

**If These Walls Could Talk:
Environmental Agency in Cinematic Narrative Construction**

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UCLA Design | Media Arts
January, 2004**

Introduction

One of cinema's miraculous tools is the creation of an environment, a window into a world that is designed by its author. The moving image is an act of a secondary god, we cannot create real worlds but can simulate them fantastically on the other side of a flickering window. But can the process be reversed? Can environment create cinema? After 100 years of cinema as a handmade artform, the work of an auteur, new media technologies are introducing the possibility of environmental agency in narrative construction. Space can now become a protagonist, not metaphorically but literally, in the creation of the moving image and the stories it weaves. The world can now imprint itself on film. This paper will look at using design technology to reconsider the role of environment in cinema creation.

We first must make some clarifications about narrative itself and where it is located in cinema. Since so much depends on the phenomenology of the moment that cinema is witnessed, it can almost be argued that there is virtually no inherent story, so much personal baggage defines how we interpret what we watch. We will discuss whether there is a narrative that can be separated from the screening event itself. From there, it will be helpful to consider environment in theatrical terms by examining its role as a character, script, director, and editor. After a brief discussion of environmental damage to cinema and how that affects narrative, we will look at the new media tools used to capture the 'voice' of the environment and the best narrative structure for presenting that voice. The paper will close with an explanation of the 'Brakelights' project, a real-time system to capture environmental color changes and translate them into the construction of cinematic narrative.

Environment and Narrative

Cinema is an interface of sorts to events are taking place in another worldⁱ. Frustrated with the rectangular window as the sole portal, it didn't take artists long to begin moving that window out into the world around them. That interest has never subsided—to this day, artists are experimenting with new projection systems and alternative screens in an effort to relocate the moving image even more. These early and recent experiments have forced a revised understanding of narrative since it is now clear that the viewing location of cinema has tremendous impact on the perceived narrative. Perhaps narrative needs to be divided—the one we experience when we watch film and the one we experience when we live film.

Perceptive Phenomenological Narrative

Recently I was in a seedy bar in Cambodia watching a pirated "Bad Boys II" bootleg. Someone had smuggled a digital camera into the theatre and filmed the movie—I heard the audience laughter, watched people passing in front of the screen, saw the camera jostled. "Bad Boys II" took on a completely different narrative structure by moving behind a second window, by capturing the theatre environment as the film

screened, and by showing it to me in a haze of Asian cigarettes, a jukebox, and the haggard ex-pat conversations around me. The context of cinema's presentation is so closely tied to narrative that before we continue, we must consider how the narrative of a film exists outside the work...in our interpretation of it.

The **Expanded Cinema** movement enthusiastically experimented with projecting on objects other than the screen and quickly learned that new projection options led to new narratives. It seemed as though cinema was being freed from its window frame...gaining a third dimension. As cinema became touchable by the spectator, the audience took part in the construction of the narrative and interactivity was discovered in relation to the moving image. The crowd bouncing around on those giant inflatable pillowscreens in Shaw's "Movie Movie"ⁱⁱ were watching and writing the movie simultaneously (and it looked like quite a party as well). The space was oxymoronic—an immersive surface. By shifting from screen to environmental object, cinema began to tell new stories.

The movement also recognized the power of multiple screens in narrative construction. The stunning Eames exposition in Moscow and Expo '67 helped realize that large multiple screens communicate a sense of landscape that is far beyond the single depiction of a world through a window. Multiple screens, in addition to the power of scale, also allow for patterns to be communicated and, as our eyes dart back and forth, up and down, it mimics the wild complexity of experienceⁱⁱⁱ. Warhol took it even further and in "Chelsea Girls" in 1967 let the visual landscape operate metaphorically as well—he used his multiple windows to allow the characters to discuss their lives in multiple perspectives and at several different levels at the same time. Expanded Cinema celebrated the transportation of images—either bringing the images into the audience or bringing the audience into the images.

But this obsession with surface implies that narrative is completely in our perception of cinema...show us a stoic Russian cut with a bowl of soup and we'll tell our own story, thank you. Relocate the surface, recontextualize the presentation, and the narrative changes. Quoting Alexander Kluge, "The concept of production not only includes the manufacturing of the film but also its exhibition and appropriation by the imagination of the spectator who actually produces the film, as the film on the screen sets in motion the film in the mind of the spectator."^{iv}

Inherent Phenomenological Narrative

However, media theorists have long argued that we are projecting ourselves into that window—cinema is not just looking *at* but looking *through*. Gregory Galligan states that, "The success of visual perception depends on the perceiver maintaining a subliminal awareness of the self as object in the visual field."^v This implies that there is an interior phenomenology at play as well as that one at the moment of presentation. We are also 'present' inside the window of cinema, experiencing that world as well. McLuhan knew that the glowing box in front of him was not a visual media and

considered it an extension of touch rather than sight^{vi}. Cinema is a phenomenological mosaic—many different threads of experience are being taken in at the same time.

We are not referring here to the ‘intended’ narrative in a work of cinema—the one planned by the cinema’s creator—since narrative often occurs when it is not intended, those great story accidents of film. It seems more useful to think of inherent phenomenology, the course of the journey, using theatre terminology. When staging scenes and shots, directors work with **beats**...the emotional bookmarks along a timeline that create the total narrative arc, usually denoted by gerunds (he’s begging, she’s resisting, etc.). In “The Language of New Media”, Lev Manovich discusses the core structural unit of cinema as the shot^{vii}, but the core narrative unit of cinema, and perhaps storytelling in general, is tied to the beat. Several directorial beats may shift within a shot or sustain through several camera setups. Knowing that we’re inhaling a mosaic of experience with cinema, the emotional beats of a story are just one layer of the phenomenology, this ‘medium of touch’.

So, a second phenomenology must be considered. The first is connected to the environment in which cinema is viewed, the second is with the environment within the window—the phenomenology we experience when we propel ourselves into the film. There is an emotional, multi-sensory, physiological journey that is a collective cinema experience within the work itself; in the dark theatres (or minivan screens or cell phone windows or...) we share shifts in phenomenology...our hearts race together, we sweat, tears well up. When viewing cinema, we cannot separate these two environments from our perception of the narrative...they are locked, linked together. However, we can affect one or the other, and after years of experimenting environment affecting the external layer, it is time to experiment with the internal one...to see if we can use the environment to control the inherent narrative.

Protagonistic Environment

To understand the environment as a protagonist, we first have to understand space as self-motivated. I’m not arguing for a sentient world, although I’m dangerously close. Examples of an active, dynamic world are obvious, but the creation of narrative involves motivation, self-will. When I lived in winter snowcaves in the Colorado Rockies, we had to constantly adapt our living space to the movement of the glacier and the weight of the new snowfall on the roof...the space had a motivation all its own, hellbent on sliding down the mountain. My old woodframe Victorian house expands in the damp winter so that many of the drafts seal; in the summer it contracts and more air passes through. My elderly Dutch mother used to complain that my house “had a mind of its own.” Environment is alive, with its own agenda often beyond the initial design intentions...our built spaces conspire around us.

Translating this self-motivated role of the environment to the creation of cinematic narrative, it helps to utilize theatre terminology once again to assist in making the leap—to look at space in terms of Character, Script, Director, and Editor.

Environment as Character

Civilizations have been looking at the stars and seeing characters form, connect, and narrate for centuries. Assigning character to the environment is part of every cultural mythology and is one of the ways we define the relationship we have with our universe. Myth is not non-scientific, but a complex merging of science, art, and culture^{viii}. The fact that nearly every civilization uses character assignment in environment as part of a complex pattern of belief implies that something else is at play. More than just ascribing human characteristics to natural phenomena, it is the recognition of character in environment. The qualities are there, not projected.

A personal favorite in fiction of the characterization of space occurs eloquently in Edgar Allen Poe's "Fall of the House of Usher". In typical dark Poe prose, the story blurs the line between the man and his house by describing the house's windows as 'eyes' and the man by his 'frame.' The decay of the man and the decay of the building are uniquely paralleled and the collapse of Usher, both the man and the mansion, occur as one event. Poe realized the unique bond we have with space, that it is an organic, self-motivated entity^{ix}. We humanize space in fiction so effortlessly that perhaps it is non-fiction.

Environment as Script

We also read space—temporally, emotionally, physically. Grand oratory has been told by using space. With the **Earthworks Movement**, artists learned that it was the interaction with the space that created the art, and the environment was now part of the game. Earthworks resituated the site of the aesthetic epiphany from the object to the surroundings. By considering entropy and environmental changes, the works told extended narratives. Robert Smithson's "Spiral Jetty" still ominously, grandly surfaces in the Great Salt Lake and it's duration reads like a strange novel. In Smithson's 1968 catalogue, he stated that "earthworks have nothing to do with conventional notions of landscape or nature...the desert is less nature than concept, a place that swallows up boundaries."^x Spaces that spin stories are some of the great artworks of the 20th century—Tyree Guyton's Heidelberg Street in Detroit, with it's crazy painted houses and aestheticized garbage used a neighborhood as a comment on urban decay and became a powerful political statement; Scottish artist Ian Hamilton Finlay's "Little Sparta" began as a quaint neoclassical garden and became the site of battles with the Scottish Arts Commission with Finlay's minions battling the art bureaucracy with arrows and eggs; in 1998, Ars Electronica awarded the town of Popotla, Mexico its InfoWeapon award for their resistance using their environment against the filming of 'Titanic'. In each case, environment tells a story.

Environment as Director

To understand the environment as a director, we can turn to DeBord, derives, and pyschogeography. The **Situationist International** (SI) movement constructed situations

to disrupt the ordinary, to jolt people out of customary ways of thinking. They dismissed the concept of art as a work of art; they believed that art manifests itself in an event.

These

situations were closely tied to environment and the movement embraced allowing directorial power to space. In 1956, Guy DeBord wrote, “Among the various Situationist methods is the **derive**, a technique of transient passage through varied ambiances. In a derive one or more persons during a certain period drop their usual motives for movement and action, their relations, their work and leisure activities, and let themselves be drawn by the attractions of the terrain and the encounters they find there. The element of chance is less determinant than one might think: from the derive point of view, cities have a psychogeographical relief, with constant currents, fixed points and vortexes which strongly discourage entry into or exit from certain zones.^{xii}” DeBord’s derives are excellent proof of direct environmental impact controlling a narrative and **psychogeography** continues to be explored. Jonathan Raban’s “Soft Cities” recognizes the control of space on narrative, “The city goes soft; it awaits the imprint of an identity. For better or worse, it invites you to remake it, to consolidate it into a shape you can live in. We mould them in our images; they, in their turn, shape us by the resistance they offer when we try to impose our own personal form on them.^{xiii}”

Environment as Editor

Much current architectural theory is a discussion of how space edits movement, shapes behavior by restriction and permission. Benjamin Bratton explains that “environments configure and constrain the ongoing formation of subjects by differentially positioning bodies and the conditions of their performances. Habits produce habitats, habitats produce habits; subjectivity is both a condition and an outcome of this cycle, as sensual as it is functional.^{xiii}” Like installation art, visitors perform the space, finding fictions and narratives that inhabit the environment. Space is physical experience that generates narrative, it utilizes the physical body and how we sense the world through our eyes, ears, and touch...and edits what we perceive^{xiv}.

While considering space as a character, script, director, and editor may seem merely charming metaphors, it foretells a more direct agency of space with the moving image.

Environmental Agency In Cinematic Materials

When Paik placed his magnets on those early televisions, an example of environment affecting cinema was being born. Indeed, each time we watch a dancing hair captured in the projector’s gate, hear accidental sound bleeding in, or notice dust blurring the image, we are witnessing environmental agency in cinematic narrative...those annoying hairs are changing the story, whether intended or not. While Brackage manually scratched his film with dirt, the natural and accidental effects of entropy, degradation, and deterioration are direct actions from a self-motivated environment on cinema. Recently working with 1980’s archival VHS tapes, I was thrilled to see that the colors had saturated due to moisture in the basement they were stored in for 20 years, the memory had become richer. In 1976, Mary Lucier allowed for

direct environmental impact when she created “Dawn Burn” by aiming a camera at the morning sun as it rose over New York and Paris. The direct sunlight damaged the camera’s videicon tube, leaving a dark, arcing scar on the camera image. To her, this particular environmental agency was indicative of an innate desire to confront a natural force. “I became obsessed with the idea that video have been invented to satisfy an ancient longing: to allow the human eye to gaze directly into the sun without damage to the retina. Direct, unmediated confrontation with the source of light mean, paradoxically, the death of vision—the clouding over of the eye that dares to look, that surrenders to the persuasion of desire over reason.^{xv}”

New Media Tools for Environmental Interaction

Increased Mediation

The surge of new media in the last 15 years allows the jump of environmental agency from accidental antagonist to active protagonist...computerization allows for the direct, real time impact of a space on cinema. New media’s interface with the world around us increases each day, and, according to Bratton, “it is clear that the physicality of computation as an element of the everyday world, is less representational than presentational, less cinematic than environmental, less cognitive than dialogic.^{xvi}” Computers have taken over the role as discoverer and revealer of essential truths in our world because, quoting Michael Speaks, “Science rationalizes the entire world as an object, transforming it into a calculable, mathematical truth.^{xvii}” Our practices are becoming more intelligent, our processes of thought more computational.

New Emphasis on Process

In Speaks’ “Design Intelligence”, he argues that there is a “trend driven by the new relationship between thinking and doing in architecture^{xviii}” A building is still a building, but the way we make buildings now has radically changed (rapid prototyping, 3-d modeling, etc). The new media revolution is the process. Speaks writes about a new emphasis in architecture on the analysis and manipulation of materials (rather than form) as well as the movement to consider the dynamism of society...the steering of trends, forces, movements. His criticism of the work of Greg Lynn still belies some common threads. Lynn believes that ‘reading’ the environment in architectural design leads to a truer inner order of built space—lack of environmental input creates a less coherent system, “due to an absence of interaction with larger external forces and environments.^{xix}”. Architectural design seems to be closing in on Lucier’s “direct, unmediated confrontation.”

New media is dramatically changing how we make things...and therefore, how we think about making things. When speaking at UCLA in 2002, Lev Manovich caused quite a rumble in the room when he declared that the greatest avant-garde film of the 20th century was the software Final Cut Pro. The initial response was indignant, but with some consideration it is not far from Speaks...we rapid prototype in cinema as well.

Perhaps I am just becoming jaded—not surprised by what I see in the frame anymore, not surprised when the frame is relocated, not surprised by human interaction, I will only be startled now when the cinematic creation process changes. Like the current trends in architecture, the ‘process-vs-form’ conflict is an attempt to exploit movement and environmental input to produce new forms. New media is shortening the gap between creation and presentation in cinema and, again translating Speaks from architecture to moving image, it is time that we disregard what film ‘is’ in essence, and consider what it can ‘do’. New media is allowing cinema to merge with the dynamism of environment, and maybe film, like architecture, can both anchor and steer the flows in society, and break from being an object to becoming a factor.

Better Understanding of Interactivity

The 1990’s saw an onslaught of new media work that was about, well, new media. The thrill of the new technologies was enough to comment on itself so we saw a barrage of interactive cinema that was simply about interactivity—man enters the image world, man manipulates the image world...and we were quite amazed. While the novelty is wearing down, these works did a tremendous service by giving us direct examples of mediation affecting narrative. We became more open to stories that unfold in non-linear form. Timelines were allowed to blur, realities intertwine, we stopped waiting for closure. Interactivity allows for “a floating work of art^{xx}” which is not the creative achievement of a specific artist but is more in the imagination of the user who exercises commands based on abstract sensual reflexes. Story is no longer a fixed entity but a world unfolding, a state transformed by changing influences. Narrative is now allowed to recreate every moment of its perception and this opens up possibilities for different types of interaction. We get it, it doesn’t have to be classic three-act structure anymore.

Sensor Technology

As changes in motion, light, sound, and temperature can now be measured computationally through new media, our modern surveillance technologies are no longer dedicated to watching people—they are now reading environment as well and offer unique information about the shifts and patterns in our world. In Sheldon Brown’s, “Video Wind Chimes^{xxi}” a video projector pointing down from a streetlight shows video from television stations that change as the wind shifts. A smart comment on the broadcast waves that permeate our atmosphere, the work connects the movement of the wind to invisible wind that is encoded and transmitted as part of broadcast television. As the wind blows the chimes, the direction is measured by sensors, and changes the tuning of the television signal—the wind controls what is watched. Toni Dove’s, “Artificial Changelings^{xxii}” used video motion sensing and vocal triggers to sense visitors’ presence and translate them to the narrative on the screen. Human movement in the environment changed the character’s body, speech, and sounds. More new media artists are realizing the physical connection that McLuhan was hinting at...it’s a medium of touch, and our touch can change the medium.

Database Narrative as Tool of Environmental Voice

Our world is increasingly mediated, our thought processes mimic the computational process, interactivity has allowed for more flexibility in narrative structures, and sensors are providing new ways to read the environment. All of these lead to new possibilities for allowing the environment its voice. But when it speaks, what is the language? What form of narrative can environmental data generate? Data coming in through sensors from the environment most easily connects with database. Software has a dual quality that is both a language and a technology and environmental agency is able to exploit this unique characteristic. Speaking through databases, space is able to generate narrative.

In “The Language of New Media,” Manovich argues that narrative is the opposite of database--narration is the parts of a story that moves the plot forward, description is those parts that do not^{xxiii}. He feels that narrative was the choice of cultural expression for years but that a new culture, one of information access, is now giving us lots of description with few narratives that tie it together. His argument battles spatial vs. linear—narrative shows the world as a cause and effect journey, database shows the world as a list of items. His “string vs. layers” argument insisted that narrative is no longer privileged as the main form of cultural expression, and that the database is winning.

However, witnessing the ways that story can occur within a database, it is questionable whether the two are really opposites. “Spoon River Anthology” was a collection of obituaries that revealed a story...written in 18??^{xxiv}. Even Robert McKee’s rigid story structure elements tie easily to database—the *Inciting Incident* becomes what’s chosen from the vast options in the data, *Progressive Complications* can be created by the paths or items not chosen or fighting for attention, *Crisis Decisions* occur at pathway deadends, and *Climax* at the revelation of pattern, the final selection, or the understanding of the ‘game’ itself^{xxv}. Database is not the opposite of narrative, but a different type of narrative.

The most difficult obstacle with database narrative, however, is cinematic empathy. Our capacity for ‘connecting’ with the emotional journey of cinema seems to be tied to linear narrative history. As our new topologies become the models for thought, I wonder if we can adapt. Is there structural empathy? Can we relate to a work by comparing its structure and processes to our own? More and more cinema is replacing content with computer-modeled structures, and time will reveal whether we relearn how to interpret story.

Already the public seems to be becoming more comfortable with computer language and structure and, because of this familiarity, it is seeping into more contemporary film and pop culture....the fragmented timeline of “Pulp Fiction,” the hyperlink structure of “Memento,” the databases of “Run Lola Run,” and “Sliding Doors,” etc^{xxvi}. In the near future, we will not connect with a character in a film because the emotional journey is similar to ours, but will connect with a work because the structure is similar to ours.

Conclusion: The Environment Generates the Story

The interactive cinema experiments of the 1990's seemed to tie more closely to the evolution of gaming culture than the history of cinema. If we consider cinema as a passive experience--we watch worlds unfold--then if there is any interactivity it must be non-human. One of the lures of exploring environmental agency is the hidden interactivity of the process...the narrative still allows for interactivity's liquid, floating work of art, but is still not controlled by human interface and can be witnessed passively (for lack of a better word). It seems it is a new form of cinema altogether. Suddenly the mysteries, patterns, and random chance of the environment can speak and tell stories. By reading our environment through new media technology and using database to create narrative, we may learn more about our world. Storytelling is still the greatest teacher, perhaps by listening to stories woven by the wind, we will feel that wind differently. Tomorrow's auteurs may be dynamic spaces.

And with the new options for relocating the moving image, the ability to feed these new environmental narratives back into the environment makes for mind-spinning options. The environment is read, creates the story, presents the story back...a type of biofeedback narrative loop. Our new technologies are changing how we interact with our world, computationally, and the implications on the art of storytelling are just beginning to surface.

Deleuze was concerned that nothing was happening to humans anymore, and that everything was happening to images now. His query in this context is nearly ironic... "how though, can we still talk of art, if the world itself is turning cinematic?"^{xxvii}

Brakelights Project Overview

"Brakelights" is a real-time system that reads changing color information in the environment, analyzes it, and selects elements from a visual database...a cinema making machine that I designed with programming assistance from Sean Dockray and Gabriel Dunne. In the presentation at UCLA Design | Media Arts gallery show "Caught in Transit" in January 2004, the system was codified to read the red threshold levels from brakelights on the 405 freeway and select lines of pre-filmed dialogue between a man and woman from a database of five emotions—anger, irritation, indecision, hope, and peace.

As a camera records the traffic, every pixel in every frame is measured for brightness and a number generated. The numbers are divided into a five-tiered gradient and pull random lines from the appropriate database relating to that tier. The five emotions selected were chosen to mirror the range of emotions experienced collectively by the drivers—anger when stopped, irritation when very slow, paranoia when moving slightly, hope when things open up, calm as traffic moves smoothly. Camera perspective was also used to tie to the five emotions--from extreme closeups during the anger sections to wide longshots for the calm. The actors gamely performed their 200 lines of dialogue while standing in the LA River just miles from the freeway...a poetic reference to the concrete rivers of Los Angeles. Designed as a realtime system, the resulting film

was a live-mixed creation that was 'driven' by the flow of traffic—the scene was directed by the 405 freeway.

“Brakelights” was designed as a modular system where both the measured data and output effect are easily modified. Any environment that shifts in color—tides, clouds, football stadiums, political conventions—can create cinema from a database of sounds, poetry, images, or video. In a possible future, the live film could be broadcast back to the environment itself. In this scenario, the created film could be sent back to the video screens in the cars themselves, and commuters could watch a film that gets more tense when they jam up, more loving when they move. Additional databases could also be integrated—five groups of music clips that tie to the emotions could ‘live score’ the cinema being generated.

The brakelights ebb and flow, creating a rhythm of emotions. By capturing this, we allow the environment to control the story and presentation of a scene.

ⁱ Lev Manovich, “The Language of New Media”

ⁱⁱ Jeffrey Shaw, “Movie Movie” 1969

ⁱⁱⁱ The multiple screens create a landscape article?

^{iv} Alexander Kluge

^v Gregory Galligan

^{vi} Marshall McLuhan

^{vii} Lev Manovich, “The Language of New Media” it is the shot quote

^{viii} the article on mythology?

^{ix} Edgar Allan Poe, “The Fall of the House of Usher” some of the building/man quotes

^x Robert Smithson, “Catalogue for Earthworks show”

^{xi} Guy Debord, “Derives”

^{xii} Jonathan Raban, “Soft Cities”

^{xiii} Benjamin Bratton, “article”

^{xiv} article on installation art

^{xv} Mary Lucier, “Dawn Burn”

^{xvi} Benjamin Bratton database thing

^{xvii} Michael Speaks article

^{xviii} Micheal Speaks “Design Intelligence”

^{xix} Greg Lynn

^{xx} floating work of art quote on interactivity

^{xxi} Sheldon Brown’s “video Wind chimes” from

^{xxii} Toni Dove, “Artificial changelings” from

^{xxiii} Lev Manovich, “language of new media” where narrative is the opposite of database

^{xxiv} Spoon river anthology, collection from

^{xxv} From Robert McKee's Story Structure seminar...taken in Los Angeles in
^{xxvi} are these movies from Manovich?
^{xxvii} Deleuze from the future cinema catalog