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## Conversation with spaces (superreal)

"Men can see nothing around them that is not their own image; everything speaks to them of themselves. Their very landscape is alive." Marx \*

### *Research Question*

How can audiovisual tools be used to transform, create, expand, amplify and interpret physical spaces?

### **Introduction**

The body is the link between the physical world and the mind. Audiovisual technology can be considered as extensions of our perceptual and conceptual apparatus: The camera and microphone captures the world, which is processed by a system, and the projector and speaker projects a transformed perception back into the world.

I want to explore and interact with the environment using audiovisual media, to create a poetics of everyday life. This is partly inspired by ideas of the embodied mind from cognitive science, ideas from psychogeography about the individual's relation to its environment, and expanded cinema.

To move in space and to organise in space is a way to think, dream and remember. My point of entry into communicating with a space is in the crosspoint of a specific time and location, and how movement and motion connects the concepts of time and space, and thus the relation between the present and the memory of a space.

I want to draw on my own experiences from improvisation, site-specific work, experimental film/video, realtime systems and stage work to create a set of tools and methods to be able to improvise with/interact with/play a space.

A prerequisite for doing this kind of project is to have a physical environment to work in, so I will construct a lab environment.

The intention of the lab is to create a controllable space where I can work directly with distribution and movement of image and sound in space, interactive environments, and prototypes for dynamic roominstallations with video, light and sound.

It is important to have an intimate and fundamental knowledge of the technology for it to be used in art. A lab situation enables me to work in a physical space with the necessary technology, to develop ideas, tools (software and hardware) and methods, which will heighten my sensitivity and competence to improvise with other spaces. \*

It is natural for this project to look at the city/environment as screen/gallery/stage as well as a source. I want to move between these two approaches: interventions in the environment and experimenting in a studio lab.

### **Background/Theory**

#### *The embodied mind*

A few years back I had a small revelation after reading *Philosophy in the flesh* by Lakoff and Johnsen, it summed up a lot of my ideas and thoughts, and it gave me a theoretical framework for my work, the idea that the mind is embodied.

The body is the mediator between our inner mental world and the outer physical world. According to

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\* quoted by Guy Debord in the Situationist Manifesto

newer cognitive science, it is quite probable that the same parts of the brain dealing with perception and motion are also used for conception, so perceiving and conceiving a reality are strongly connected, mediated through the body. The mind is embodied, meaning that all our mental facilities and concepts are grounded in physical experiences.

The way the human body is made up, determines how we categorise, and thus filters, the information from the world. This in turn strongly influences how we think and relate to the world. Our relation to the world is mediated through our brain structures, our bodies and interaction with the environment.

If our mind is embodied then how we relate to a physical environment has emotional consequences.

### ***The relation between the body's movements and time and space***

The connection between mental state and physical space is old. The Ancient Greeks used temples as a way of remembering speeches: By linking different parts of the speech to physical places in the temple the speech could be reconstructed by mentally moving through the temple space.

Most of our understanding of time comes from concepts about motion in space. The brain has a dedicated area to detect motion, a similar area does not exist for time, so that could explain why time is conceptualised in terms of motion in space. Concepts of time often relates to space: time as locations. In musical terms extremely slow time can be experienced as a static space, so space can be seen as a degree of time.

Jung described time and space as coordinates to describe bodies in motion.

Bergson writes (in *Matter and Memory*) about how the body and mind communicate with each other through the medium of time, that the body is the present, and the mind, through the recollections of memory, links instants together. Duration.

Merleau-Ponty writes (in *The phenomenology of perception*) about how the body inhabits space through movement, and the concept of multiple spatial and temporal perspectives.

### ***Psychogeography and the city.***

Psychogeography, which I discovered at the Psy-Geo-Conflux 2003 conference in New York, gave me another framework, again making the connection between the mental state of the individual and its physical environment, with a focus on an urban setting.

Quoting Guy Debord: Psychogeography is "the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behaviour of individuals".

"Psychogeography is the active search for, and celebration of, chance and coincidence, concurrently with the divination of patterns and repetitions thrown up by the [meeting/collision] of the chaos and structures of cities, personal histories and interpretations. It is based on the technique of the "dérive", an informed and aware wandering, with continuous observation, through varied environments. It can be sought and can lead anywhere."

So psychogeography offers both a theory of the relation between a mental state and a physical environment, but also a set of tools and strategies for exploring and experiencing the environment.

My interest in the city is on several levels: Cities are manmade and under constant transformation, both on short and long term. The city is also the natural environment for a lot of people. This environment is dynamic: Light and sound changes the cityscape completely, for instance when night falls and the artificial light comes on in windows and streets, or the pulse of traffic and people which change with the course of the day.

Since the surroundings form how we think and experience the world and we at the same time project our view of the world back onto the environment, the manmade landscape of a city is an endless source for artistic content/mythic content/ poetry. It has also become a screen/gallery/stage for a lot of art projects.

### ***Expanded Cinema***

Expanded Cinema refers to that field of art in which artists and filmmakers sought to 'expand' the terms and conditions of what film could be:

"Whenever the site of the film is not the screen, houses can be projected again onto houses or bodies onto bodies, the representation and the object overlap one another, the representation and the celluloid become superfluous. Technical reproducibility is replaced by immediacy, and with this the objective character of the film is transcended; state-reality is not reproduced, but rather the subject and its experience predominate.

The "world" is no longer simulated; rather, the possibility of producing "world" is demonstrated." Peter Weibel

## **Method**

My project is structured around some main research areas in the lab environment, which all relate to stages of capturing a space, processing/structuring, and projecting into a space (impression --> expression).

### ***The focus of space through image, light and sound***

I am interested in different ways of incorporating video, light and sound into physical spaces. Instead of simulating a 3D environment projected onto flat screens I would like to create dynamic spaces using video as light; by projecting 2D into a 3D space (and more advanced projecting a modelled 3D space into a physical 3D space), masking of the image (like *Iball*), relief projection (projecting an object back onto itself, like Naimark's *Displacements*).

For outdoor and mobile projects I need special housing for the projectors, and need to experiment with alternative forms of energy sources, like generators and batteries.

Instead of using surround sound to place a sound in a space, I would like to work with concrete sound sources, short range FM-senders and directional sound beams.

It will involve a lot of custom hardware and software solutions, and I would like to involve Soundscape in Trondheim on the hardware side.

### ***Multichannel composition and choreographed motion using image and sound.***

An essential part of the project is to construct ways of controlling, linking and combining the different audiovisual elements, both in terms of creating a physical layout of audiovisual modules, but also to create a system for distribution of image and sound over multiple computers and sources.

My main interest on the software side is working with the idea of a network of audiovisual nodes, and experiment with different ways of how these individual elements relate to each other and to the global system, to create patterns, rhythms and movements across sources.

Apart from creating dynamic spaces by moving image and sound between different sources I also want to look at mechanical movement, by moving camera, projector, mirrors, projection surfaces. How can movement create spaces, and how does movement affect the perception of spaces?

### ***Time-space relation***

As mentioned in the introduction, a space is a combination of being a specific location at a specific time. I want to explore this relationship on many levels: The relation between the memory/past of a space and the present (psychometric architecture), resolution of space and time (compressing/stretching time, looking at the surroundings through a microscope), breaking up the linear relation of space/time through animation, timelapse, reshuffling of frames, layers of time in a single image etc.

### ***Sensing and changing the space through physical computing***

Instead of using regular computers as nodes in the system, it will be interesting to explore ideas around ubiquitous computing, that computer processing will be distributed in smaller units and have a more or less transparent presence in our lives. Microcontrollers can both sense spaces through all types of sensors, RFID tags etc., and change spaces through use of light, sound, motors, and force feedback etc., so they can be an interface between the audiovisual world and the physical world.

I will be particularly interested in following the development of wireless microcontroller systems which could become an important part of doing interventions in public spaces.

I will be collaborating with the interaction design department at Arkitektthøgskolen in Oslo.

***Max***

Max is a graphical modular programming environment which can be used to make, control, transform and mix both video, sound, light, mechanical movements etc., and it is a tool I have used since I graduated at the art academy in 1999. It will be the main software development tool in the research fellow project.

### **Presentation:**

My project is based on developing projects through the practical research done in the lab, so there will be a series of projects generated over the three years from this work, like *nodio*, *soundpockets* and *mikro* which have materialised in the initial period of my research fellowship.

*Nodio* is a multichannel audiovisual network where each node in the system is a source both for video and audio. The nodes are connected through a wireless network.

My focus is on what happens when several audiovisual sources are interconnected, where the most interesting part is what occurs between the sources, not the sources themselves: The development of patterns and rhythms, and the possibility of creating a physical landscape of modules which you can walk through, where displacement and changes in image and sound transforms the space.

*Mikro* is a series of improvised performances using the immediate surroundings as raw material: A microscope captures everyday objects and surfaces like wallpaper, coins, clothing, furniture, newspapers and transforms it into an explosive universe of textures. Contact microphones and electromagnetic wave receptors pick up unheard sounds to create the live soundtrack.

*Mikro* is a collaboration between HC Gilje (video) and Justin Bennett (sound).  
The first performance was at Paradiso in Amsterdam, feb 28th 2007.

*Soundpockets* is a series of projects of intimate sound interventions in public spaces. By using fm radiowaves, soundbeams and miniature speakers to create local pockets of sound, the different projects have different scope and focus: creating private listening rooms, changing soundtracks of a location, displacement of time/or space and a bit of general disruption of everyday life. It will be presented as part of the Urban Screens exhibition in Oslo, sept 2007.

These and other projects will be documented and presented as part of my final presentation.

I will also realise a final project which can implement several of the tools and insights gained in the 3 year process.

### **Documentation and reflection:**

Since my project is very much an ongoing process it is important to document it continuously. I do this through a work diary, and taking stills, video and sound recordings, and also try to systemize the resources I come over.

I think an interesting way of presenting this is in the tradition of manuals, like the N55 manual, the instructables website and Haque/Somlai-Fischer's prototyping manual.

I also develop software modules for use in the workshops I give, so it can be interesting to see what projects they will be used for by the students.

It will be essential to contextualise each smaller project in the bigger frame of the my research fellowship, how these projects affect and relate to physical space, but also to place my work in relation to similar projects/ideas/artists, through conversations, study trips and collaborations.

### **Relevant projects/artists**

City as screen: architects and artists using whole buildings as screens: chaos computer club: *Blinkenlights* in Berlin, Realites United: *Blx* in Graz and *Spot* in Berlin, lab[au] *Dexiatower* in Brussels and Lafontaine's projection on the Frankfurt Skyline for the world cup opening.

Smaller scale interventions in urban spaces like the mobile projections in *San Jose Wildlife* by Karolina Sobecka and *Parasite* from the UDK digital media class.

Some other projects worth noting which relates to using the environment is Blast Theory's *Can You see me*

*now?* which is a mixed reality game that happens simultaneously online and on the streets, and The Rimini Protokol site-specific performance *Cargo Sofia*, where the audience sits in the back of rebuilt truck and looks out from a changed perspective back at their city.

Two obvious references are The Vasulkas and Moholy Nagy, both doing pioneer work developed in a lab environment, and both exploring and creating spaces through motion (*Light-space-modulator* and *Machine Vision* in particular).

Michael Naimark has both written and produced interesting work which connects camera and projector, presence and memory, through motion. Particularly interesting is *Displacements*.

Michael Snow's film *La Region Centrale* from 1971 where a complex camera movement discover a mountain landscape.

David Rokeby through his live camera installations dealing with relations between time and space, especially *Machine for taking time*.

Other contemporaries: Usman Haque, Somlai-Fischer, United Visual Artists, Rafael Lozano Hemmer, Hotel Modern, Verdensteateret.

### ***Selected literature***

Merleau-Ponty: *The Phenomenology of Perception*

Henri Bergson: *Matter and Memory*

Adam Greenfield: *Everyware*

Gene Youngblood: *Expanded cinema*

Lucy Bullivant: *Responsive Environment \_Architecture, art and design*

R. Murray Schaefer: *The soundscape*

Tom Igoe *Physical Computing*

Lakoff/Johnson: *Philosophy in the flesh*

*A mis-guide to anywhere*

*Moholy-Nagy Experiment in Totality*

*Vasulka-lab*