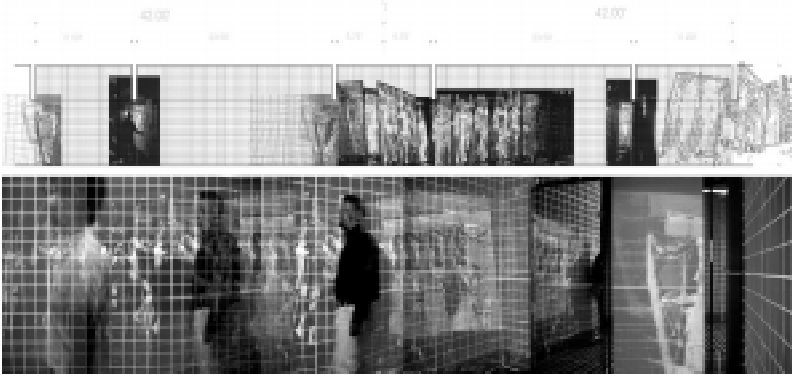# TRANSFORMING LANGUAGE OF ARCHITECTURE

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Synthesis image:
«Thresholds: Arcade Projects»,
multimedia interactive installation

Abstract
Digital media fosters new spatial concepts and constructs in ways unconventional to the representational culture of architecture. Non-linear and simultaneous modes of expression, simulations, and construction of spatial and interactive experiences through simultaneous collective reception of images, can trigger technological, material and spatial concepts to be realized. My research and teaching encompass interdisciplinary processes, utilizing multi-dimensional, time-based disciplines to address spatial and temporal dynamics of movement through space. This body of work engaging interdisciplinary issues of interface between technological and theoretical discourses of architecture has become the means to develop and investigate pedagogic and didactic aspects of this hypothesis.

When a new tool or medium of communication is invented, most often follows a period of examination of the tool in order to understand how it can represent or reconstruct «the familiar» in a more productive or perhaps more seductive way. During this time the tools' capabilities are explored and enhanced. «The familiar», too, now seen from a different perspective begins to be understood in new ways and transforms. Gradually the fascination with the tool begins to wear off. It simply becomes a matter of technique. Experiments that follow this period allow us to question the ways in which we can modify and use the tool to address unprecedented questions and produce new kinds of realities only possible through the new tool.

I would like to propose that the reproduction of reality is the first stage of the use of computing and digital media in the field of architecture. Digital Media,

like perspective painting, early portrait photography, narrative cinema, and video is currently concerned with the reproduction of the environment in which we live.

As a cursory reader, I can easily give into the seduction of representation. However, as someone who is conducting research in this arena, I have had to question representation as the sole purpose of digital media. As precedent, and as inspiration, I have been examining the developments in painting, photography, film, and video. Each has achieved the status of an artistic and cultural activity by initially reproducing the appearance of the reality of its contemporary environment; each, however, was followed by another that could recreate reality more readily and more legibly. At the moment when photography could represent the appearance of reality far better than any painting, painting had to search for new

realities, new spaces to create, new fictions to invent, and new landscapes to construct. It is at these key thresholds of transition that each medium has ventured into an arena of experimentation and creation in favor of pure representation and reproduction. Most often, these experimental arenas are generated through experiments with the medium itself. My approach benefits from this understanding and uses the medium as a means of construction and expression.

I would like to briefly discuss a painting by the Nineteenth Century Dutch Painter, Vincent Van Gogh, a painter of extreme facility, practicing at the wake of the photographic image. In 1887 he experimented with a technique of applying paint that promoted a new model of constructing space out of smaller fragments of paint using short brush strokes. The painting, «Self Portrait with Felt Hat» still reads as a uniform

representational image from a distance. In detail, however, It is composed of points of color, analogous to that of the grain of the photographic image. Points of color that together would construct surfaces of flesh, clothing, and the sky. No where in this painting is there flesh as color. The expression of flesh is achieved by juxtaposing fragments of dissimilar colors.

This conceptual approach highlights the most obvious similarities between this work and photographic process. However, the most significant parallels lie at the more fundamental and philosophical level. The nineteenth century witnessed a rise in materialization of scientific hypotheses, based on observation, tracing, experimentation and technological determination. Photography was discovered as a result of this philosophical transition.

I would like to draw a parallel between these techniques in painting and the possibility of seeing the world through the eyes of a scanner which in a similar way fragments the object of scan into digits and pixels of colors and information. No where is there the color of flesh, only the juxtaposition of cyan, magenta, yellow, and black; the grain of the scanner much finer than the grain of the photographic image, which in turn is much finer than the grain of Van Gogh's brush strokes.

In the same way in which Nineteenth century artists had been influenced by photography, the artists of the early 20th century were informed by cinematography. This view introduced the time factor into painting. Objects come to be seen as inseparable from the complex time-space processes and continuum to which they belong.

Marcel Duchamp, the French artist, rendered visible the duration of an action, a body in motion, in the «Nude Descending the Stair Case» of 1912. Influenced by the contemporary cinematography techniques, Duchamp presented the spatial flow between the figure and the field by incrementally capturing the duration of the nude as it descended the staircase. Duchamp established an active dialogue between the figure and the field, by a formal breakdown of the two while allowing them to interlock. The integration of the figure and the field referenced the temporal and the spatial duration of the event in much the same ways that Van Gogh's brush strokes created a spatial flow between the portrait and the sky.

American Nineteenth Century photographer, Muybridge envisioned new directions for the medium of photography in the concept of stereo-view. Like his contemporaries, he produced double-image stereo-cards for viewing with stereoscopes. It was not until his 1878 Palo Alto experiments that Muybridge saw the possibilities for the single instantaneous photographs to become documents of a series of images captured over time. The concept of serial photography would follow logically to construct a string of cameras, to control the duration of time between the release of the shutters, and to produce a series of photographs that capture the analytic phases of a single event.

With Muybridge's development of serial photographic techniques, he proved himself able to link scientific demands for information and experiments about motion with the experimental photographic methods. Muybridge photographed his subjects from three different angles simultaneously in equal intervals of time and space in front of a gridded background.

Film was also at first purely a linear reconstruction of narrative for entertainment purposes. Futurist cinema in its most clear embodiment manifests itself in a 1929 film by Dziga Vertov, titled *The Man with a Movie Camera*. The film is a construct sited in its medium rather than relying on a scenario as the basis of film. He constructed a reality out of direct articulation of the material - which allowed him to address techniques of editing and montage to exhibit a new kind of rhythm or beat structure throughout the film that is constructed from the changes of its own images. This is only one way that he makes the film self-referential. A direct reference to the machinery, defining the camera as a participant in what it sees makes the film the forerunner of many films that explore self-referential structures. The image contains the camera, the man with the camera, projectors, the cinema auditorium and the screen, the public, the film within the film, and the process of its own making and editing. In addition it explores various forms of superimposition and split screen form, which contributes to a dynamic exhibition of the networks and connections on exhibit. *Visual Counterpoint* Techniques of motion and counter-motion, among other ones are used not only to explore formal modes of making but also to conceptually explore the relationship to radical political environments.

Nam June Paik video installation artist began his career in the threshold between the filmic moving image and the television image. He was the first artist to use TV as an artistic medium. Paik created musical instruments, sculptures, and installations, building on the idea of manipulating and transforming the moving image. Paik's revolutionary inventions influenced how audiences viewed technology, art, and music.

Paik also incorporates video into his work, focusing on the capabilities of this medium to show on a TV monitor what is being recorded in real time. He uses a portable video recorder to loop reality into the digital realm and recycle the image until they belong to a single work. Paik's exploration and creation of media art continues to demonstrate how art can be a valuable tool for understanding the impact of rapidly expanding technology.

At this point I would like to elaborate on

the concepts and techniques of incremental capturing of the duration of time and space. I will also address the collapse between the figure and the field as well as the digital and the material in my conceptual approach and teaching.

I have conducted design studios, where during the site analysis phase of the project, I have asked the students to think and act as a scanner would in reading their site. I have asked them to create spatial analogues and digital collage composites that reconciled their pixilated understanding of the site. Together we have developed techniques that allow students to consolidate and process information, and issues of both concrete and implied nature while transforming them into architectural and constructive decisions. (Figure 2)

In a series of related investigations in my own work questions of time and space are addressed in project and site specific ways. «Space of Locomotion», as the title suggests, is the study of the space of movement. I have used digital animation software to construct a space that while describing the incremental fragments of motion and its duration, assembles the fragments to reconstruct the continuous space of locomotion. I have examined the spatial relationship between the motion of the body and the surrounding space, as each unfolds relative to the other. This project, is influenced by the work of Muybridge. I selected plate 405 of his Animal Locomotion, of 1887 as the base for the project. By juxtaposition of all three

views simultaneously in a single composite drawing using the digital media I was able to find a spatial language to define the space of locomotion.

In a related installation project «Thresholds: the arcades project», in order to demonstrate the links between my transformations and the work of Muybridge, I adopted a spatial grid based on the grid that he imposed behind his subjects. In my work the spatial grid applied to the volume of the existing site prepared the space to receive, record, measure and articulate the relationship of the fragments of the work relative to one another. I used the audience as an integral part of the construction and experience of the work. The project acts as a temporal and dynamic spatial montage that continually brings together the passage of the audience with the prepared digital work.

In this brief essay I have tried to locate four key periods of transition in the development of the image within the past 150 years. I have done so to locate some of my work in relation to the work of the artists who practiced in these periods. More importantly, I have done so in order to suggest that digital media are in a period of transition and a threshold of transformation. One in which, the fascination with representation has given way to the production of new spaces through unprecedented experiments within the medium.
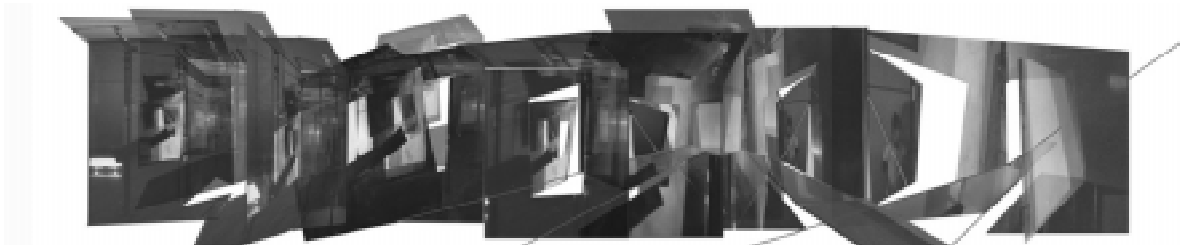

Fig 1 Student work from «Building/Machines» Studio