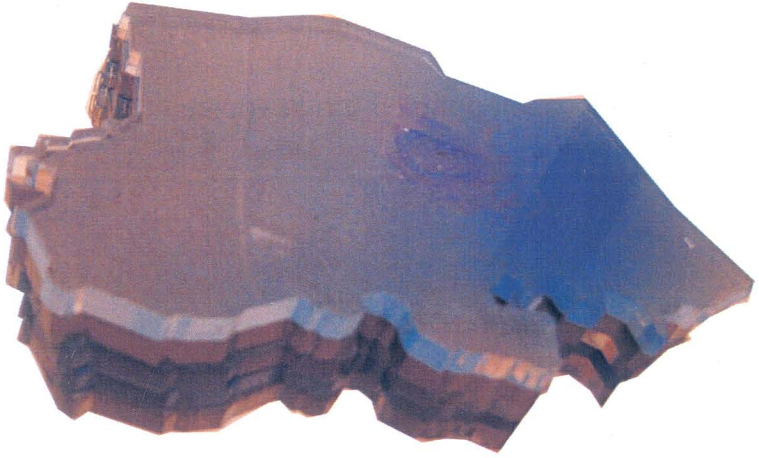
# Pixelizing Beirut



The heterogeneity of Beirut makes it multiple. Many different Beiruts co-exist but do not always meet. Different social groups see Beirut in different ways, they have different spatial perception, spatial references and spatial projection of the same city.

My project on the site is an attempt to link all these Beiruts in a 4 dimensional event, through pixelization.





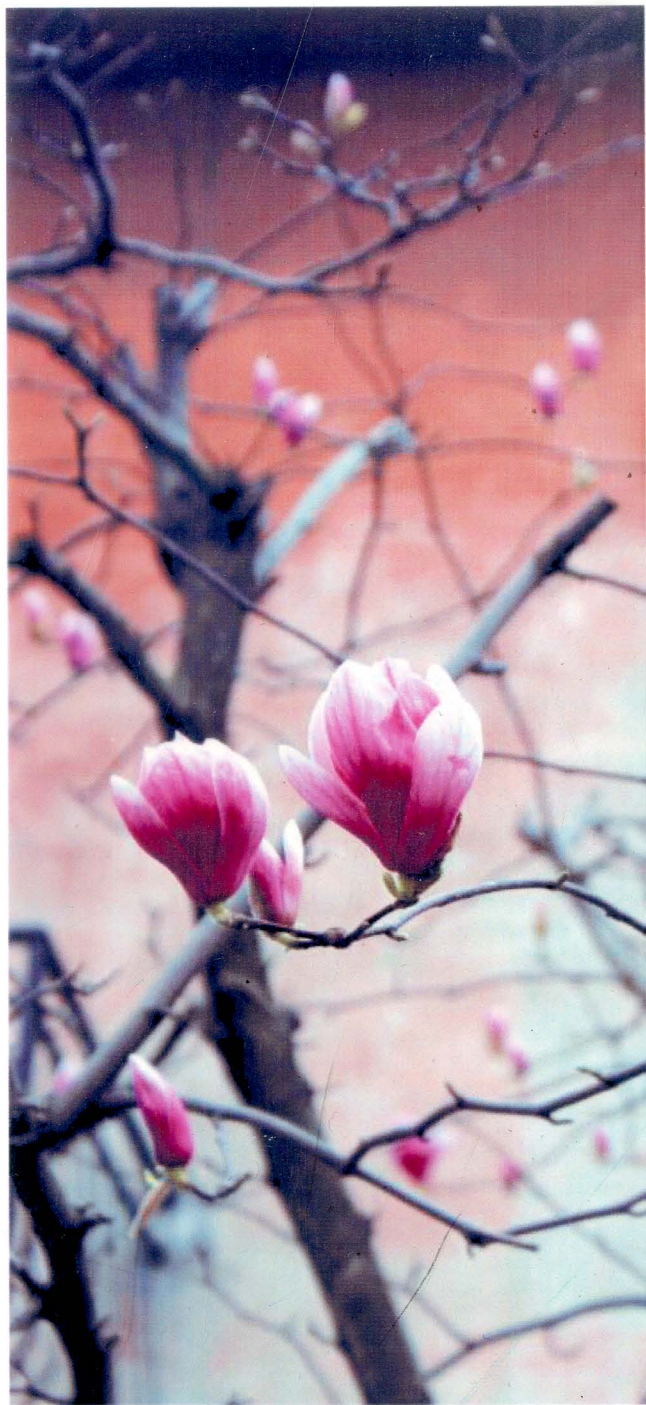
110

The analysis of this site will be done in relation to virtuality, and real virtuality. One particular aspect of it is the presence of paintings on the walls that already inscribe a new reality, hence a new set of relations. The paintings have been done by the association Help Lebanon.

## Site analysis







## Real virtuality: Space and atmosphere in Japanese painting

Gert J. van Tonder

Kyoto Institute of Technology, Kyoto 606-8585, Japan.

Email: [gert@kit.jp](mailto:gert@kit.jp)

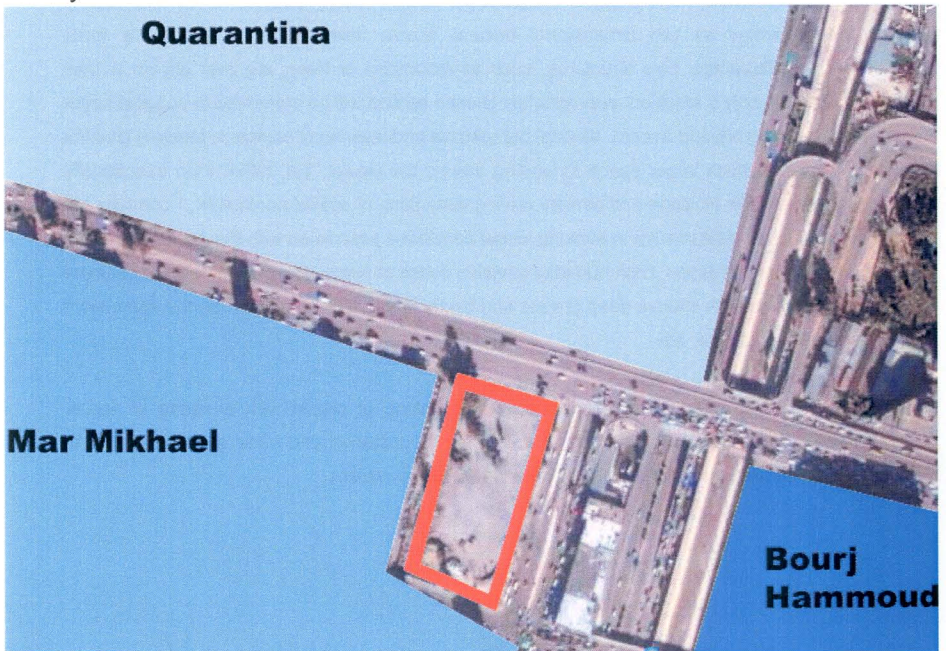
The legacy of Japanese painting bears witness to a tradition of implicit yet acute understanding of how visual effects can be applied to convey a sense of atmosphere of space. This presentation will focus on paintings intended for architectural interiors, and some visual effects used to turn these works into successful devices for conveying a sense of *being* somewhere. The visual culture from which this tradition developed often faced challenges quite unlike that of the creators of computer driven virtual reality. Limitation of space was perhaps the greatest factor shaping Japanese painting intended for interiors. Varying light intensity and culture of enjoying both light and dark in interiors also determined what painters emphasized. Yet both virtual reality and Japanese painting are united in the creation of visual environments where the viewer would become immersed and experience being somewhere.

Certain colour combinations lie at the heart of Japanese painting. I will show how limited spaces in Japanese architecture benefit from colour over different levels of illumination. Other consistent trends enhance space. Presentation of incomplete visual scenery is perhaps the foremost among these. Large sections of canvass are simply left open, gilded, or covered in sharp or blurred cloud patterns. Monochromatic regions are usually clearly outlined, or various objects may be presented as two dimensional textural sheets delimited within apparently three dimensional silhouettes. Few structures, such as mountains or trees, are ever shown in their totality. Instead, only a small but appropriately chosen section will be presented to suggest larger objects extending beyond a room. Vertical perspective and layering of objects in pictures give the impression of a much larger space extending around the viewer. Yet, rather than intentionally causing perspective illusions and directly driving distortions of spatial perception, I consider the above techniques instrumental in evoking visual conditions associated with the ecological optics of local conditions in Japan. High humidity sustains dense growths of forest, and effects combine to create soft light with intense deep greens and blues. In fact, the Japanese use the same word for both green and blue: *aoi*.

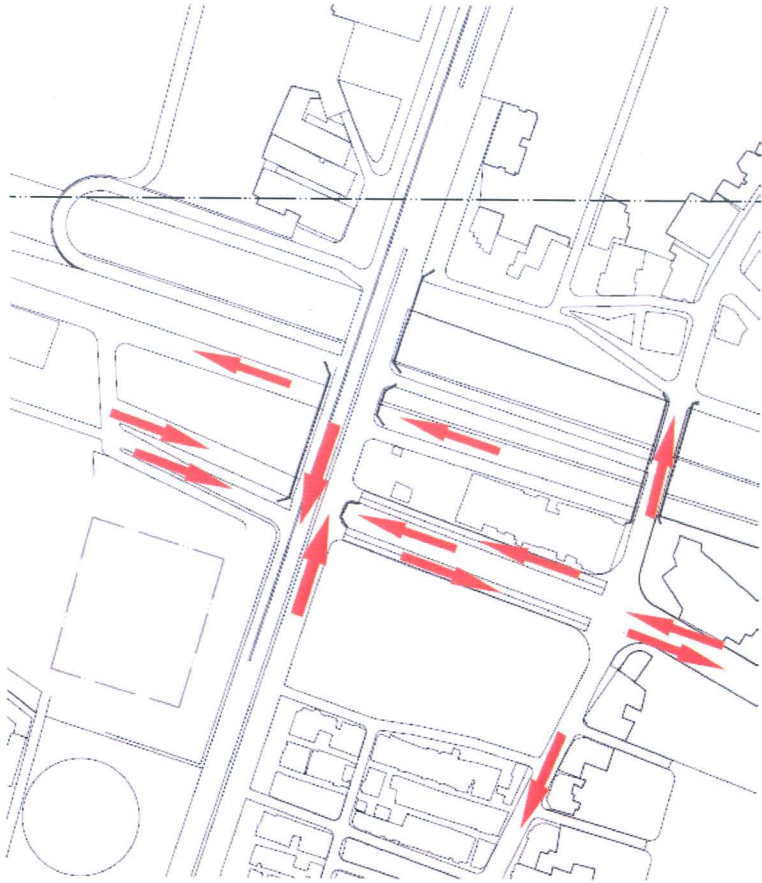
Japanese painting offer valuable lessons in the making of places with a sense of space. Japanese painting effects, colour use, framing, partial occlusion and other aspects discussed here would certainly enrich the palette of the virtual reality creator.



The site is situated at the north limit of Beirut, linking different areas together, from industrial to residential, pedestrian access to the highway, sea road to the ancient damascus road, to the main highway. It is in the continuation of Gemmayzeh and faces Quarantina.



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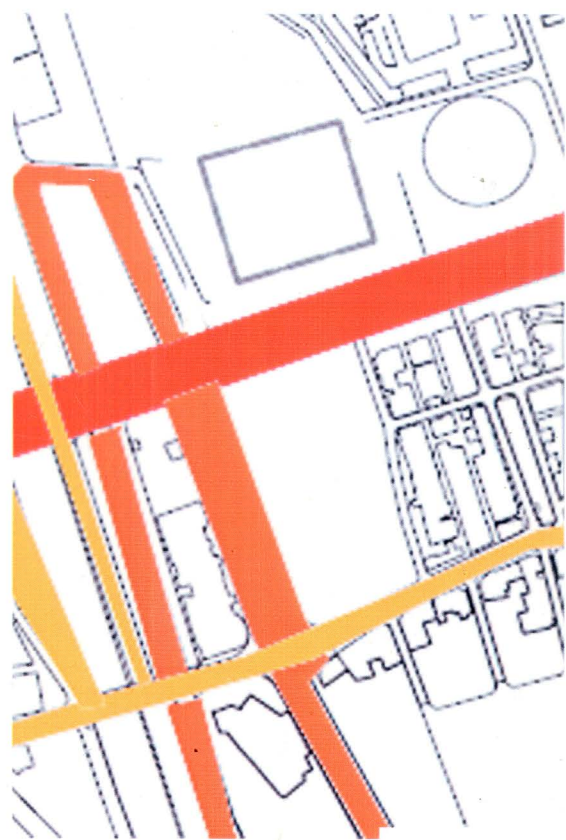


**Car flows around the site**

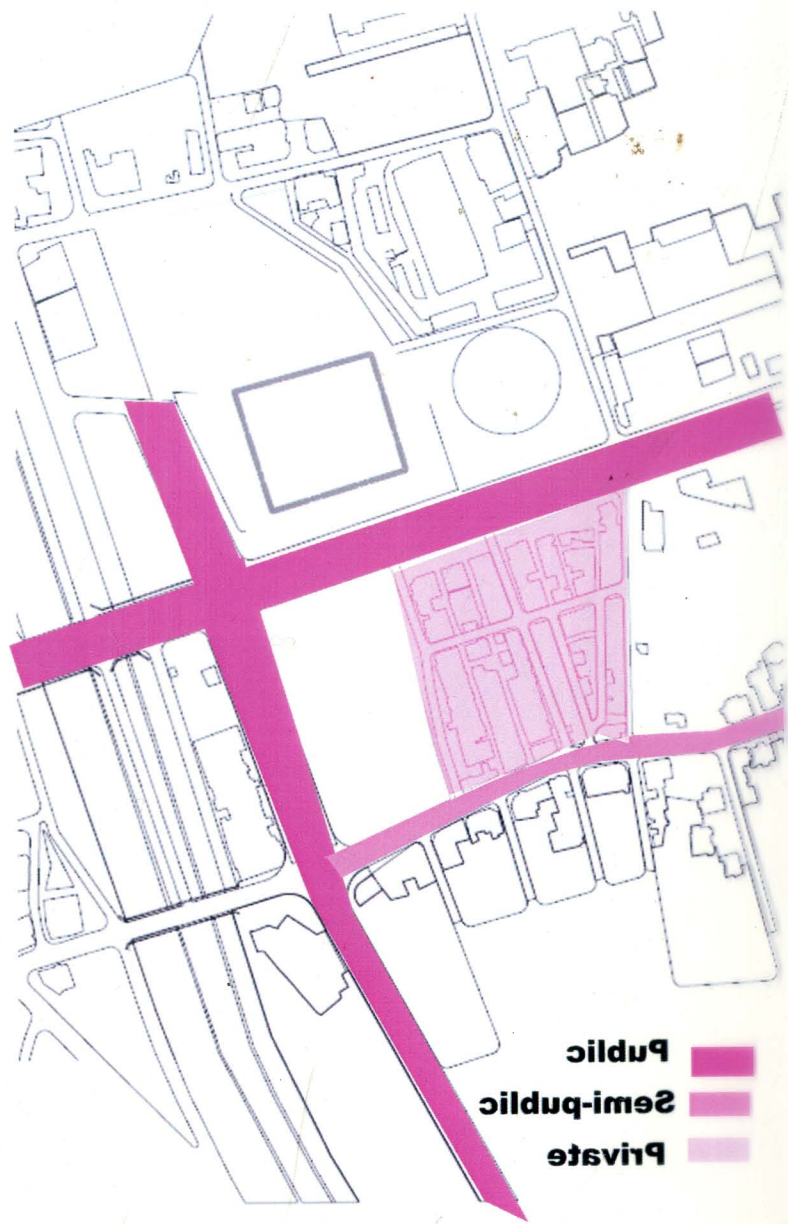
**Because it is exposed to many speeds, degrees of privacy, nature of programs, flows, densities that are very different from on another from one side of the site to the other, This site has a great potential for the production of real virtualities.**

**Only where pixelization occurs, does real virtuality take place, pixelisation is noticeable at the edge between the highway and the residential area, it is produced both by the invading elements of the highway into the small streets, and by the presence of the paintings on the walls.**

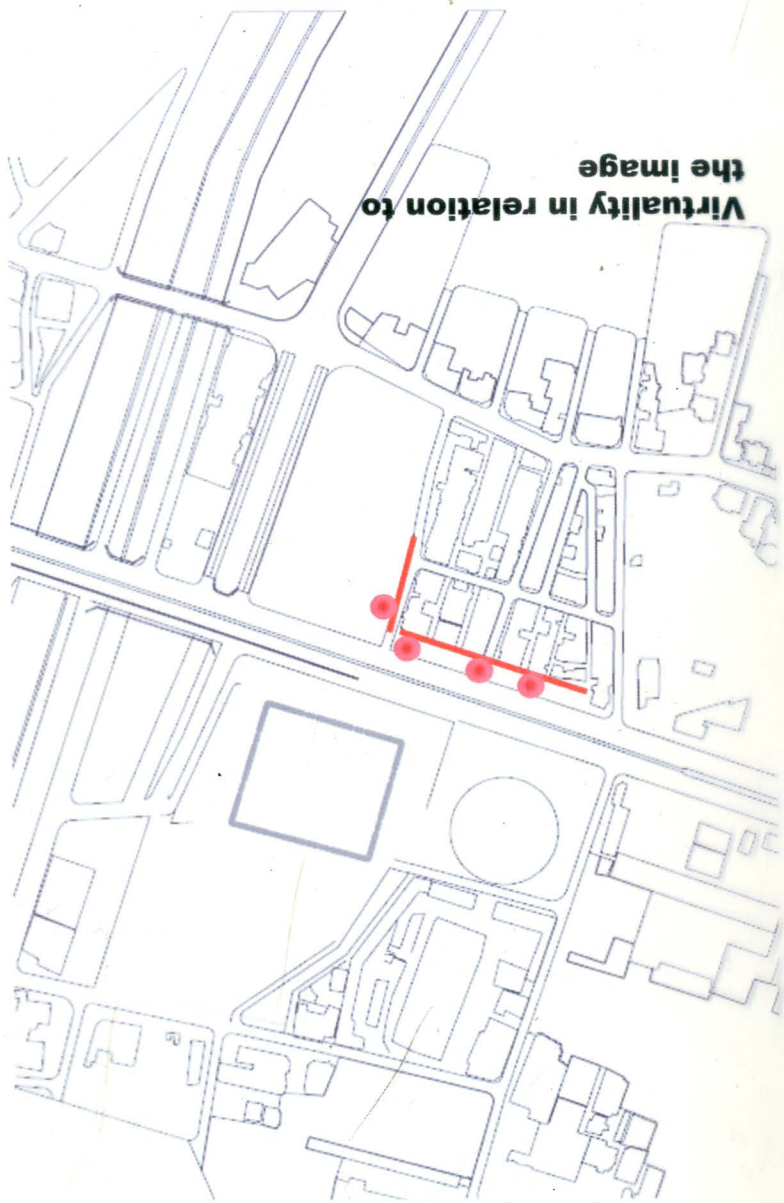
**We can see that privacy is directly linked to speed, in fact, the area that are closer to slowness, are the most private ones.**



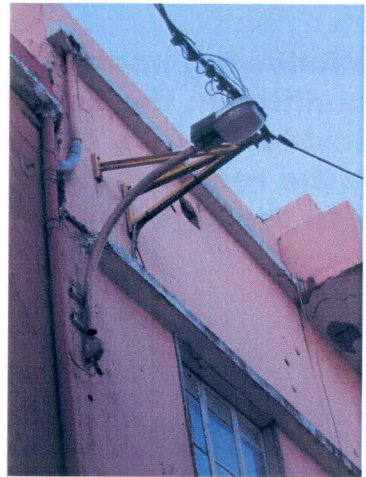
Very fast traffic   
fast traffic   
Medium speed traffic 



**Virtuality in relation to  
the image**

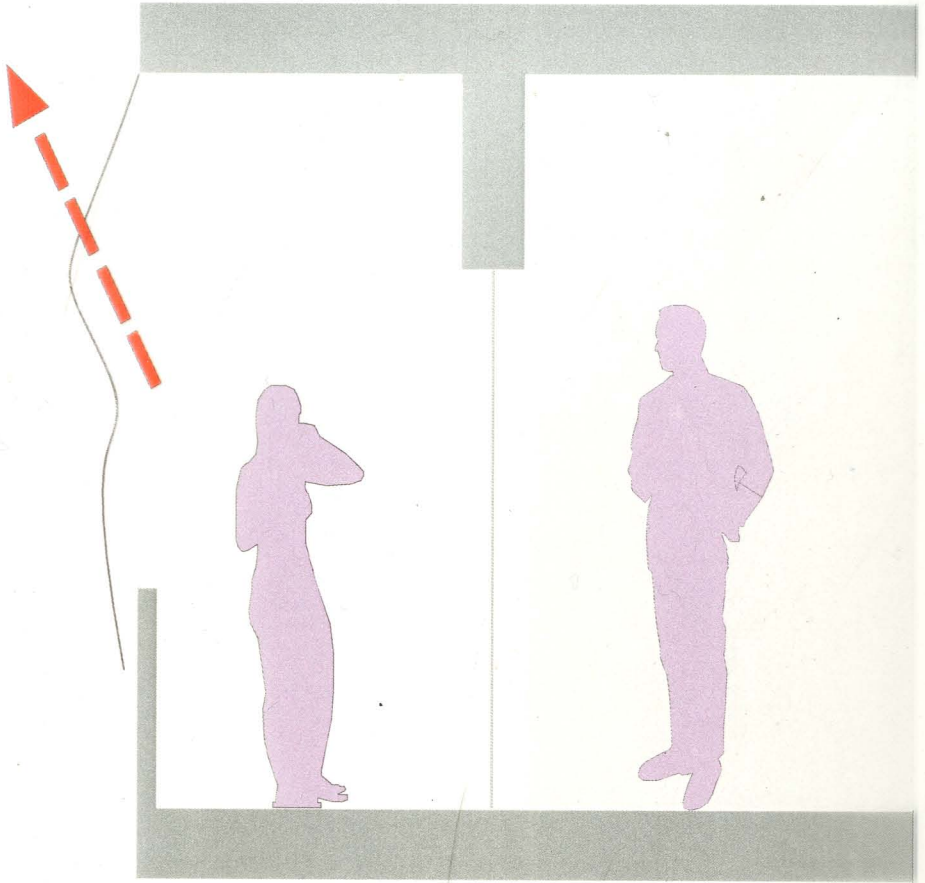






Pixelization already exists on site. Elements of the highway are more and more invading the residential area:

**The following images and diagrams illustrate real virtualities in the flexibility of some relations such as Inside/outside, opaque/transparent, slow/fast inside the residential area as well as with its connection to the highway.**



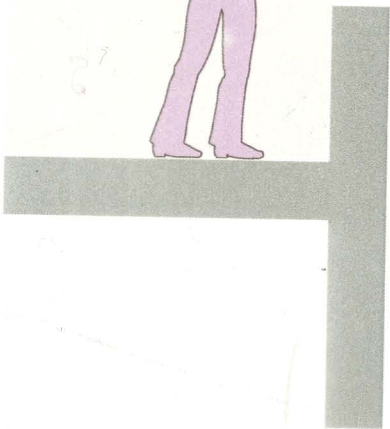
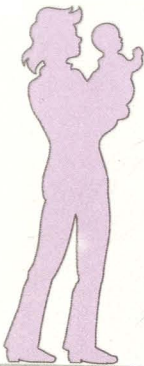
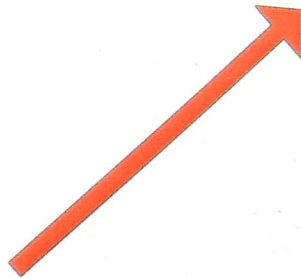
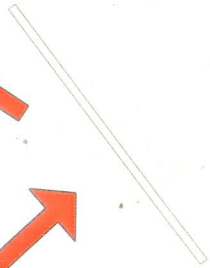
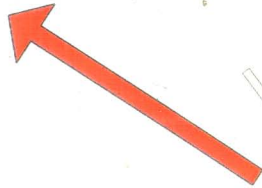
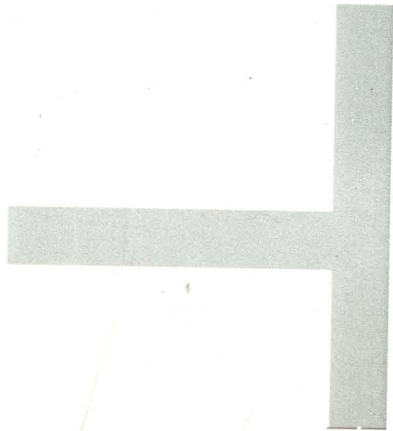


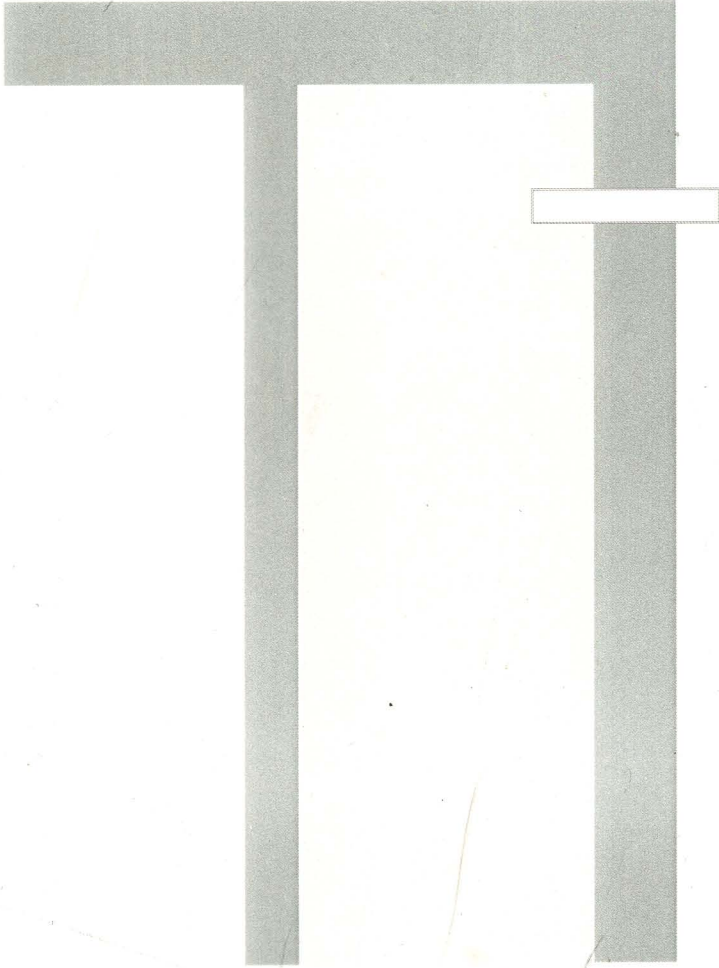
**Flexibility exterior/interior**

123



**Relation opacity- transparency**







**The clash of two realities**

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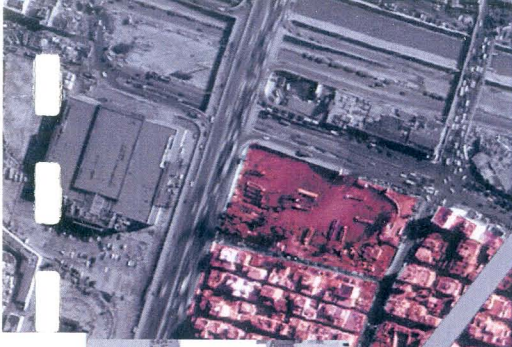




Speed creates different relations between realities. Someone who is passing by car on the highway, won't necessary the time to see if the cat moved or not. So the cat can be part of the painting. But if the cat is just an image, the "realness" of the window is also to be doubted.

While for someone who is walking, the movements of the cat is detectable, and it won't appear anymore as an "image".

Pixelizing those different speeds that produce a different perception of realities, on my site is one of the strategies used to create real virtualities



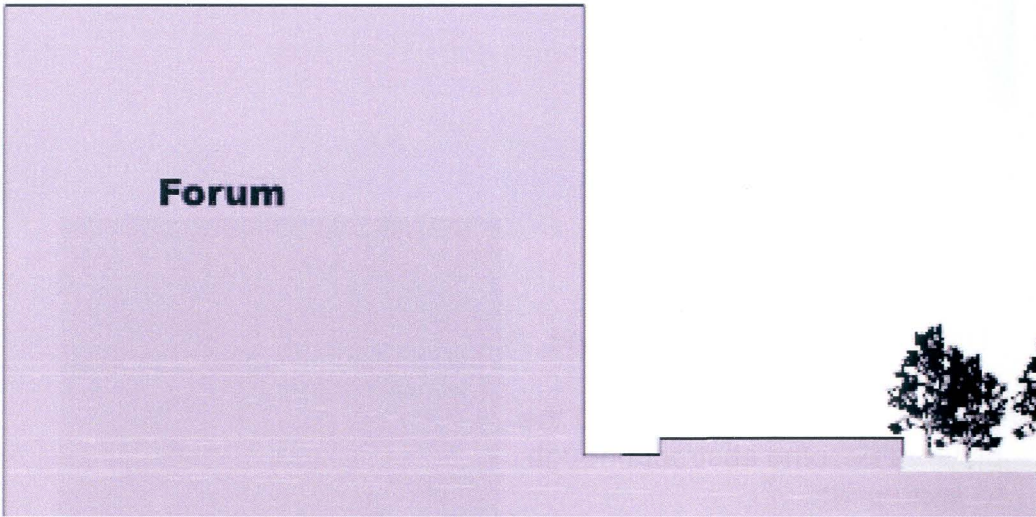
Perceiving the space with the speed on the residential area, limits you to a certain reality, the pictures on the walls are too clear to be abstracted. The only dilated matter seen from the area colored in red are the cars, which speed makes them look as such.



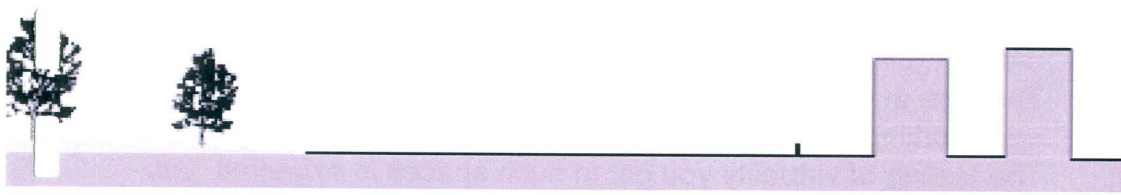
The reality seen with the speed of the highway is different. Everything is seen dilated and the pictures become abstract enough to appropriate.

It is the merging of these two different perception that is interesting.





**Longitudinal section through site**



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# Programs

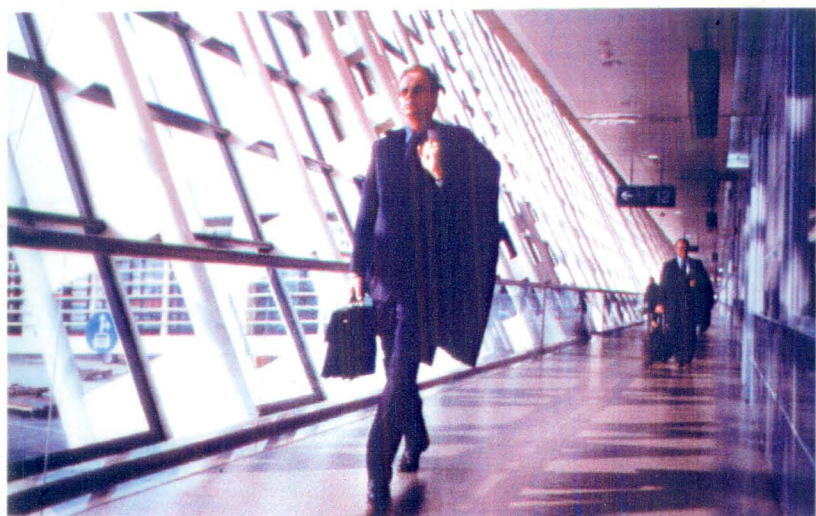
## Why not hotels and train station

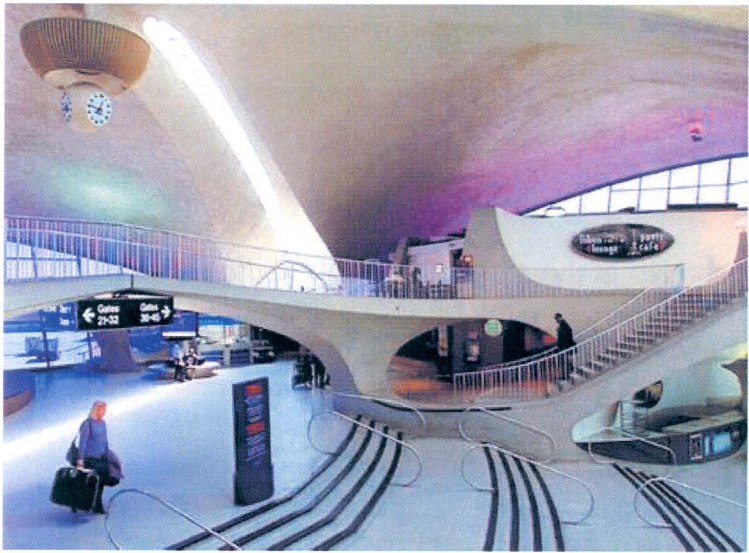
Hotels and train station are spaces of flows, which by nature deal with real- virtualities because they constitute unusual spatio-temporal dimensions, where different rhythms and speed cycles meet.

They are at the same time on a local, regional and international grid, working on different realities.

The feeling of virtuality you get in such spaces is expected, you would don't requestion yourself if you feel virtuality in these spaces because you expect to feel such a thing.

I want to give my project through an unexpected program, the chance to surprise the user, and thus give her/him the chance to realize the clash between a usual space and a space that is inhabited by virtual and physical bodies.





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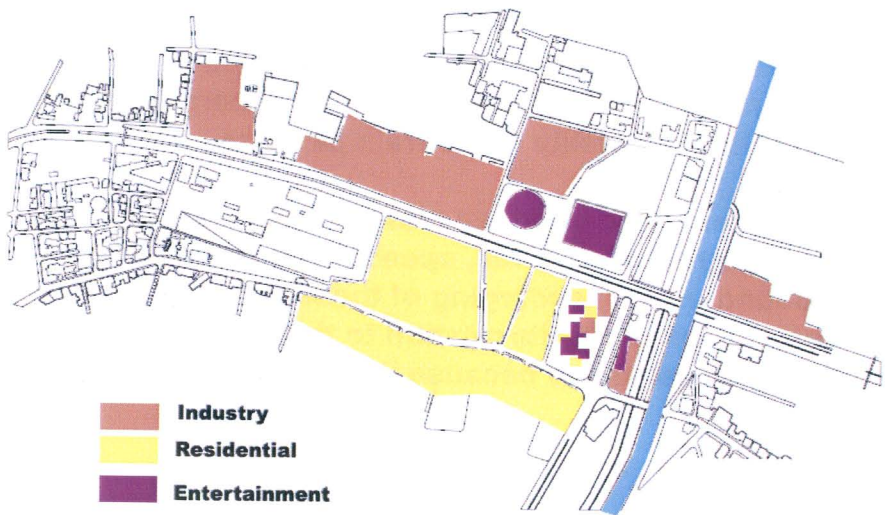
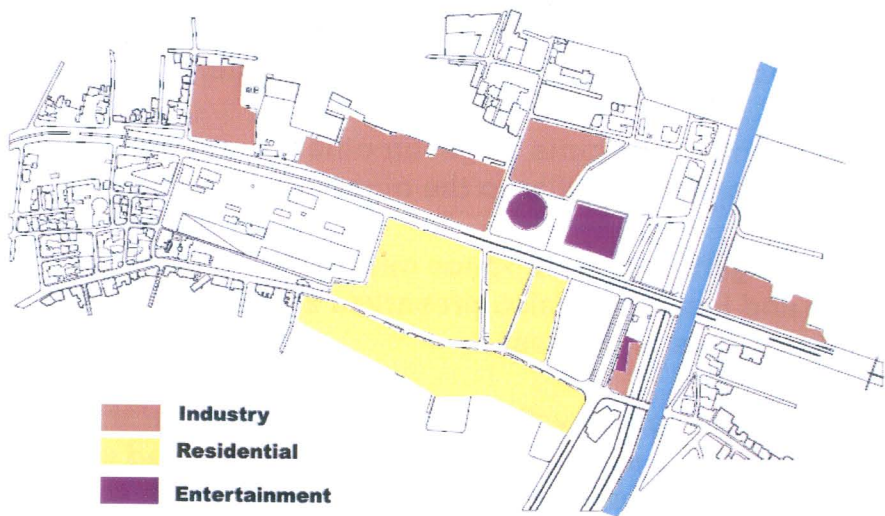
# Programs

## Pixelizing the site

The richness of the site being partly in the different programs that exist around it, and my project being about pixelization and pivoting between different realities, the program for my project would be a pixelization of the different programs, mixing in the same time the different speeds, rhythms, degree of privacy linked to these functions. The program will be:

- **Armenian souk (justified in next page)**
- **Pubs and restaurants as a continuation of Gemmayzeh**
- **Public garden**
- **a train passage way**
- **an industrial program**
- **a motel for students, tourists, couples.**





The Armenian souk will create a specific rhythm particular to it, while constituting at the same time a good area multiplying the relations between private and public.

The Pubs and restaurants target an other user group, a user group that is more familiar to the night life of Gemmayzeh

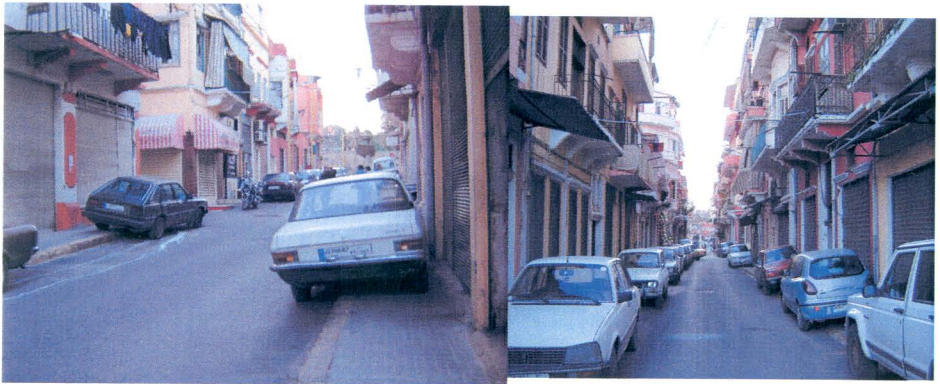
The Public garden will introduce new relations between outside and inside, and also preserves a reminiscent vegetation, like images of the past

The train passage way will hint at another speed, without directly using it, but the only presence of this speed will create new relations with the others. It is also a link to the Mar Mikhael station, since the ministry of transport plans to reintegrate the train in Lebanon

The industrial program will have a link to the souk, but also will bring a different kind of user groups

Finally the motel for students, tourists, couples is a more static program that offers another degree of permanency in relation to the temporality of the train passage.

Those programs tend to create real virtualities between the diverse user groups, rhythms, speeds, degrees of privacy, spatial boundaries. The merging of those programs makes each one of it unique by its relation to the rest, each program is not an usual one because it cannot be but with the other programs.



The ground floors of all the buildings are constituted of closed shops. These shops used to sell artisanal products, but according to the armenian community living in this area, there were no enough clients to maintain these workshops active.

By bringing new and different users to the area, and create an armenian souk, we give the chance to this area to regenerate again.

# User Groups

## Pixelizing the site

The user groups are divided in relation to:

### **1- Speed:**

The slow pedestrian in relation to the cars on the highway  
The old people in relation to the younger, that would use the same space differently, and at different hours, such as the public garden

### **2- The Age and its relation to the time cycle**

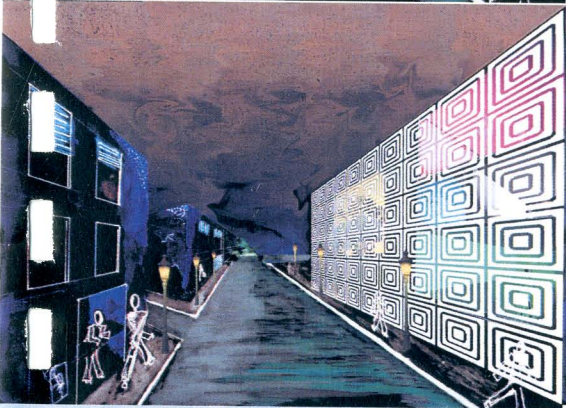
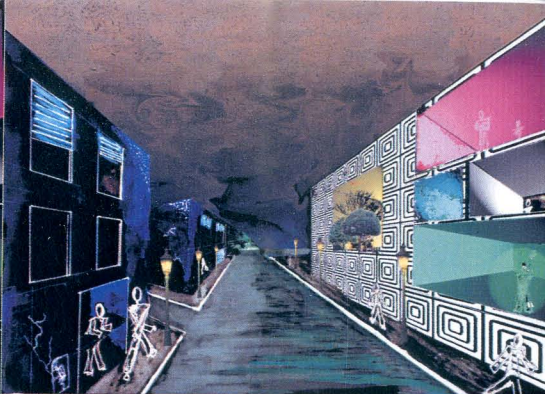
The younger generation, teenagers of the today have been immersed in the globalization, media and consumerism cycle since their birth, whereas young adults have seen the evolution of the technology that allows this immersion, older people have a lot of difficulty to see reality in everything that is digital. Every generation has a different relation to real- virtuality and it is the clash between them and their difference in the way they perceive and construct the space accordingly that might increase the awareness about virtuality and its actualization

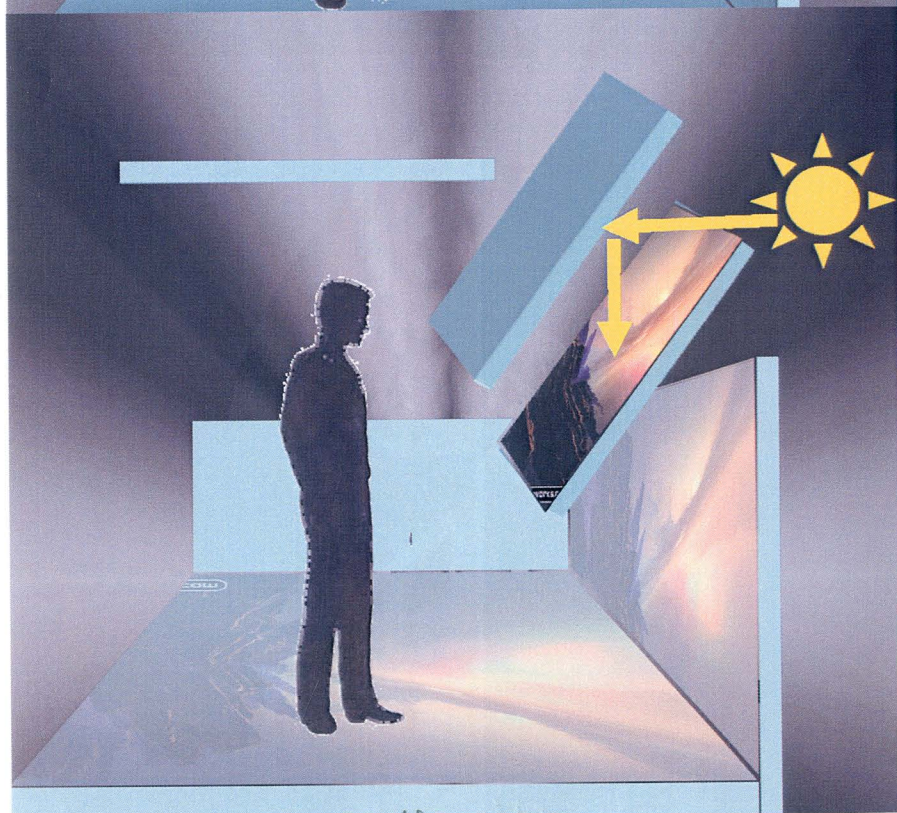
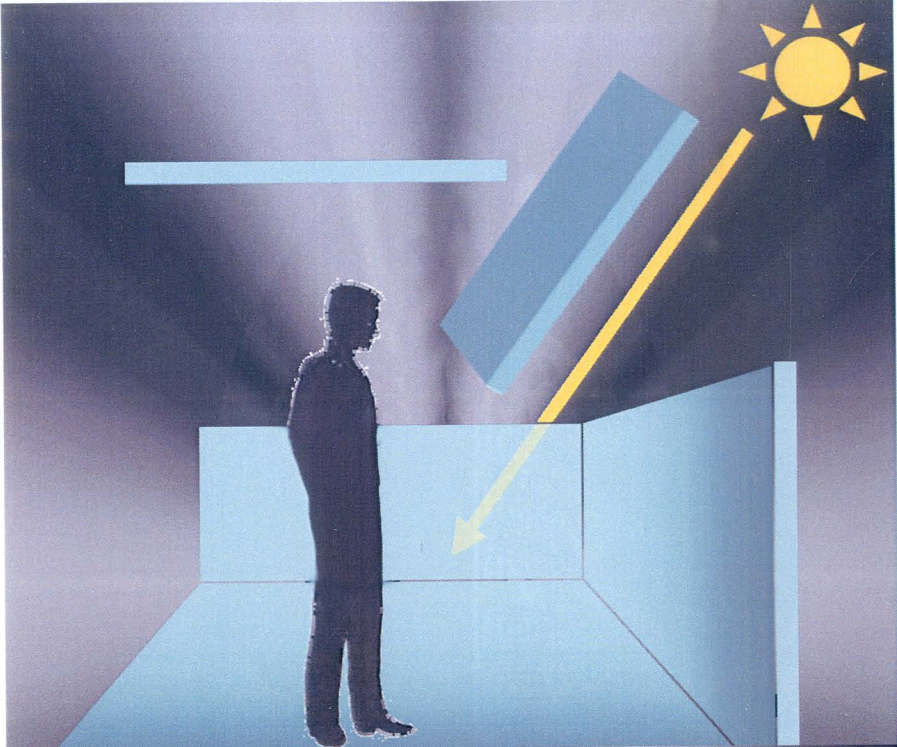
### **3- Permanency and regularity**

A space is never the same if the users of this space change. The familiarity of a space depends partly on the familiarity we have of the bodies that inhabit it. Different degrees of permanent to less regular users will multiply this relation of enrich one can have with a space.

## Tactise

The following images are not contextual since they were produced before the choice of the site. They just show many moments of a facade, and different relations of this facade to the environment, from louvers that cast different shapes according to the angle of light to diverse visual and physical relations from the interior to the exterior, whether by night or by day.







**The project will be based on the use of specific materials that allow different degrees of transparency such as:**

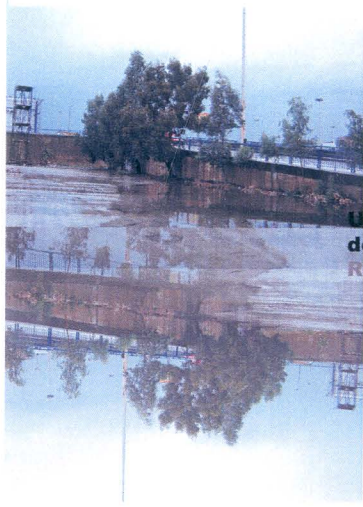
- Glass**
- Stainless steel**
- Screens**

**It will also involve the tactics analyzed in the architectural and movie examples.**

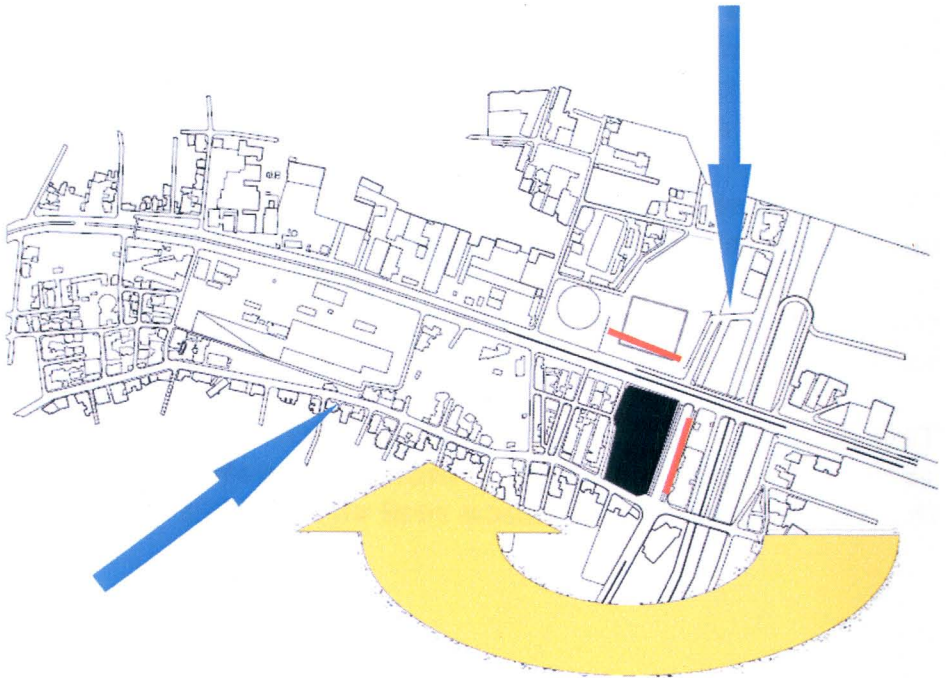
**Using reflections and spatial fading to blur the boundaries between outside and inside, underground and overground.**

**The pixelization of the project will also happens in its environment, for examples a facade that belongs to the project can be placed in front of the forum, transforming the relation of the whole environment to the project and vice-versa.**

**The project will include movable partitions and some screens, as to give a maximum potential to the variations that produce real virtualities**



upside  
down  
Reflector



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- Code 46 **Michael Winterbottom**
- Hyper Cube **Vincenzo Natali**
- Cinema Paradiso **Giuseppe Tornatore**
- Playtime **Jacques Tati**
- Dune **David Lynch**
- Matrix **The Andy and Larry Wachowski**
- 2046 **Wong Kar- Wai**
- A.I **Steven Spielberg**
- Minority Report **Steven Spielberg**
- Fifth Element, **The Luc Besson**
- What the bleep do we know?
- Pleasantville **Gary Ross**

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