Moving Images – Static Spaces:

Architectures, Art, Media, Film, Digital Art and Design
AMPS CONFERENCE 14

THE MEDIATED CITY CONFERENCE
Altınbaş University; AMPS; Architecture_MPS; PARADE
İstanbul: 12—13 April, 2018

Moving Images – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design

SERIES EDITOR:
Graham Cairns

EDITOR:
Ayşegül Akçay Kavakoğlu

PRODUCTION EDITOR:
Eric An

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INTRODUCTION
This publication is the product of the conference, Moving Images – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design held in Istanbul in April 2018. Organised by Altınbaş University, the international research group AMPS, its scholarly journal Architecture_MPS and PARADE (Publication and research in Art, Architecture, Design and Environments, it offered a platform for multiple and diverse examinations of the city based on the following proposition.

The relationship between architecture, urban environments and the moving image is deep rooted. It is also mutating. Born in the City Symphony films of the early 20th it was premised on the dynamic and mobile representation of buildings, streets and cities. Caught on celluloid, these architectures were the setting of news reels and documentaries. They were also settings projected on screen and presented like never before. This complex relationship continues today with interiors, architecture and cities still forming backdrops to action and being the subject of feature films, documentaries, news broadcasts and TV.

Today, however, moving imagery and architecture coexist in multiple other worlds too: iphone screens and locative media; YouTube ‘news’ streaming of war torn cites; virtual reality spaces explored through headsets and haptic sensors; the animated environments of Second Life; the fantastical settings of the gaming industry; fly-through representations of architectural projects; and the real-time algorithmic formation of parametric architecture on a computer screen. All this has also been built on an ever resent and still influential history of the static image. This complex traditional and new scenario will be explored at this event.

As with other events in the series, it brought together people from diverse backgrounds to fragment, multiply and reconfigure our readings of the city; to offer multiple and conflicting discipline perspectives. The intention was to share views of the city as setting for film, physical entity, online community, film set, photographic backdrop, geographical map, sociological case study, political metaphor, digital or video game etc. It sought to examine the city as a mediated and shared phenomenon. The papers collated in this volume represent a sample of the research discussed and explored at the İstanbul conference.

Special thanks for support on this conference goes to Tübitak 2223-B Program (The Scientific And Technological Research Council Of Turkey)
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Katherine Allan
...BECOMING MICROSCOPIC TO FIND SHELTER...

Author: CONCHA GARCÍA

Affiliation: FINE ARTS FACULTY, DEPARTMENT OF DRAWING AND ENGRAVING, COMPLUTENSE UNIVERSITY OF MADRID, SPAIN.

"... the geometrician sees exactly the same thing in two similar figures drawn at different scales."
Gaston Bachelard¹

"But I live only from the interstices... that are narrowing..."
Peter Handke²

0- INTRODUCTION

The project described here, "... becoming microscopic to find shelter...", henceforth and in order to simplify BMTFS, aims at the depiction of 30 micro-cities camouflaged in common structures of contemporary urban landscapes, specifically in the city of Madrid. The succession of images is accompanied by the soundscapes of the various sites, but not in a direct correspondence relationship, but using for the sound material reversing procedures of scales and levels, making audible what is usually inaudible, and rejecting the normally audible sound that could, therefore, be easily identifiable.

1-THEORETICAL DEVELOPMENT

BMTFS is a project of Architectural fiction, faced from an artistic perspective. Art has always been erected as the main creator of fictions and narratives of subjectivities, and within this context, our project is developed, but at present, there are many disciplines, even scientific, that consider the need to use the subjective enunciation and a narrative element as indispensable to theorize.³ Also, the experimental architecture has orientated its attention towards new practices that include the use of computerized simulations and new tools for creating systems, but also creation of fictions and lines of subjectivity, according to The New Territories Architectural Organization:

“Experimental architecture has shifted toward a new corpus of instrumentations, made out of tools, computation, mechanization, but also and simultaneously of fictions and lines of subjectivity, synchronous with our symptoms; of fears and great escapes in the “here and now”.”⁴

Here is where our project is located.

1a.-The production of the space

We firmly believe that space is not something that is already given to us. Each society, following Henry Lefevre⁵, produces its space -which he calls social space-, and develops as well, a logic of its visualization, which is cultural and political and implies an act of creation. This must be understood as a process, based on a constituted conceptual triad: first by space practice, which ensure the continuity of that space and a certain degree of cohesion. The spatial practice of a society advocates its space and presupposes it in a dialectical interaction; secondly, the representations of space, which constitute the dominant forms in any society, by means of which is defined the conceptualized space; and finally, the representational spaces⁶, which embody complex symbolisms, codified or not. They are related to art
and the clandestine part of social life, and with them, imagination seeks to appropriate of the space and change it.
We wonder then, what will be the spatial practices, the representations of space and the representational spaces in the context in which we are now: the so-called **Anthropocene**.

![One of the micro-cities](image)

**Figure 1. One of the micro-cities**

1.b.- **Anthropocene and Ecomimesis**

*BMTFS* takes as a necessary context the consideration that we are in the so-called **Anthropocene Epoch**, and raises epistemic questions around the construction of the imaginary in this context, in which the human can be re-imagined from Biology and Geology. Although Anthropocene is a geological concept, it can be considered a *"collective assemblage of scientific enunciation that is also an inherently political concept"*vii, because capitalism is both the context and instrument of the geological inscription.

Since the thesis of the concept of Anthropocene undermines the epistemological distinction between nature and culture, art and architecture must take as an element of fundamental reflection the context. Contemporary art evokes and makes a call to what is outside the work: in that sense, we can talk about environmental works.

The environment, therefore, is the fundamental element in which our reflections are made, using a device that **Timothy Morton** calls **Ecomimesis**, understood as an atmospheric exploration focused on the context and the ecological attitude of “listening”, or focusing on the environment and space: a context where shapes are not the important issue, because the difference between background and foreground is faded.viii For **Timothy Morton**, ecomimesis occurs as an “authenticating device” that is carried out by means of a call to the environment or ambience, suggesting a material and physical world, in which there’s no difference between natural and cultural, or in our case, between Nature and City. The cities represented in *BMTFS* can be considered aggregations camouflaged in the environment, arisen by the action of **actants**, understood in the context of the theory Actor-Network (at) of **Bruno Latour**: “actor, actant: Actant is a term from semiotics covering both humans and non-
humans; an actor is any entity that modifies another entity in a trial; of actors it can only be said that they act; their competence is deduced from their performances; the action, in turn, is always recorded in the course of a trial and by an experimental protocol, elementary or not.” Therefore, an actant is a source of action, which may be human or non-human and may have varying degrees of effectiveness. The contexts, that is, the environments in which the architectures are erected, are not given, but have "agency", understood from the point of view of Latour’s concept. And as such, they can be ignored, put in motion, or blocked.

In the same way, at the time of Anthropocene, architecture can no longer reflect only in terms of extension, but, as Latour affirms, in terms of intensity. It is in this context that becoming microscopic, as a symbolic way of renunciation to the extension, is necessary and convenient.

From a theoretical standpoint, we take also as a starting point a critical analysis of the growing homogenization of contemporary space and time, dominated by the omnipresent capitalist socioeconomic system, along with a reflection on the deterioration of a form of social imagination.

Having disappeared the possibility of conceiving a world radically different from that in which we live, (characterized, therefore, and because of this same inability, by the absence of the future), and the desire to propose arises, encouraging and propitiating new ways to dwell, to re-imagine and to resemantize the present.

1.c.- Dwelling

Dwelling, therefore, is another central concept of the project, following Heidegger when affirms that "The relationship between man and space is none other than dwelling, thought essentially", and continues:"...building, by virtue of constructing locales, is a founding and joining of spaces", and later, "The essence of building is letting dwell. Building accomplishes its essential process in the raising of locales by the joining of their spaces. Only if we are capable of dwelling, only then can we build".

Our current concept of dwell, can only be changed if we also change our point of view of the environments, that is, if we also include in our considerations, non-human actants and if we understand our environments as a result of networks of action not confined to the human species.

Dwelling requires a particular room space: a close, intimate relationship, requires a singular effort to cling on, and is a fundamental experience of lived-space: a discontinuous space, determined by perception and strongly centralized by the one who experiences it. From this radiating center, a system of axes and vectors arises, determined by the structure of the human body and the physical forces that inhabit the space that occupies. This is a space with qualitatively differentiated places and regions, without transitions: only trimmed boundaries. Oblivious to neutrality, it is linked to man by means of vital relationships that attract and repel, which urge and slow down. Their limits extend parallel to our experiences, in a closed and finite principle.
1.d.- Small cities

Intimately related to the concept of dwelling, the house is located in the center of every scheme of lived-space, radiating influences and desires of return, since it possesses anthropological qualities by providing a security space in which to take refuge. In BMTFS, the house does not appear personalized or individualized, but represented as polis, that is to say, as space in which dwell is produced to inhabit in community, more precisely, micropolis. Small cities have been represented, because as it is a small space, it can be more easily anchored an experience of topofilia, that is, affective links with the inhabited space. Once the imagination has penetrated in the small, there is an investment of perspectives, entering in spaces of spacious rooms. We can say that "the tiny opens the world" and the one who "grippers" the magnifying glass, faces the novelty of the world with new eyes. The use of the magnified image is a call to attention: to pay attention to the small, because in the small lies one of our possibilities of re-imagining, with renewed intensity.

Our small places are located next to emblematic places, considered by the role they play in a society dominated by capitalism, and they are understood as a set of energies, precepts, intentions, dreams... and materialize by means of the composition and resemantización, aided by the use of sound. The places where the small cities have been located, have been chosen by the representations of space and structures of power that shelter, hide or represent, (network of motorways, banking network, water supply and sewerage network, transport network, commercial network...), and their advancement in the conquest and the usurpation of space once public, in an attempt to have a gaze of vital materialism: "In a vital materialism, an anthropomorphic element in perception can uncover a whole world of resonances and resemblances-sounds and sights that echo and bounce more than would be possible were the universe to have a hierarchical structure. We at first may see only a world in our own image, but what appears next is a swarm of "talented" and vibrant materialities (including the seeing self). The miniature helps me to shelter in the vibrant matter and to establish traversal relationships, by the difference of proportions with the environment. It also symbolizes a projective
space that represents the resistance, which encourages the pleasure of thinking spaces of possibilities and accommodates them. It represents the possibility to dwell and inhabit in the in-between, in the interstices, according to the words of Peter Handke leading this paper\textsuperscript{xviii}. In a space like the one of capitalist society, which dispossesses us and dilutes our differentiating barriers, in which assimilation brings with it a de-personalization, our micropolis are conceived as metaphors of the resistance of the individuals "at the Molecular level", according to the concept and strategies developed by Felix Guattari\textsuperscript{xx}, which gives rise to new space practice, new subjectivities and new attitudes that grow around the old structures. “From now on, what it will be to the agenda it is the release fields of virtuality «futurists» and "constructivists.. ” with “...the deployment or, if you like, the display, of becoming animals, of becoming vegetal, cosmic, but also of becoming machinic, correlates of the acceleration of the technological revolutions and Computer”\textsuperscript{xxi}

1.e.- Mimicry
The micro cities are camouflaged in different environments and their existence goes unnoticed, although the keys of the mimetic intention may be given by the article of Roger Callois\textsuperscript{xxi} Mimicry and legendary Pyscasthenia. In this article, he identifies in both circumstances, mimicry and psycasthenia, a vitalism and attraction for the space in which the form (and the life, if we talk about living organisms), loses its support and blurs its limits, expanding them. Callois finds the same base in certain types of mimicry and in the experience of depersonalization of the psycasthenia: a certain instinct of resignation oriented to a reduced mode of existence by the attraction for the space: “this attraction by space, as elementary and mechanical as are tropisms, and by the effect of which life
seems to lose ground, blurring in its retreat the frontier between the organism and the milieu and expanding to the same degree the limits within which, according to Pythagoras, we are allowed to know, as we should, that nature is everywhere the same”xxii.

2- ELEMENTS OF BMTFS

The materials that our project brings into play to represent the environments are: the rendering, and the timbral, concepts that derive respectively from the world of the image (and filming studies, as well as game studies) and the world of sound studies. Both can be developed from an epistemological point of view and from a technical point of view.

2 a.-Rendering

Epistemological: Rendering consist of the achievement of a consistent sense of atmosphere by means of using different materials that build the appearance of a world. It is a simulated one, a reality that we perceive as true, even knowing that it may not be true. Its efficacy is based on its appearance of truth: in creating a space that we can inhabit, even if only we can do it once. In this rendering, that is to say, this creation of simulated images as real, the important thing is the atmosphere in which this simulation is created, so there is always a reference to the real environment in which it is immersed.

Technical: Image recordings have been made in 30 chosen sites. By depicting a sort of "month´s diary", it has been considered 30 different “real”sites in which to "settle" and camouflage. At the same time, virtual environments of the small cities, have been created in a digital simulation environment of 3d spaces (software of creation of spaces and virtual objects). From the chosen sites, and emulating the same position and camera angle with which the original images were recorded, a virtual space is created that includes the modeling of the basic structures on which the small cities are placed, as well as their textures, and a simulation of the lighting conditions of the moment of the recording, pursuing the mimicry effect. Using these scenes, we obtain the technical renders (calculation of the textured and illuminated images taken from a camera located inside this 3d virtual environment) to build the appearance of a consistent world.

2 b.-Timbral

Epistemological: The timbre is the quality with which matter vibrates. We can say that it is a medial quality, because it is media-dependent and evokes the medium in which the timbre is considered. Much of contemporary music can be considered as a timbre composition, especially since the development of the acousmatic music and the concept of the sound object, developed by Pierre Schaefferxxiii. Many of the timbres that we enjoy today, have been rescued from the environment of the formerly considered noise, modifying the relationship between signal and noise, or between significant and not significant sound if we consider it from the point of view of the theory of communication. Timothy Morton reminds us that the word Timbre derives from the Greek Tympanonxxiv, a hand drum touched by the devotees in the rites of Cibeles, Dionysus and Savazius, that refers to the straps skin of the drum (and of the eardrum) that serves of interface and gives resonance when it is beaten.

Most of the time, we hear the timbres of the matter vibrating in the air, but in BMTFS, and in order to make us aware of the materiality of the systems put into play, recording devices that allow to make audible the inaudible, have been used (Electromagnetic fieds), the sound transmitted by the different materials (water, metals, wood...) and reverberated through them. The fact of emphasizing the timbral, allows us to focus on the physicality of the sound. This mode of representation of the sound, which does not represent a direct relation between the objects and the sound heard, was called by Murray
Schafer, father of the concept soundscape, Schizophonía: “The Greek prefix schizo means split, separated; and phone is Greek for voice. Schizophonia refers to the split between an original sound and its electroacoustical transmission or reproduction. It is another twentieth-century development.”\textsuperscript{xxv} We will use the schizofonía as a resource to reveal hidden relationships under the soundscape.

The sound has been recorded using the materials as an interface of sound perception. In our daily experience, air is the interface or medium by which the sound material is propagated: air is the cohesion element of our daily sonorous landscape. In BMTFS, the different materials, that is, the material world with its associated objects, created by our omnipresent socio-economic system, works as a conceptual element that unites all the sites, creating a sort of “fabric” of objects. Through the different materials and using contact microphones, the places act as instruments and "resonate" in them, revealing their fundamental activity either evident or hidden.

Technical: Sound recordings have been made with contact microphones, hydrophones, (a special type of contact microphones, which allows to collect the sounds transmitted by the water), and passive electromagnetic sensors. The contact microphones collect the vibrations received through their contact with solid objects, being insensitive to the vibrations transmitted by the air. In the same way, the hydrophone collect the sound transmitted by the water. The passive electromagnetic sensors allow the recording of electromagnetic fields.

CONCLUSIONS

BMTFS can be considered as a representational space. Conceived from a point of view that does not differentiate between human and non-human or nature and culture, it tries to develop one geological gaze of a big city in the Anthropocene. The project focuses its attention on a material world, symbolically built on the existing material world, with which, however, it melts into a mimetic relationship. Focusing on vibrating matter and listening to what it hides, it allows to think of a nomadic and transient becoming in which architecture and art are based on active connections between spaces and their various ways of being inhabited. It reflects on new ways of building policies that prioritize the role of subjective narratives involving non-human agencies and materialities, thus reducing the impact of our so far in excess, anthropocentric vision.

This project has been carried out thanks to a grant for artistic creation granted by the Regional Government of Madrid in 2017.

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SHORT-FORM VIDEO AND THE POSSIBILITIES FOR A NEW ARCHITECTURAL CRITICISM

Author: DAVID COWLARD
Affiliation: WHITECLIFFE COLLEGE OF ARTS AND DESIGN, AUCKLAND, NEW ZEALAND

INTRODUCTION
Over the last few years, architectural film-making has come into its own. There are now architecture film festivals in major cities all around the world and many of the films that are shown are ground-breaking in the way that they go beyond a focus on the architectural object and show in real ways how buildings are occupied and shape lives. The films of Ila Bêka and Louise Limoine for example are fascinating, humanistic documentaries that convey a sense of how people live their lives alongside a deep interest in the often unseen details of the buildings themselves. While there are some exceptional films being made, most are narrative driven and sit within a conventional structure made for cinematic release.

In this paper the focus will be on the type of short films that are less easily defined and often find their natural outlet online or within spaces of exhibition, as well as being shown at screenings and film festivals. The possibility for these short-form videos to shared online, to be disaggregated and tagged on social media platforms such as Instagram and Twitter, give them the potential to inform a new type of architectural engagement and critique, alongside shaping a more fine-grained form of urban reportage. A provisional definition of the short-form video will first be proposed by looking at how they are being used and discussed across disciplines such as journalism, experimental filmmaking and as content for social media. The experimental cinema of the 1960s and 1970s will then be referenced for its importance in informing the structure of much short-form work, and in particular how filmmakers’ interest in duration and repetition have set up the loop as a default possibility for viewing contemporary short-form video. This will then lead into the key proposition which is that when these filmic elements are applied to an architectural or urban subject matter and are further combined with digital annotation and publishing platforms they can give the short-form video critical potential.

SHORT-FORM VIDEO
Short-form video, that is typically between six seconds and four minutes in duration has come to prominence alongside shifts in technology that have allowed high quality video to be made by filmmakers, photographers, motion graphics artists, marketing departments and significantly from a wide range of amateurs. The creation of video is now more in the hands of the public than ever before. In the eleven years since the first iPhone was released video cameras have become smaller, better and almost ubiquitous, and platforms for publication and distribution have similarly exploded.

Although short-form video is very much a product of the new digital technologies there is often a shift in interpretation and usage of the term. However, within journalistic and marketing discourse there is a more fixed definition. The backdrop to this is the huge emphasis placed on their positioning and influence on the growth of online communications, social media coverage and audience
engagement. This sector has also seen the development of a similar awards structure to those of the film industry, such as the Shorty Awards and the Cannes Cyber Lions. In terms of the shifting landscape of journalistic use of the short-form video, the British *Guardian* newspaper and the *New York Times* have led the way in adopting online video alongside other social media strategies. However, the formation of AJ+ by Al Jazeera is of particular interest in demonstrating the prominence that a news organisation places on the short-form video format. The establishment of AJ+ was a spinoff of the Qatari based news organisation’s move into the US market. Following the acquisition of a youth based channel, AJ+ was formed in 2014 with a mobile first policy and an operating slogan of “Experience, Engage, Empower”. The channel is pitched at the eighteen to thirty-five year old market, it is opinionated and is a distinctly distributed media outlet operating across social media platforms and a Youtube channel. The videos produced by AJ+ average around sixty seconds, they open with visuals and introduce captioned text designed to be watched without sound; they are fast paced with a mix of infographics and always end with a large graphic call to share and it is clear that the channel see their use of video as a means of attracting and holding a digitally native audience.

While the format of video is typical of news production sites, the type of short-form video I am most interested in rests somewhere between these rapid-fire bite size stories and the work of experimental filmmakers that are testing the medium against more conventional narrative structures. There have been a few attempts to create platforms specifically for this type of video and an early example was Vine. Launched in 2013 and quickly absorbed into Twitter, the platform was based around six second video posts that would loop automatically on playback. The app quickly became the home of hipsters, pranksters, and cats. However, independent filmmakers and artists played an important role in defining how Vine developed with stop frame animations, short formal experiments and attempts at six second serializations that gave the platform its variety. Within a couple of months of the launch of Vine, the Tribeca Film Festival had set up the #6secfilms festival and the #veryshortfilmfestival and the hashtag #svaes, or “shortest video art ever sold” was used when collector and art advisor Myriam Vanneschi bought a Vine from New York based artist Angela Washko. There was also a small but significant number of video artists and digital producers such as the LA based DanOrst and Tokyo based Device No53 that took the platform as an experiment to look at how the built environment could be portrayed while making the most of the default looped playback. Another short-lived experimental platform was Zeega which was established by James Burns, Kara Oehler and Jesse Shapins, a small group with skills that ranged from radio journalism, tech. development and media arts. Shapins described Zeega (named after the Soviet film director Dziga Vertov) at the time as ‘revolutionizing web publishing and interactive storytelling for a future beyond blogs.’ The platform had grown out of the group’s work at Harvard’s Berkman Center for Internet and Society and had received funding from the Knight News Challenge grant, evidence of the wider interest in new platforms, storytelling and short-form video at the time. The Zeega project was ultimately short lived, going through a remix / gif based variation called Go-Pop before closing down in 2015. Arguably most of the experimental aspects of the media creation platform had been, or were soon to be, adopted or surpassed by Instagram, Facebook and Snapchat as short-form video became well and truly established within the parameters of the mobile web.

**EXPERIMENTAL PRECEDESNTS**

Having established the rise of short-form video across multiple disciplines it is worth focusing on some of the formal and filmic features of these videos and to make comparisons with an earlier group of experimental filmmakers who started working in the 1960s and 1970s. Filmmakers such as Andy Warhol, Ernie Gehr and Chantal Ackerman challenged the dominant narrative form of Hollywood and Western European cinema by extending their time of filmic observation. These filmmakers equally
implicated the audience in their shift to the experience of duration. Discussing his film *Still* (fig. 1) filmed between 1969 and 1971, Gehr stated in a recent interview that: 

"I work with time, change, and the fact that a moving image is physically always in a state of flux. … *Still* is an interesting work in that respect. Instead of filming an action, each shot denotes a chunk of time, an image of time which accepts moments of activities as being as interesting and relevant as moments when ‘nothing’ happens."

![Fig 1. Still, Ernie Gehr](image)

A related feature or characteristic of the experimental films was the use of repetition, particularly in relation to space, place and time. Jonathan Crary provides a useful contemporary view of the long take and how a filmmaker can return to a theme or viewpoint and how this opens up meaning for an audience. Crary discusses filmmaker Chantal Ackerman’s 1992 film *d’Est* (*From the East*) and states: 

“*D’Est* records journeys across territory, through seasonal time, from summer to winter. … more than anything else, *D’Est* conveys the time of waiting. It does this most compellingly in its extended tracking shots of people standing in line or waiting in railroad stations. Akerman shows the act of waiting for itself, without a goal, never disclosing why a crowd is formed into a line.” And he continues “…one of her revelatory achievements is also to show the act of waiting as something essential to the experience of being together, to the tentative possibility of community.”

This statement is particularly useful as it also makes clear the critical positioning that many of the experimental filmmakers had and how they were often directly concerned with space, architecture and urban context. Their experiments impact equally on the reading of the spaces and the films themselves. The loop is the last of the formal devices to locate when thinking about experimental cinema and the influences on short-form video. The use of the film loop was employed by the experimental film makers as part of as strategy to ‘assert the materiality of film’ and in a similar way to the long take to present a challenge the illusionistic norms of mainstream cinema. In further exploring the possible impact of short-form video it is more interesting to look at the loop as a way of extending the time spent with a scene or shot. Photographer, writer and curator David Campany discusses the ‘substantial adoption of the ground opened up by experimental cinema of the 1960s and 1970s by contemporary art’ and makes reference to the way that the looped ‘single take’ has found a place within the gallery as much as in the cinema. The looped film or video allows an audience to spend time that is open ended within this form
of exhibited screening, and invites closer consideration of the work far beyond what could be taken from a single viewing of the film.

The loop as an exhibition and publication device has become one of the key methods of engaging with moving image works in the current period. Not only are short films and short-form videos presented in this way but the loop offers a way to explore longer films in a disaggregated form. Ackerman prefigured this shift with the installation of *D’Est* at the Walker Arts Centre in 1995. Each ‘scene’ was presented on a separate TV monitor and the film theorist Giuliana Bruno described the installation experience as one where “the gallery viewer is offered the spectatorial pleasure of entering into a film as she physically retraverses the language of montage.”

A more recent example of the use of disaggregation shows how successfully the loop can be employed to extend the impact of documentary practice. Union Docs, a Brooklyn based non-profit centre for the documentary arts worked with new media artists, documentary filmmakers and the local community on the restoration of the 1984 film *Los Sures* directed by Diego Echeverria. Alongside the restoration of the film, new short films were commissioned as well as a project to give voice to the people featured in the original documentary. Christopher Cekay Allen, described the potential of the project:

"The encounter between a 16mm camera and a Brooklyn neighbourhood in the early 1980s – producing so many mysteries in the margins and the background of the frame – inspired the expansive documentary project."

Allen and his team set about interviewing people from the film and to get responses about what they had experienced in 1984. This resulted in deconstructing the edit of the film into 326 scenes. Scenes were then played with sound and then silently looped leading to a much richer recounting process for the interviewees.

**CRITICAL ENGAGEMENT**

My own filmmaking process draws upon the use of repetition of frame and subject. In a series of films that focus on the urban fabric of Auckland, New Zealand the same places and spaces are re-shot in different light and at different times of day (fig. 2). The durational aspect of this filmmaking is informed by a sense of the long take to explore habitation and the use of a hand held mobile device to film the spaces necessarily means that even when returning to the same location, the re-framing of the shot will be noticeable, therefore placing greater emphasis on the time difference within the cut. Taken together, the long take, the use of repetition, and the loop provide a framework for understanding how the short-form video can operate at many different levels within today’s digital platforms.

This form of viewing can allow for a visual process that operates in a similar way to our sense of spatial appropriation. Time spent with a building is key to an accumulative appropriation of the space itself. In the filmic foregrounding of this time spent, whether through repetition of a scene or through the device of the loop, short-form video can approach a situation where the viewer of the work can position themselves in relation to the original appropriation. This positioning of spatial appropriation draws upon Walter Benjamin’s framework of thinking where architecture is not known through contemplation but through habit and is ‘consummated by a collectivity in a state of distraction’ or ‘casual observation.’

Architectural theorist Anthony Vidler takes up Benjamin’s conception of distraction, emphasizing that: “Benjamin’s remark about distraction, …is generally understood to refer to the distracted state of mind of the urban dweller, jaded, bored, or swamped by the flood of visual and social stimuli of the modern city”.

However, Vidler notes that:

“Benjamin himself employs the concept more precisely,…, linking it to the opposition he is drawing between a traditional spectator of a work of art in a state of concentration, and a mass audience lacking
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concentration and thus ‘absorbing’ the work of art. In the case of buildings, only a tourist will evince that ‘attentive concentration’ characteristic of the art lover.”

The habitual knowledge of a space or building is where the loop, or the long take, can provide a shortcut for the viewer’s attention, one that corresponds more closely to the habitual state of the original observer / filmmaker.

Fig 2. LUNG, David Cowlard

Having established that short-form video can offer a viewer an experience that is akin to that of the knowledgeable observer, if this is combined with further information such as post-occupancy experience, residents stories and technical detail this is where the full potential of shareable short-form video can really be seen. Platforms and formats for digital publication of short-form video such as Instagram or Twitter come with a set of functions that allow for a disparate set of media to be grouped and aggregated. The hashtag and the geotag are key components for this form of organisation but keywords and other forms of embedded metadata serve similar functions. The potential to upload or publish short-form video that is also annotated in ways that can provide a greater depth of information about housing, spatial use, architectural programs and urban living points to the conditions for a new form of architectural engagement. Today there is a well-informed public interested in architectural issues from design to liveability. This is why short-form video has the potential to inform a wider critique of architecture and the urban condition. All of the searchability that sits within digital platforms is available to filmmakers, urban activists and researchers.

For new media theorist Lev Manovich the database is the cultural expression of the computer age. He sees many new media objects, such as short-form videos, as not necessarily having a story: “they do not have a beginning or and end; in fact, they do not have any development, thematically, formally, or otherwise that would organise their elements into a sequence. Instead, they are collections of individual items, with every item possessing the same significance as any other.”

Returning to the team responsible for the creation of ZEEGA, an earlier project that they were involved in dealt specifically with the issue of aggregation and the creation of an ‘immersive media player’ or interface. Jessie Shapins’ doctoral thesis drew upon the work of Manovich and the database and the project that he worked on with Burns and Oehler was the Mapping Main Street. In 2009 the small team set off to record and map the 10 466 streets named Main in the United States. James Burns described the project as having been driven by “a core structural system which becomes generative” and this formed the basis for an open ended documentary that could thematise the database formed through the
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process of visiting the streets and interviewing people but also setting up a hashtag which invites a wide reach for contributions from residents, professionals and artists.

CONCLUSION
To conclude, filmmaker Patrick Keiller has suggested that: “film space can offer implicit critique of actual space, so that looking at and researching films can constitute a kind of architectural criticism. And that [we] can make films that set out to criticise architectural space rather than simply depict it.”

Short-form video can significantly add to the possibilities for a new form of architectural and spatial critique. One that can draw not only on the experiences of artists, filmmakers, researchers and activists but on the user and inhabitants of buildings. While short form video has been the playground for pranksters and bored teenagers, its adoption by documentary filmmakers and news organisations shows the potential for more serious intervention. Time spent with a building is the key to an accumulative appropriation of the space and an aggregated collection of short-form videos, variously annotated could prove to offer a much more viable collective impression of a building that could complement current forms of architectural criticism.

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1 In April 2016 the Museum of Modern Art (NY), acquired a number of films made by Bêka and Limoine and described it in a press release as representing “the first inroads for the Department of Architecture and Design into the medium of film.”

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3 It is not hard to see why such news and branding organisations are keen to define their use of short-form video. For example the most recent survey from the Pew Internet & American Life Project on Social Media Use in 2018, noted that 78% of 18-24 year olds in the US use Snapchat and 71% use Instagram.


5 One of the founders of AJ+, Riyaad Minty, commented early on in the channels life that “Engagement is key and that discussion is focused on Conversation Points, this then leads to shareability.”

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10 Peter Gidal’s “Theory and Definition of Structural/Materialist Film” in his edited collection Structural film anthology. London: British Film Institute, 1976, remains one of the clearest summaries of the approach to defining experimental
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Ibid, p.218


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THE CONTEXTUAL SIGNIFICANCE OF ARCHITECTURAL RUINS IN THE CINEMA OF THE 2ND HALF OF THE 20TH CENTURY.

Authors:
DIMITRIS GIOUZEPAS, PANAGIOTIS GOULIARIS, GIANNIS TSARAS

Affiliation:
DEMOCRITUS UNIVERSITY OF THRACE, GREECE [XANTHI]

INTRODUCTION
The use of architectural settings in cinema is as old, as the medium itself, and quite often, the chosen settings are not the ones of complete and polished built environment, but of crumbles and ruins instead. Main aim of the proposed paper, is to uncover the role that these kinds of settings serve, especially in a more contextual way.

Even from the early cinematic era of the German expressionism there can be found various uses of the notion of architectural ruins in destroyed or distorted settings, serving more in the overall atmosphere, rather than having a functional role towards the plot. In a similar way, the horror film genre often provokes audiences feelings, by using abandoned and ruined settings. In such situations the directors and settings designers take advantage of the capability of such built environments to carry and transmit such meanings.

In the second half of the twentieth century, we are witnessing a new, much more sophisticated use of architectural ruins. Directors and designers of that era seem to realize the power of these settings. The memories of the past and the history of a place are somehow written on the scars and the physical damage of built environment, and film directors are in search for “Genius Loci” in a similar way that architects and urbanists of the same period are presenting their ideas, trying to connect space with time. Since abandoned and destroyed buildings have lost their rational function, they are open to new immaterial and spiritual interpretations.

In such cases, in Fellini’s “Roma” there can be seen a connection with the neorationalist architectural movement, and in Jacques Tati's movies, old and disintegrating buildings serve in favor of the vernacular against the modern. Of course Tarkovsky's poetic cinema often uses ruins and relics to emphasize characters' mental situation, but even as plot devices too.

ARCHITECTURAL RUINS IN THE CINEMA OF THE 2ND HALF OF THE 20TH CENTURY
In the early 70ies, Italian director Federico Fellini has already left back his neorealist past and his films are having a more nostalgic but yet a bit political stance. In his film “Roma” (1972), Fellini is putting together a seemingly non-connected bunch of short stories, with common feature his own ideas and impressions about the past, the present and the future of Rome, the capital of Italy. But except his obvious concerns about the present and the future of Rome, one can easily project these concerns to any big city of his time. In his stories, among other ideas, there can be found a strong criticism against modernity as a way of life, but also as a way of building and transforming contemporary cities. In order to underpin his disapproval against modernity, Fellini uses nostalgic images of a decaying past as a
contrast to the images of the modern faceless city. In one of the most intriguing stories of the film, the workers of the city's subway are accidentally discovering the ruins of a lost sum of ancient chambers, decorated with frescoes of magnificent technique. Most of the frescoes are depicting human figures, people from the past, with a strict look against the subway workers and the viewers. In the beginning of the story, Fellini uses contradictory montage to show the contrast between the silent and strict figures of the past and the noisy and violent machinery of the workers which they use to break the thin wall that divides the tunnel from the ruins. When the workers enter the ancient chambers they walk silently among the ruins looking the frescoes with great admiration. But in a while the frescoes are starting to disintegrate and disappear, probably from the air that entered the forever shielded ruins.

This scene is obviously trying to transmit the same ideas that few years earlier were expressed by the same nationality neorationalist architects, such as Aldo Rossi, about cities losing their connection with the past and their historical evolvement. In a similar way to Fellini, Italo Calvino expresses the same ideas in a very similar way in his classic novel of the same year, “Invisible Cities”, by using quite often the contrast between modern and vernacular built environment.

But the contrast between the modern and the vernacular built environment, is not the first time that was used in cinema in Fellini's films. In two of his greatest films, French director and comedian Jacques Tati, is using criticism towards modern built environment as the main subject. In “Mon Oncle” (1958), Tati is using the contrast between a soulless modern house, which cannot even become really functional, and the vernacular houses of the old Parisian neighborhoods. These houses although small, old, and with scratched and weather surfaces, seem to work better, not just socially, but functionally as well.

Both “Mon Oncle” and his later film “Playtime” (1967) share another very interesting feature too. The absence of a main character that leads the plot. Or at least a human main character. Built environments appear to have a much more significant role in these films, and one could easily attach human characteristics to buildings and neighborhoods depicted in these films.

But the filmmaker that made the most extensive use of architectural ruins in his films is no other than Andrei Tarkovsky. The Russian director uses ruins in at least three of his films and according to scholars and contrary to his denial, Tarkovsky uses images of ruins in a very significant for his storytelling way. In “Stalker” (1979), we experience one of the first ever visual depictions of a post-apocalyptic environment. The zone is a vast area of ruined buildings and crumbles. A place where the characters are walking through in search of the deeper meaning of their lives, and the eroded environment is ideal for this existential quest.

But what is very characteristic in Tarkovsky’s work is his obsession with the past that is gradually disappearing from the human conscience and about what is left and how is blurred or confused. His own references to Marcel Proust quotes, stand as proof of the aforementioned statement. And architectural ruins play a very significant role in this. According to Juhani Pallasmaa, the eroding surfaces of the settings in “Nostalghia” (1983), “feed dreams in the same way that an inkblot figure in Rorschach’s personality test invites figural interpretation”.

In “Nostalghia” Andrei, the main character, is away from his homeland and the ruined settings of the film match perfectly with his nostalgic homesick feelings. The eroded houses, penetrated from wind and rain, serve to the transmission of the homeless feeling of Andrei to the viewers. Old ruined buildings, are stripped from their functionality, in order to accommodate Andrei’s despair. The film ends with a scenic view of his home in Russia spatially included in a ruined Italian cathedral. The camera slowly moves away while rain is starting to fall through the old church.

Of course there are many more examples of using architectural ruins in recent cinema history, especially in the horror film genre, or in films with post-apocalyptic themes but the main aim of the paper is to
underpin these films that really offered a new perspective and a new paradigm in the role that movie settings play as a narrative device.

LIVING CITY

In 2011, I (Dimitris Giouzepas) wrote, directed and designed the settings of an experimental short film named “Living City” ([https://vimeo.com/37845149](https://vimeo.com/37845149)). Main character of this film, like in Jacques Tati’s films is not a human, but a whole city instead. A city that is made of flesh and bones, a literally alive city that interacts with its citizens and is reshaped in order to cover their basic needs. Citizens and city are living in a fragile condition which is disrupted by a strange newcomer. An enigmatic figure who introduces new habits.

The settings of this short film are a mixture of real existing structures and three-dimensional models, combined to form a new whole of environment. The existing built parts where filmed in an abandoned military campus with semi-demolished buildings. These settings aim to reflect a problematic society, a society on the verge of an irreversible change.

Furthermore, one of the main aspects of the film is to criticize the loss of sense of home and intimacy, and the fact that one cannot relate himself with an ever-changing built environment. Also the fleshy parts of the city are designed with slick and polished textures, but with scars and veins at the same time. All these decisions were made in order to convince the audience that the citizens are sentimentally detached from their urban environment. So when the city finally collapses, the fact that they leave without looking back would offer an unexpected climax to the films plot.

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MOVING IMAGES IN DIGITAL HERITAGE: ARCHITECTURAL HERITAGE IN VIRTUAL REALITY

Authors:
HANNAH RUSHTON, DAVID SILCOCK, MARC AUREL SCHNABEL, TANE MOLETA, SERDAR AYDIN

Affiliation:
VICTORIA UNIVERSITY OF WELLINGTON, NEW ZEALAND (WELLINGTON)

INTRODUCTION

The politics embodied within Modern architectural heritage is defined by unawareness of the period’s architectural and historical origins. As a result, the public overlooks technical and aesthetic innovations associated with Modernism, along with the times of social change these advances represent. Instead, the deterioration of these buildings, caused by unforeseen issues with experimental construction techniques and materials, creates concern among the public. This decaying Modern architecture sits in juxtaposition of traditional architectural styles in the contemporary urban landscape. Its abstraction is misunderstood, disconnecting public observers from the heritage significance of Modernism. Where ‘historical’ styles such as classicism are viewed as objects from the past and are thus assumed to have heritage value, Modern heritage “lacks the perceived inherent value retrospectively attributed to almost anything conventionally recognised as belonging to the past.” Once Modernist architects were recognised for their creation of new techniques throughout international print and media. These pioneering construction methods have caused rapid deterioration, and as a result, today, this architecture is only seen as an eyesore within its environment.

Therefore, in the case of Modern architectural heritage, where architectural significance is not understood, heritage value may not be considered. This raises the question: how can the historical, social and technical characteristics of Modern architecture be communicated to inform the public’s perception of modern architecture? The research presented investigates methods to provide members of the public with relevant information relating to the heritage significance of Modern buildings. The aim is to develop a methodology to present both the tangible and intangible qualities of heritage to the public, which includes all relevant information about the technical, aesthetic, historical, and socio-cultural characteristics of the building. Such that, this documentation can be open for interpretation to allows for the development of informed judgements about the heritage significance of a building; to facilitate participation in public discussion about the preservation of Modern heritage.

A “living museum” preserves modern architecture to facilitate interpretation regarding modernism’s value. These restore the fabric and contents of a residence; to recreate the way it once was during a specific period of its existence, to become a ‘curated house.’ A curated house features documentation about a building’s design, technical attributes, and embodied socio-cultural values. These are derived from the lived experiences within the building and thus communicate a narrative, to enhance the contextual value and understanding of the architecture’s significance for visitors. However, this described experience provides limited information about the structural or aesthetic significance of heritage architecture as, for example, visitors are unable to look beneath the walls to understand construction processes or materials; essential to the understanding of the value embedded within modern architecture. A further critique is the static nature of the Living Museum, which is constrained to a single period and props are the only evidence of life.
This project considers the context of a Living Museum within virtual reality. Where a Living Museum is restricted to contemporary heritage conventions for the conservation of a building, the tangible aspects of a modern building can be virtually reconstructed to present an experience within it. In the recreation of a tangible heritage environment, the addition of intangible heritage allows for the development of a narrative to enhance the virtual heritage experience. The constructed narrative follows a building through its lifetime, to contextualise its technical and cultural evolution; together forming a dynamic, multi-dimensional virtual environment. Therefore, these once static spaces provide a greater understanding of architectural heritage, and the value embodied within a building through the immersive experience of virtual reality.

As the digitisation of cultural heritage is not confined to reality – existing within the possibilities of a virtual world – the experience of architectural heritage within virtual reality creates opportunities for multiple interpretations of heritage, and thus understanding and engagement. This digital heritage research project explores the possibilities of a Virtual Living Museum to capture the journey of a modern building to its contemporary state of decay. We demonstrate how this approach facilitates architectural understanding, to inform public discussion surrounding the preservation status of a Modern building. In this paper, we focus on the methodology for curating different forms of architectural information into a virtual environment and the experience that results from the collation of the tangible and intangible within a heritage narrative.

**PROJECT: THE GORDON WILSON FLATS**

The project investigates the case of ‘The Gordon Wilson Flats,’ a Modernist apartment block in Wellington, New Zealand. The Ministry of Works constructed the building between 1957 and 1959 (Figure 1). The post-war climate in New Zealand favoured city living, and due to housing shortages, there was a demand for high-density housing. As a result, there was an increase in government expenditure on public works, such as state housing. The Gordon Wilson Flats became a model of state housing in New Zealand at this time; “recognised as one of the most important design offices of cost-effective, high density, social housing during the mid-twentieth centuries.” Architect Gordon Wilson designed and constructed the building with his team from the architectural section of the Ministry of Works, and the flats were named in Wilson’s memory following his death in 1959, the year the construction was completed.

At the time of completion, New Zealand’s architectural publications celebrated the building for its stylistic and technical attributes – even considering it worthy for the building of the year award. The Gordon Wilson Flats is one of two buildings in New Zealand directly influenced by the international Modern movement. Its form can be directly linked to international precedents such as Le
Corbusier’s ‘Unité d’habitation,’ as evident in the resulting structural and aesthetic form of the building. Aesthetically, the building’s design is modular, following a reinforced concrete grid structure, with a timber-framed apartment placed within each void (Figure 2). There were other technologically advanced methods implemented throughout the construction of the Gordon Wilson Flats, for example the piling system was used for the first time in New Zealand.

The flats functioned as social housing until 2012; following an earthquake in the same year, the building was evacuated and has remained uninhabited due to safety concerns. Over this time, the flats condition has deteriorated, both on the interior and exterior (Figure 3). As the building is no longer accessible, the public constructs an impression from afar. Thus, this perception derives from the architecture's state of decay (Figure 3).

The juxtaposition of the building’s style and condition amongst Wellington’s urban form has sparked public discussion regarding the significance and thus future of the flats. Much of this discussion does not consider the history behind the decay, or the social, technical and aesthetic influences that have powered the building's evolution. Virtual Reality provides an opportunity for the public to step inside the Gordon Wilson Flats, to understand the history of the building behind the decaying facade. Thus, this paper will examine how a digital heritage narrative can communicate architectural significance within a multi-dimensional virtual environment to assist in decision making about the fate of buildings such as the Gordon Wilson Flats.
DOCUMENTATION
The project began with the collection of historical documentation. The media collected, ranged from the tangible to intangible, which aided in the reconstruction of a narrative about the evolution of the flats and their changing lived experiences.

Collection of Heritage Documentation
Documentation of the intangible ranges from photographs dating from the 1950s to oral history interviews of people who lived in the flats over the years that they were open. It also includes published articles from magazines and journals; sources that express the opinions and attitudes towards the flats at the time of publication. From this initial collection, a timeline was constructed to present the information (Figure 4).

Creation of Virtual Heritage Spaces
Following the intangible historical documentation of the flats, a tangible virtual space was reconstructed to embed the intangible within it. In order to create a successful virtual experience, the connection between the tangible and intangible is essential in the communication of architectural significance (Figure 5). First of all, the original construction drawings were considered – representations of the tangible built form – to reconstruct a three dimensional digital CAD model. The result of this is a hyper-detailed model which, as the product of CAD modelling, depicts the flats in their original, pristine state. Further techniques of laser scanning and photogrammetry were used to recreate the conditions of the flats as they are today. Laser scanning was used to record the interiors of the flats, while photogrammetry documented the exterior. The imperfections of both processes lead to representations of the flats that emphasise their state of decay, which directly contrasts with the CAD representation of the building.

REPRESENTATION IN A HERITAGE NARRATIVE
Following the completion of the documentation stage, virtual spaces were developed within a gaming engine to create an experience of the building using the collected documentation. The history of the
building, as collated from this information, was to be presented as a clear linear path\(^{18}\) so it was necessary for the narrative to follow its evolution over time. Therefore, the fusion of tangible and intangible documentation was essential to communicating this narrative. Not only as a reconstruction of the tangible architecture, but an interactive multimedia experience communicating the intangible heritage significance of the Gordon Wilson Flats (Table 1).

<table>
<thead>
<tr>
<th>Modelling technique</th>
<th>Sources</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD models</td>
<td>News articles, old photographs, original blueprints</td>
<td>Visualisation of the original conditions, e.g. colour</td>
</tr>
<tr>
<td>Photogrammetry</td>
<td>Photographs</td>
<td>Visualisation of the current conditions of the exterior</td>
</tr>
<tr>
<td>Laser scan</td>
<td>Photographs, audio files</td>
<td>Visualisation of the current conditions of the interior, dissemination of oral histories related to the lives of who used to occupy apartment units.</td>
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</tbody>
</table>

The game engine used to construct this experience of the building presented the narrative in a series of consecutive scenes. In this project, each develops upon the narrative of passing time, and hence deterioration of the building. Furthermore, when implemented within virtual reality, each scene will give the user control of the space around them, allowing them to interact with each environment. As an immersive medium, virtual reality permits people to experience the building at a one to one scale, with documentation represented within each virtual space. The reconstructed historical environment that they become immersed within is not static, but dynamic - unconstrained by reality and the static museum context. Using this software, application of textures and sounds within the environment create further detail for the experience.

**Construction Scene**

The first scene within the narrative is a construction scene in 1957. The construction scene is intended to give the user an understanding of the processes and context of the construction of the Gordon Wilson Flats. As they were used for the first time in New Zealand, the beginning of the scene illustrates what the building's foundations look like, but also how they work. The system is presented, first, at a one to one scale, then as a scale model, which marks the beginning of an exhibition about the construction of the building. This exhibition continues with the display of further scale models, along with photographs and other forms of documentation. We provide a range of media to entice all users with different types of information, to engage them with what may interest them most about the construction phase (Figure 6).
The models communicate the building in section, plan, and elevation. Each demonstrates a method of architectural communication and together makes architectural information more accessible to the public who have not had architectural training. The user can engage with what interests them and hence build towards an individual interpretation of the heritage value of the flats, based on their past experiences, ideology, and learning ability.

The creation of virtual 3D models inside the environment means a user is not only able to see the building in section and plan but also understand the depth of room and the variety of spatial qualities in the building. These models were part of the curated display, guiding users through the flats; each piece of information is intended to build upon the last, essentially constructing each component of the flats in front of them. At the end, there is a large interactive model, which allows the user to investigate the modular character of the structure by pushing and pulling each apartment (Figure 7). Not only can they interact with the model, but the user can also inspect details they were interested in from the exhibition models or documentation.

The resulting experience allows the public to forge an understanding of the historical, technical, and socio-cultural conditions at the time of construction leading to the degradation of the Gordon Wilson Flats.

**Apartment Scenes**

Following the construction scene, the user is transported to the next phase during the lifetime of the Gordon Wilson Flats, immediately after the completion of construction. They experience the exterior and interiors in a pristine state; a direct contrast to the way they see the building today. Within this experience, the creation of environments in the scene allows the user to switch between the CAD representation of the interior, and the laser scan recording of the interior. As a result, creating an immediate comparison for the user (Figure 9).
To further enhance understanding and engage the user, switch oral histories – which are relevant to a specific part of the building – are heard in each space to provide context to the changing conditions of the space a user is immersed within.

**Flythrough Scene**

The flythrough scene of this project presents a one to one scale model the Gordon Wilson Flats that the user can fly around, to investigate the architecture in a new way - something not possible with traditional documentation techniques. It presents two models, each depicting a different condition of the building; one portraying the original colours of the flats, and another incorporating a photogrammetry model showing the current state of the flats (Figure 14).

**DISCUSSION: INTERACTION AS AN AESTHETIC EXPERIENCE OF MOVING IMAGES**

The expected outcome of this research is a living virtual museum that generates user-oriented digital narratives. The idea of virtual museum has been an evolving concept since the 1990s, together with growing influence of interactive media. Museums, such as Louvre Museum in Paris, San Francisco Museum of Modern Art and the ZKM Centre for Art and Media in Karlsruhe, were the pioneers for providing their collections in digital formats. Compared to today, these early ‘virtual museums’ were primitive digital technologies, which usually came in CD-ROMs which were sold in museum shops. One of the earliest virtual museums was the El País Virtual Museum of Arts (MUVA), which was developed as an online interactive exhibition platform. The virtual tour of MUVA is still online and exhibits Uruguay’s creative artists from the last century, their works of art from early stages to the most advanced examples. The main interaction of MUVA is the navigation through the corridors and rooms of a 3D virtual building. In 1999, Hani Rashid and Lisa Anne Courture, co-founders of internationally-renowned Asymptote Architects, were commissioned to design the Guggenheim Virtual Museum (GVM). The content spectrum of GVM was mostly inspired by digital art. The creation of early virtual museums was limited to the idiosyncrasies of the 3D physical world, such as gravity-bound static spaces and one-way navigable corridors.
In the last two decades, the concept of interactivity in virtual museums moved from being confined to simple mouse clicks of the earliest examples to data visualisation along with advanced digital technologies providing more immersive environments. Apart from the growth of digital technologies, the theoretical advancements, such as the categorisation of documentation, representation and dissemination as the three main activities involved in the creation of virtual museums, have laid the foundation on which emerging methodologies are situated to address novel museum experiences. In this, we presented a methodology that is tailored to the special situation of The Gordon Wilson Flats. Besides, an anthology of the collection of intangible and tangible heritage information is demonstrated to discuss the implications of the used methodology in the development of a virtual living museum (Table 2).

| Documentation       | - Photographs
|                    | - Plans
|                    | - Elevation drawings
|                    | - Audio recordings for oral history
| Representation     | - Section drawings
|                    | - Photogrammetric models
|                    | - Laser-scan models
|                    | - CAD models
| Dissemination      | - Interactive multimedia environments

Despite digital heritage’s relatively short history in comparison to cultural heritage and museum studies, many of the methods involved in documentation, representation and dissemination have undergone significant modifications and alterations with technical updates, new production lines, different presentation styles and situations. In this research, we follow the conventional methodological framework (see above, Table 2) to produce an evolving virtual museum that address heritage as a work of the future. Of this ‘futuristic’ approach, the content production is open-ended, and the research turns into a problem-finding activity. However, in the field of digital heritage, many research and practice exclusively focus on the final outcome as a single product of the entire creative process. This second approach may be understood as a translation of the heritage value into a system of understanding that is confined within the past. The debate we present here is that the former approach should contrapose the concept of heritage with the creative concept of heritage, which sees the presence of the observer as an intuitive involvement in the dynamic interpretation of the heritage content. Our research explores the possibilities of a virtual living museum to capture the journey of a modern building from the height of its significance, to its deterioration in the contemporary age. Given that The Gordon Wilson Flats suffers from public neglect for ignoring modern architecture as a heritage value, a virtual living museum can be valid if it is not built on a purely historically oriented interpretation that neglects the current situation. In this paper, we presented the documentation and representation stages in this research. The dissemination approach we intend to follow entails a testament to an evolving interaction between the users and the content. We demonstrate how this approach facilitates architectural understanding, which heightens engagement, to inform public discussion which surrounds the preservation status of modern buildings. Such narrative that cover both the tangible and intangible aspects can form a dynamic and multi-dimensional virtual environment. Static spaces that are turned into a digital living museum can provide a greater understanding of architectural heritage, and the value embodied within a misunderstood building within the immersive
experience of virtual reality. Furthermore, this information is available for open interpretation, informing a member’s opinion on the heritage significance of the modern building in question; to facilitate informed participation in public discussion with regards to the preservation of modern heritage. In this regard, we will continue this discussion based on our experiments in different types of engagement with our virtual living museum, such as within a headset VR application for individual engagement and a non-headset VR cave installation for social engagement.

CONCLUSION
This paper presented the value of The Gordon Wilson Flats as a significant heritage building constructed in Wellington, New Zealand in the 1950s. Within the context of Modern architectural heritage, public ignorance may result in the destruction of the building that represents the technological capabilities of New Zealand during the post-war era of development, as well as the will of the country to catch up with the rest of the world’s aesthetic understanding on architecture. Following this, documentation and representation methods were presented to stimulate public engagement with the heritage significance of the building. Finally, we discussed the positioning of the digital heritage approach based on a theoretical debate on how to contextualise a virtual living museum in terms of the concept interaction between the content and the user. The implications of the research are also discussed while mentioning further research on the dissemination methods.

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Alonzo Addison, who is a prominent scholar in the field of digital heritage, provided a clear presentation of the categorization of documentation, representation and dissemination activities in virtual heritage in 2000.

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THE PRACTICE OF CINEMATIC DRAWING IN GRASPING THE SETTING OF URBAN INTERIOR: CASE STUDY OF OPEN MARKET IN ROTTERDAM, THE NETHERLANDS

Author: NOOR FAJRNA FARAH ISTIANI
Affiliation: READING-SPACE.NET

INTRODUCTION
This paper brings together three seemingly different fields and practice such as urban, interior design, and cinematic drawing to pose the potential concern of the area of cinema and the act of drawing in the urban environment. As an interior designer, the urban context acts as a site for understanding the boundaries in which always shifting and transforming depends on the spatial-temporal event. On the other hand, drawing as the act of figuring the space is conceivable to trace the performance of a given and designed urban environment. Thus, this research proposes an alternative way of representation through analysis by drawing practice. Further, drawing practice has a role as an investigating tool exploring the shifting realms between urban context and interior.

Focusing on the investigation of dynamic urban phenomena, this study is triggered by some of the works of Atelier Bow-Wow: Made in Tokyo, Pet Architecture, and Public Drawing, in which they observed a kind of non-design of yet functional hybrids of the urban’s chaotic current situation. In the project Made in Tokyo, the Atelier Bow wow examines an accidental urban realm by investigating the setting as an urban detective and cataloging the liveliness of Tokyo. The observation method of the urban fabric was conducted by inventing the unique drawing as a documentation tool and visual representation which is specific to the subject of “lively space” at hand like the book Graphic Anatomy. However, from the above project example, we found that the drawing as an analysis tool means to be an artifact archive. In particular, drawing ignores the immateriality aspects which are perceived by minds such as human sensory experience and movement parts. In this regard, there is always lack of representation in the observation stage from what we see on the screen or media into the physical realities. This concern eventually affects the way designer represents on the user experiences and occupies urban space, which unfortunately is still detached into the nature of reality. As a consequence, the final representation will be just read as a static object or a still image without any involvement of the user and the cultural space. Therefore, the new idea of drawing method is needed to understand the interconnectedness between nature and culture in the context of an urban interior.

Cinema or moving image is proposed to portray a particular perspective on how people adopt new behaviors through design, assuming the gestures, pose, patterns in the contemporary urban environment. The idea of cinemetrics turns out to be one of the primary references for drawing methodology. Cinemetrics reveals the future of drawing which focuses on how to align drawing into the nature of reality by analyzing the way people interact with the designed object and dynamic environment. Therefore, this paper aims at discussing the possibility of constructing the gap between the people and the designed dynamic urban interior by conducting the cinematic drawing. Further, this study mainly
focuses on emerging the urban interior design representation by including the element of moving image, moving scene, and moving frame borrowing the method from cinema practice and cinemetrics theory. This paper attempts to answer the central question: What are the possible investigation and observation approach to engage with the phenomena of the urban interior which would express its dynamic characters and qualities through the eye level? To answer that, we begin with the brief overview of urban interior and cinemetrics as two main terms following by discussion in the case study. As a case of urban interior setting, this study looks deeply at revealing the liveliness quality beyond how the event works at the open market in Rotterdam, the Netherlands. By extracting the moving condition of the panoramic image captured in three different timeframes: before, during, and after the market, this project attempted to figure varieties of shifting situation in urban interior context.

**VISUALIZING AN URBAN INTERIOR AS A SHIFTING ENVIRONMENT**

Hypothesis setting of the urban interior is dealing with the dynamic event, temporary occupation of space, and the shifting boundaries in response to people activities. Suzzie Attiwill pointed out that the setting of the urban interior is related to area in between, ephemeral happening, and the situated events. As a term, the urban interior deals with the circumstance which accommodates the people to gather and to meet each other in the temporary space. Furthermore, the spatial boundaries of urban interior context are traversed and shifted by defining the position, whereas inside or outside. Therefore, as an assumption, the urban interior can produce the temporal territories in which dynamically change through the movement of people, object, and spatial program.

The question of designing urban interior will be followed by how the process of interior-making in the urban context shaped by the spatial and temporal condition. There are two design strategies in urban interior referring to project the urban room. First is thinking about the detail of the existing façade and exterior architectural fabric as a mold material. Second is considering the current condition by developing the interior program through relation and connection. Urban interior can also be formed by exploring the existing structure which is already occupied by the human activity. Consequently, this research focuses on the second strategy which considers not just the materiality of an existing site but also the immateriality elements, such as human occupation, connection, movement and active flows.

In the process of understanding an urban interior, the practice of site analysis by collecting the particular parameters becomes a crucial design stage. There are several parameters to be mapped and collected such as public-private condition, lighting, shadows, material, movements, flow, densities, stillness, behavior, sound, historical layering, urban character, program, and activities. The practice of situation analysis by observing and documenting aims at finding the potentiality of an existing site. In particular, by recording the temporary occupation in the place, this study finds the shifting in the spatial program, the user occupation, and the duration.

Documenting the situation of an urban interior is the process of highlighting the temporal activities and movement on the site. The drawing of motion is captured in one frame image consisting space, actors, and events. The idea of picturing change in the urban interior relates to the way architecture as an event is framed. Further, the drawing movement not only depicts to the specific objects and building but also considers any image involving both still image and moving image. As a result, the act of documenting movement within temporary situation aims to highlight the process of interior making within the urban context.

As a reference on the above consideration, project Interior mapping by Alice Kohler (see fig.1): Interior plan, movement, and stillness were focusing on the observing process of arrangement and formation in response to the forces of movement and intensification in the production of the interior. Nevertheless, there is still inadequacy in the way the process of observation is documented, which is
just captured by a static image rather included the moving representation. Therefore, by adding the idea of cinema in drawing, it would be possible to provide another particular perspective on how urban interior is composed by a temporal gesture, pose, and patterns of a program.

![Figure 1 Project Interior mapping by Alice Kohler: Interior plan, movement, and stillness](image)

**CINEMATIC DRAWING AND CINEMETRICS**

The idea of cinematic drawing aspires to collect the moving ingredients for designing an urban interior situation. Furthermore, the cinematic drawing will be possible to emphasize the process of interior making within the urban context. This idea considers the cinematics theory as a related study which is about the exploration of the drawing tools and cinematic representation in investigating the realms of an urban interior.

Cinemetrics mainly reveals the mapping which emphasizes movement, space, and time. This method focuses on how to align the architecture drawing into the nature of reality by conducting method in excavating data. Data mining process is undertaken sequentially through film scenes and frame by frame images to measure the ways people interact with the designed object and dynamic environment.

Cinemetrics consists of three mechanisms on how drawing is technically applied: firstly, (see figure 2) drawing contains the tracing elements from the film frames, the opposite point of view, the orthographic drawing, the timelines, and the transparent layers of figures and frames. The section frame,
furthermore, is captured from the orthogonal point of view of the subject. Secondly, (see picture 3) the drawing considers the use of the camera, both the movement of the camera as a subject and the captured images as an object. Additionally, in cinemetrics technique, there is a combination between an analog drawing and a camera as a scanning device. Thirdly, (see figure 4) drawing traces the relationship between the position of the camera, the lens, and the center of actor describing the relational movement between actor and camera.

Figure 2 Cinemetrics Drawing 01

Figure 3 Cinemetrics Drawing 02 [13]
Cinemetrics is possible to extract the transformable wealth situations to create an animated archive for public space. This archive can measure how objects and environments are perceived and generate the spatial border. Therefore, cinemetrics will offer more effective spatial analysis strategies by considering the human perception, activities, movement and by bridging the gap between people and the urban environment.

This paper points out two main technique from theory cinemetrics; first conducting camera position as a subject to record the footage, second, the tracing technique in drawing practice including element of film frames, timelines, and figure. However, there is still a limitation in the cinemetrics study which relates to the static output of representation. Cinemetrics representation merely shows and highlights the particular scene of situated context. Therefore, the information pictured is limited and reduced from the real situation.

**CASE STUDY: OPEN MARKET IN ROTTERDAM, THE NETHERLANDS**

This case study is a student studio project in discovering the topic of revealing the beauty beyond the movement of how things work at the open market as a set of an urban interior. The project was started by extracting and observing the moving quality of the open market event captured in three different timelines: before, during, and after market. To observe the liveliness of open market in Rotterdam, we made two analysis approaches: the first method is recording the film footage which depicts the open market through two different perspectives and three timeframes composed in six video frames. The second approach is practicing the cinematic drawing which attempts to figure and to point out the varieties of shifting events through the movement of people, object, and spatial program.
The film footage (see fig.5) mainly objects to record the urban plaza situation in which shift into an open market event. Those six film frames depict three different time frames from two perspective shots; human eye level shot and frog eye level shot. By representing this fluid context through filming, we could generally show the liveliness of the urban situation and could experience the dynamic atmosphere from the site. Moreover, filming is possible to grasp the movement of people, pose, gesture and pattern activities which define the transformable the urban plaza into an open market. However, to analyze more specific details and focus on the particular subject, drawing is needed to apply in the next step of figuration.
The drawing shows the differences of overlapping event; before the market, during the market, and after the market into such a panoramic image. First, the condition of the plaza before the market where most of the object is related to the construction work as well as the existing situation. It shows the everyday setting as it is during the usual day. The second condition is during the market where the event is running, and most of the figure are the people and their buy and sell activities. Lastly, is the situation after the market event, which shows how the setting is back to the open plaza. However, in this particular set, we can see the leftovers object from the market remains. Further, the overall diagram illustrates a spatial investigation as the process of uncovering the potential of an urban interior. The picture, moreover, represents the transformed environment in the sheet of panoramic image. From the drawing exploration, we learned that the open market is whether space or event which defined by the people, object, and spatial activities. By conducting a tracing technique in each particular moment, we could point out the specific items which produce the lively quality in the market based on three different timeframes. Diagram below shows how particular spatial objects defined the changed situation in the open market.
By conducting two different approaches to investigate the open market, we found that film and drawing could be combined to grasp the dynamic condition of the urban context. In particular, the film aims to emphasize the liveliness of open market through its movement, space, and timeline. On the other hand, cinematic drawing objects to point out the hidden mechanism of the open market both as space and event by tracing the particular condition in open market.

CONCLUSION
The idea of cinematic drawing in grasping the setting of urban interior is introduced through adding the element of moving image in drawing practice. This practice would be possible to provide another particular perspective on how urban interior is composed by a temporal gesture, pose, and patterns of a program. Cinematics as one of preferred method open the possibility as a spatial analysis strategies by considering the human perception, activities, movement and by bridging the gap between people and the urban environment. Through practicing cinematic drawing by combining film footage and drawing by tracing as a method, this paper attempted to analyze and visualize the dynamic event in the open market as an urban interior setting. The act of cinematic drawing allowed us to understand the connections between the liveliness of urban interior and the hidden mechanism involved in the dynamic everyday event.

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THE REPRESENTATION OF HETEROTOPIAS IN CINEMA

Author:
ÖZLEM DEMİRKAN

Affiliation:
KTO KARATAY UNIVERSITY, TURKEY [KONYA]

INTRODUCTION
Heterotopia is a rich concept identified by Foucault to represent highly real spaces against utopia. The term consists of combination of topos and hetero meaning place and different, respectively. It appears to be a medical term especially after the 1920s, and describes the fact that an organ is in a different place than it should be. While defining the term, Şentürk places Albrecht Dürer's rhinoceros as a reality in the cross section of the fantasy, and regards the horn as a heterotopia. Different interpretations astonish about heterotopia and it effects a range of disciplines including architecture, interior architecture, psychology, urban studies and film studies.

Foucault used this concept in three different contexts. Firstly, it was used in his book entitled “Words and Things” in 1966. He argues that the things in Jorge Louis Borges’ book which is a fictional Chinese encyclopedia in which animals are classified in categories. According to Foucault the things are placed in so different spaces in Borges’ book that it is impossible to define a common space. He added that these groups of animals are juxtaposed only in the non-place of language. According to Foucault (fabula), narrative real events are added by Borges so it’s also unlike utopia. The concept of utopia is used when the things don’t have real spaces. However, all of the things are placed on plain and magical space, such as large avenues, cities with well-cared gardens, and countries that are reached easily. He names these spaces as heterotopias. The second use of heterotopia term took place in his paper called “Of Other Spaces, Utopias and Heterotopias”, which was published in Architecture/Mouvement/Continuite journal in March 1967. The third one was used in a conference given to a group of architects in 1967.

Foucault emphasizes that we live in a homogenous and empty space contrary to Descartes’ views by referring Bachelard’s opinions. According to him, Bachelard fills the space with his phenomenology. According to Foucault, utopias are the unreal spaces that have associations with real spaces, and there are heterotopias as the opposite of highly real spaces. In the mirror sample, the space obtained through
the mirror experience is both utopia and heterotopia. Indeed, there is no space behind the mirror. Therefore, it is the utopia. However, in reality, that space exists in terms of perception and presence. As a result, it is heterotopia. Foucault glimpsed a new direction of space. According to Knight, when evaluating linguistically, authors such as Calvino, Eco, Auster, Ondaatje, and Carter blur the boundary between reality and fiction. In the heterotopia concept, although heterotopia appears as more real space than utopian spaces, this boundary is blurred. The heterotopian void prevails not only as a physical space but also as a perceived and lived space in which the desires, hopes, thresholds, and bounds occur. Evaluating David Lynch’s Blue Velvet through the concept of heterotopia, spatial pastiche, schizophrenic temporality and postmodern speed, Filiman identifies the postmodern space and time relation. Filmic style and its interpretations enrich the heterotopia concept of Foucault and endeavor to bring space-time relation. Representations in filmic space opens the audience mind through nonexistent spaces which seems existing. Film is actually an attempt to realize these concepts. According to Filiman, Lynch’s spaces are experienced in small-town and carries rich space-time relation of Foucault’s concept. Contrasting characterization helps enrich it and added fragmentary weird, too. In fact heterotopia is a paradox including mirror, prison, library, garden, and brothel and never refers the real spaces or filmic spaces but inside its interpretation has a rich concept. We can read the filmic space in light of Foucault’s heterotopia concept that corresponds Soja’s concept of thirdspace or Lefebvre’s space production diagram. Shane evaluates the concept of heterotopia over urban spaces and examines heterotopia systems formed by urban actor. Canzatti considers Soja's thirdspace concept and Foucault’s heterotopia as spaces that differ in terms of meaning and context. Thirdspace is both intersection and combination of perceived and conceived space based on trialetics of being and trialetics of spatiality developing on Lefebvre’s three moments of space production (perceived, conceived, lived). Urbach considers Foucault’s heterotopia concept as an instrument for evaluating social exclusion and spatial formation. Gomes tries to find a place for Avatar between utopia and heterotopia and considers that heterotopias are drawn in half-way with utopias.

HETEROTOPIA IN CINEMA

The concept of heterotopia places itself on the intersection of space, which is one of the common objects of cinema in reality and in representation of reality. The space in cinema is the space which is seen through a screen within a real space. At the same time, it is one of the setup objects in cinema just like the people, light, and sound. While we experience the space by seeing, hearing, tasting, smelling, and touching, we experience the cinema space only by seeing and hearing, but we complete the taste, smell, and touch senses in our minds. In cinema, what we live is a specific time and space while what we experience is another time and space. The space and time isn’t continuous opposite to the real life. In cinema, it is possible to leap from one space to another in a short time. Firstly, the present, then a century before, and then two centuries later can be experienced. Within this context, although the film space isn’t real, it is a representation of reality where it is experienced by visual and audial perceptions and created using setup, montage, sound, and light. The audience experiences the space and time to the extent that the director allows, and has no idea about the whole space. During the 90 minutes in a dark and noisy room in cinema experience, the audience isn’t able to distinguish between the lived and experienced spaces. In cinema, the experience of space provides the audience with the opportunity to experience the emotions, thoughts, and activities that he/she can’t in real life, and what excites audience is that it is an aesthetic phenomenon addressing individuals’ feelings and thoughts. At the same time, cinema is an expressive statement of our minds. Among these reality representations,
Moving Image – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design

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Utopia and dystopia are the nonexistent spaces which give the audience and architecture the opportunity to dream although they don’t exist. They are the expressions of ideal or bad spaces and societies from an optimistic or pessimistic viewpoint. They are derived from the combination of Latin words ‘eu’ meaning good and ‘eutopos’ meaning good space, and the combination of ‘ou’ and ‘outopos’ meaning nowhere. The concept of dystopia is described as the bad utopia. The good/bad nonexistent spaces, u/dystopias, describe the door to heaven in More xv, the ideal order created by Hoh and his supporters Pon Sir and Mor in Campenella, and the dilemma between technology and nature in Bacon.

Foucault explains heterotopia in six principles xvi. The first principle; heterotopias exist in every culture, but in different norms. Foucault divides the heterotopias the first principle into two. The first one is crisis heterotopias. In cultures, there are spaces which are forbidden or privileged for people in specific periods (adolescents, menstruating women, pregnant women). Boarding schools and honeymoon hotels are among the examples. Şentürk expresses that crisis heterotopias depend on the obligation of “transition” experience that occurs “nowhere”. The second one is heterotopias of deviation. The examples of second one are rest homes and psychiatric hospitals. Şentürk exemplifies the determinism of heterotopia spaces based on the closure function of many institutions from prison to nursing homes xvii.

The movie “Hababam Sınıfı” is one of the most fascinating examples of boarding schools in cinema. Hababam Sınıfı was adapted into cinema from a book which was composed of the collection of Rıfat Ilgaz’s stories called as “Stepne” and published in “Dolmuş” journal involving author’s references to his own school years xviii. It was directed by Ertem Eğilmez in 1975. The movie tells the story of students of Literature 6-B classroom, who cheat on the exams, escape from the school, and make fun of teachers, and Mahmut teacher, who tries to discipline them. The movie was followed by other sequels. Many famous and cult actors and actresses such as Adile Naşit, Kemal Sunal, Tarık Akan, and Münir Özkul played in this movie. The dining hall, dormitory, and classrooms were used as the spaces. Adile Sultan Qasr was turned into museum of Hababam Sınıfı. Harry Potter and the Philosopher's Stone directed by Chris Columbus and Blindness directed by Fernando Meirelles are among the examples. Harry Potter and the Philosopher Stone was adapted to cinema Rowling’s first book of a modern classic series entitled the same as the film and was directed by Chris Columbus. Harry Potter is a gifted boy and receives an acceptance letter to the Hogwarts School of Witchcraft and Wizardry. The Blindness is adapted to cinema from Nobel Prize laureate Saramago’s book and directed by Fernando Meirelles and tells a story about a dystopia that the whole world is blind because of an illness. Both films were chosen as an example for heterotopia as other places in the context of dystopia and utopia.

Fig 2 Hababam sınıfı 03.54 and 08.56 frames
The second principle; each society produces heterotopia of some function in different ways through history and attribute different functions to heterotopias. Foucault exemplifies these types of heterotopias by cemeteries \(^{19}\). The movie Buried, which was directed by Rodrigo Cortes in 2010, was chosen as the representation of grave heterotopia. Although Foucault indicates different functions of societies in his example of cemetery, it is the heterotopia representation potential of a place where the struggle to survive occur which leads this movie to be chosen. The movie was shot in a single space (grave) with one actor. Paul Conrey wakes up in a coffin buried alive and his cellphone is the only tool that can save him. In Kill Bill Vol 2 written and directed By Quentin Tarantino which tells the story of a warrior bride with two conflicting characteristics, Uma Thurman’s grave scene was chosen as heterotopia.

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**Fig 3** Harry Potter and the Philosopher's Stone - Sorting Ceremony

**Fig 4** Blindness directed by Fernando Meirelles (2008)

**Fig 4** The scene in which Ryan Reynolds wakes up in the movie Buried

**Fig 5** Kill Bill Vol. 2 buried alive scene directed by Quentin Tarantino (2004)
Third Principle; Heterotopia involves many different spaces inside. Foucault exemplifies these types of heterotopias by cinemas, theatres, and Persian gardens. While only one heterotopia is produced in reality in cinema, the representation of cinema produces nested heterotopia spaces in cinema. This situation is similar to mirror example of Foucault. The utopic space in the mirror along with the real space in perception and its reproduction, bringing together two spaces which are distinct normally, and cinema space and its representation in a cinema movie theatre stratify the concept of heterotopia and remove the distinction between utopia and heterotopia drawn by Foucault. Shakespeare in Love, which was directed by John Madden in 1999 and involved Ben Affleck, Gwyneth Paltrow, Geoffrey Rush, Colin Firth, and Joseph Fiennes, was chosen as the example of this type of heterotopia representation. It is about William Shakespeare under pressure of the theatre and his becoming a great playwright with a girl he met in London of 1590.

Fourth principle; what is accumulated forever or become extinct is associated with time. They are the accumulated samples of a general time collection in a space. They are the historical documents of all time. Foucault exemplifies heterotopia spaces that depend on time collection by museums and libraries. Foucault calls heterotopia spaces where the time disappears as festival heterotopia. Carnival, concert, and fairground are examples of this type of heterotopia. In these spaces, time is evaporated in space and the individual gets away from experiencing the time. Interstellar, which was directed by Christopher Nolan in 2010 and starred Matthew McConaughey, Anne Hathaway, and Jessica Chastain, was chosen as the example of this bipolar heterotopia. The movie was inspired by physicist Kip S. Thorne’s theory of Wormholes. Cooper’s decision for human’s safety affects his relation with his daughter and he can see her again in her old age. Especially the library scene where the father communicates with his daughter in a library (2.20 - 2.35) becomes a space which collects their whole life story. The space evaporates the time and at the same time collects all of the memories as a festival heterotopia.
Fifth principle; Heterotopia spaces depend on conditions and they have specific starting and closing time. They are easily and freely reached and require some rituals. Headquarters and prisons are the examples of this type of heterotopias. The Cube movie, which was directed by Vincenzo Natali in 2001 and starred Julian Richings, David Hewlett, Nicole De Boer, Nicky Guadagni, and Wayne Robson, was chosen as the example. It is about people who found themselves in a prison composed of interlocked cube shaped rooms and their efforts to escape from deadly traps. The movie involved cubes, which were designed as killing machines, and time, which was given by the cubes for passage. The Experiment directed by Paul T. Scheuring is another example.

![Fig 8 Scenes from Cube](image1)

![Fig 9 The Experiment directed by Paul T. Scheuring (2010)](image2)

Sixth principle; Heterotopia spaces are related with all other spaces. An illusion creates the space. Although this principle is based on regular and specific rules, they are the spaces of others. According to Stavrides, otherness is mostly experienced through residing in interspaces and times. Within this context, boundaries and thresholds are important in creation of other spaces. According to Stavrides, the threshold character of heterotopia refers to the thresholds where the dominant order and control is ensured in space and time. The movie Passengers, which was directed by Morten Tyldum in 2016 and starred Chris Pratt, Jennifer Lawrence, Michael Sheen, Laurence Fishburne, and Aurora Perrineau, was chosen as an example of this type of heterotopias. It is about the experiences of people who are travelling to another planet in a spaceship. A technical issue causes Jim Preston’s (Chris Pratt) capsule to land 90 years earlier than the intended time. Jim Preston opens the author Aurora Dunn’s (Jennifer Lawrence) capsule. The movie space is a spaceship. The threshold is the space. Although it is based on specific and regular roles, it is the space of the other. Prometheus directed by Ridley Scott is another example of thresholds as a heterotopia.
IN LIEU OF CONCLUSION

Spaces are produced conceptually while they are being produced formally. Whether they are real or cinema spaces, they create different images and concepts in each user’s mind. Space and cinema space are produced through similar but different processes. However, cinema is an art which increases the possibility of spaces with its ability to make the unreal spaces seem real. Moreover, cinema space is a representation of the real space. The concept of heterotopia refers to the highly realistic spaces contrary to nonexistent spaces. They are the spaces of others at the same time. Classified as the spaces of others by Michel Foucault, the concept of heterotopia is associated with real life and lived space. Additionally, the spaces of others and threshold spaces involve the negotiation spaces between two distinct spaces. Within this context, cinema space was chosen for the representation of the concept of heterotopia in this study. The current study proposed a method to give meaning to a phenomenological concept rather than presenting precise and fixed information. In conclusion, cinema space is a tool of representation in architecture that can be used to visualize a phenomenological concept and create the real representations in unreal spaces.

ACKNOWLEDGMENT

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CENTRAL PARK IN FILM: ARCHITECTURE AS THE STRUCTURE OF DESIRE

Author: SADRA TEHRANI

Affiliation: PENN STATE UNIVERSITY, UNITED STATES OF AMERICA [UNIVERSITY PARK, PENNSYLVANIA]

INTRODUCTION

Central Park could be said to be the “most urban park in the world.” Most of its original design elements still exist. It opens up the compact urban grid to long–distance views and makes it possible to experience being outside the city while being at its most celebrated center. In the words of Elizabeth Barlow, “It filled a heretofore enormous void the city never knew it had.”1 As of 2011, 305 films have been shot in Central Park, making it the most filmed location in the world.2 The filmic popularity of the park raises many questions. One answer has to do with New York’s status as a cultural hub, but my essay aims to understand how key features of the park work within a system I will call “proto-cinematics” — an anticipation of being filmed — made long before the technical evolution of cinema. I will illustrate this proto-cinematics with examples to prove how the park is to structure desire, not just in the films but generally. This is not just a happy accident; it is the result of Olmsted and Vaux’s mastery of design, the transformation of the park’s landscape by the dense urban periphery, and the potential of wandering developed by the eye of the camera.

The park cultivates a proto-cinematics by developing, within the urban grid, four types of resistance. These key structural qualities include (1) scale — countering the park’s containment with a sense of vastness; (2) variation — refusing uniformity by creating diverse, unintegrated views; (3) the picturesque — pushing “the beautiful” into margins of “the sublime”; and (4) void-ness — supplementing the urban through negations rather than additions. Resistance makes the park impossible to define and opens the door to the imaginary.

Cinema is not just a record of what is “out there.” It attaches, to the visible scene, virtual potentialities that seem to be held in reserve for a new medium to expose. Landscape, in this sense, is a predecessor of cinema in that it situates subjects in relation to an exteriority of an objective scene. The park’s use of layering opens up variable connections where subjects, objects, and voids activate the imagination. At the level of landscape, Olmsted and Vaux converted their knowledge of painting and theater to create such openings for the park’s users. These mise-en-scene elements resembled the 19c. diorama, in that by relating foreground–background relationships they evoked a distanciation — a theatrical space inserted between the viewer and the viewed — that distilled and then magnified the experience that the park was “revealing itself” to its users. This revelation was not a framed presentation but, rather, the use of frames and obstacles to let the viewer appreciate the scene but desire for more. Potentiality was delicately interlaced within presentations of rural beauty, so that the viewer would be driven by what he couldn’t see, by invisibility that was intensified and controlled by elements that guided the motion of the viewer.3 The park’s proto-cinematics stems from this idea of an animated vision, an eye set in motion by foot or carriage, where presence would be continually off–set by absence: an eye moved by desire.
REDEFINING THE SPATIO-VISUAL AESTHETICS OF THE PARK

Olmsted in effect builds desire — and, hence, a proto-cinematics — into the park by pushing the picturesque’s customary rules. In the picturesque tradition, landscapes affected paintings and paintings affected landscapes in return. In this exchange, the custom was to present specific views intended to be seen. Scenes were constructed to instruct the public in how to use the park. Olmsted, however, pushed beyond the use of elements — hills, trees, lawns — as elements of a naturalistic landscape. The elements devoted to movement through the park created spatial–temporal folds and hinges. The function of instruction shifted, from the presentation of what was available to the eye to the larger, more ambitious goal of experience where specifically the known would combine with the unknown in ways so personal and intimate to each user that the motion of the individual would uncannily activate private desires rather than public conventions.

Later, with the advent of cinema, the camera lens could trace the paths already defined by Olmsted to open up new realities of the park held virtually within its configuration of landscape elements. Hills, trees, and lawns were “activated” through formal motions through the park, diversely re-configured and delicately balanced between presence and absence — the potential to hide something from view that actually structures the desire to discover and see it. In this way, Olmsted paved the way from proto-cinematics to full cinematic exploitation, through the linking common element of temporal uncertainty.

But, one element was missing originally. The city skyline had, in Olmsted’s day, not developed. The park’s “interior agenda” was not yet in contrast to the city’s “exterior agenda” of high-rise development. The edge of the park was not yet a variable wall of upscale apartment and office buildings. This edge made it possible, in the age of cinema, to evoke fantasy, nostalgia, or romance through the reverse–angle connection to the city. Olmsted somehow seemed to have anticipated both the evolution of cinema (and prepared a way for it to exploit the eye set in motion to heighten desire) and the future need for an urban façade serving as a backdrop for a rural interior. Through filmic techniques, such as painted mattes and editing cuts, the camera could fragment the park experience, but these played into Olmsted’s insertion of dynamics and concealment perfectly. It was as if Olmsted himself had an unconscious desire that allowed the park to serve the city as, precisely, a desiring unconscious that only cinema could reveal.

FANTASY AND VOID IN THE PARK

The naturalistic park design aimed to distance its users as much as possible from the city using an idea of endless nature. But, with the growth of the skyline at the park’s edge, the park–city relationship became “extimate”: simple distance from the city now became a complex combination of “so near, yet so far,” distanciation plus intimacy. The user must now experience distance in relation to the circumference. Because it is possible to see city landmarks from multiple points of view inside the park, the outer skin becomes a panorama that converts into a navigational device, useful for way–finding and orientation but also management of entries and exits: the portal function.
THE PARK AS PORTAL TO FANTASY: MANHATTAN

Woody Allen’s Manhattan (1979) tells the story involving a failed father–to–lover romance between an older man (played by Allen) and (much) younger woman (Muriel Hemmingway). The cinematographer, Gordon Willis, chose an extreme aspect ratio (2.35:1) to set the story up as a flattened tableau, allowing characters to disappear and re-appear while we hear their voices engaged in dialog. In outdoor scenes, the ratio favored the panorama Allen needed to develop the idea of New York as a city of lovers, initially, but qualified by the disappearance of one relationship, romanticized within the setting of the romanticized city, and re-appearance of another, more antagonistic or failed relationship.

Scene Analysis: Carriage Ride

The most romantic scene in the film takes place when the older Isaac and younger Tracy go for a carriage ride in Central Park. By mapping the carriage’s and camera’s movements relative to the urban skyline behind the border of trees, it is possible to see the dynamics of the scene — a dynamics in keeping with Olmsted’s idea of concealing–while–revealing.

In order to create silhouettes of trees and buildings, the lighting is underexposed. Shape and position are visible only through movement. A green foreground of trees moves orthogonally across a background of buildings. This camera’s oblique angle allows for more of the street-side buildings to

Figure 1: Diagrams illustrating the use of the urban (fantasy) wall in Manhattan (the carriage ride scene) and the filmic void in Wall Street (Sheep Meadow scene).

Figure 2: Shots of Central Park, from the intro montage sequence, Manhattan.
fit inside the frame. The location of the shot is near the southwest corner of the park facing south, which at the time of production was one of the tallest edges of Central Park.

Although almost perpendicular to the layer of trees in front, movement is at a skewed angle, held constant in relation to the buildings in the background. The resulting sense of a “wandering pleasure drive” enjoys the city while holding it at a fixed distance. The constant angle allows the foreground to change while the background stays (mostly) the same. Because the foreground seems to move much faster against background, the city seems to look back at the camera.

The wide aspect ratio emphasizes on the panoramic view outwards, and on the horizontal motion of the camera which gradually reveals the spatial elements. The fact that this is a POV shot with voiceover (rather than one that would show the actors) locates us as the audience into the interior scene as if we were riding the carriage and gliding into space ourselves. It is a long take — about 40 seconds — and the absence of a cut works in favor of this immersion. The focal length is 40mm Panavision Scope which equals 55 mm DSLR. Although slightly more telephoto, it is relatively close to what the human eye sees.

The cityscape is at a distance where it can be said to be near, yet far, and is visible through the empty pockets of space in between the trees, creating a chiarosuro — frame-inside-a-frame — effect. As the scene progresses, the voids in between the trees shrinks, and this turns the night skyline into twinkling stars produced by a moiré effect. This uncertain view works again in favor of blurring the distance, as it is reminiscent of the night sky, whereas in fact we are now closer to the street. The voiceover which started in Allen whining that “This is so corny” ends by “If I had been with a girl, this would have been an incredible experience.” All these visual and auditory effects set the tone for the progression of the scene. Once the trees block the view, the space becomes private and intimate, which, together with the dramatic change in the music, ushers in the scene of the couple kissing.

THE PARK AS AN EMPTY VOID: WALL STREET

*Wall Street* (Oliver Stone, 1987) shows us how the physical void can coincide with the subjective void. It narrates the story of Bud Fox, an ambitious stock trader who will do just about anything to get into the big leagues. The theme of excess is present throughout this film: excess of money, luxury, phone calls, numbers, digits and quick bucks. These representations of “too much of something,” embodied also in Fox’s quest to gain Gekko’s trust, is essential to the development of the gaze — the way a film looks back at the spectators from a “blind spot” within the filmic image. The gaze allows for conversions, reversions and reversals, because it produces excess that’s out of control. In the analysis to follow, I discuss how the aggregation of events, patterns, and filmic form and signification
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devices can be used in assessing Central Park’s role in the confrontational sequence between Gekko and Fox, shot in Sheep Meadow.

Figure 4: Wall Street (1987), screenshot from the film using a spatial montage technique to depict the idea of excessiveness at the core of the film.

Scene Analysis: Confrontation in Sheep Meadow

The cinematography of this film is at times as frantic as a war documentary: Fluid and dynamic movements, using fast pans to navigate between the characters abstracts the space in between them like a liquid thread, rather than establishing “set” or “static” points of view. Richardson had adopted a cinéma vérité documentary style of shooting which emphasized continuity over looks in filming: “I don’t care if my work looks gorgeous … I want to make good films, not good-looking.” This form of visual storytelling is also visible in the Central Park sequence.

Figure 5: Wall Street (1987), screenshots from the film showing the dramatic silhouette lighting in Gekko’s office used to hollow out his figure (above) and the vast, empty space of Sheep Meadow when he confronts Bud Fox (below).

Sheep Meadow is one of Central Park’s most favorite lounging places on sunny days. Fogginess and cloudy skies have, in this scene, “emptied it out.” The filmmaker’s choice of a wide lens highlights the distance of not only the camera from the characters, but the characters from themselves and from the cityscape. Where else in New York could the filmmaker distance the two characters far enough from the excessiveness of the city (while still being inside it) and have a chance to create a conflicted distanciation between them? The privacy for them becomes this (internal–external) distance. The vastness and emptiness of the meadow highlights Central Park’s function as a void — an antithesis to the city — the place where you can be far from the city but still be radically inside it.

Sheep Meadow resembles the void inside the void. Central Park situates itself as a space that offers an inside-frame to the resolution and the coming-to-self-consciousness for Bud Fox. A wide pan from Gekko’s close-up to Fox’s medium close-up visually distances the two characters by showing the
empty field in between. Gekko and Fox are held together with the nothing in between them, and when it’s laid out open, Fox delivers his line: “As much as I wanted to be Gordon Gekko, I’ll always be Bud Fox.”

Figure 6: The composited image of successive frames shows the wide pan from Gekko to Fox, highlighting the voided space in between them.

Figure 7: Diagram showing the duration of the shots in the Sheep Meadow scene.

Through editing, blocking and framing, the cinematographer is able to create a filmic void that coincides with the spatial void of Sheep Meadow and the subjective void of the story. Throughout the sequence, a total number of ten shots are composited in two minutes and sixteen seconds. Other than the establishing shot in the beginning, which uses a wide frame, the rest of the shots are close-ups or medium close-ups. This shows how by tightening the frame on the two characters, the filmmaker is able to isolate them in order to show their conflict. Most of the shots are handheld, and the high-paced and tense movement of the camera resembles the dynamics in the argument.

Figure 8: Composited image of two shots showing Fox entering (left) and exiting (right) the meadow. Blocking of the shot is important in contrasting the two characters and highlighting the space between them.

The pacing of the shot follows a long/short rhythm. In terms of shot duration, the editor follows up short shots with long ones to temporally disorient the viewer. This disorientation is more visible if we study where the cuts of each shot happen and how the camera moves and crosses the 180° line. By starting on/ near the 180° line and crossing it twice, the cinematographer is able to produce the whirling motion that defines the antagonism present in the encounter. It jumps from one character to the other — constantly switching left and right — implying a spherical space around them. The closeness of the camera to the character minimizes the visible portion of the park during the punch scenes and, because of the consistent presence of the cityscape as a background, the audience becomes...
further disoriented with each cut, until eventually Gekko punches Fox to the ground (shot 4 in the diagram below).

![Diagram showing the position of the start and end (cut) frames of successive shots in the punching scene.](image)

**Figure 9: Diagram showing the position of the start and end (cut) frames of successive shots in the punching scene.**

**CONCLUSION**

This essay has shown how “design thinking” can anticipate new media by realizing, in the terms of its own age, the topological implications of the imagination — how, in effect, desire and the experience of surprise require specific architectural configurations. This essay has shown that Olmsted was, in effect, a “proto-cinematographer” able to know—without—knowing how a space would be useful to a medium and technology that had not yet been invented. His knowledge in shaping the park’s gaze — the disposition of “what lies beyond” that cannot be apprehended through sight but through subjective imagination — made Central Park into a kind of eye in the city. In the park, the idea of an eye as “opening” in the city’s fabric has combined with the dynamics of the eye as a “lens” by which subjects imagine themselves to exist as visible/invisible, appearing/disappearing entities in physical space. The second accomplishment of this study was to show how this dynamics of places working as eyes has been carried out in cinema, using examples that could not have succeeded without this idea. By analyzing the physical/optical operations of scene construction in particular narrative layouts, this work has shown how “optics” must be defined in terms of a fluid, overlapping set of practices that use whatever lies at hand to fix key transactional “moments” of the film’s logic, such as the combination of distanciation and (intimate) antagonism. The incontestable historical fact of Central Park’s utility and favorability for film production cannot be explained by any addition of the Park’s “attributes.” Rather, it is a matter of the Park’s status as, itself, an ocular device, a core of functionalities that, when extended by the technological film apparatus of particular cinematographers, becomes evident in specific films that connect, emotionally and rationally, with audiences.

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3. Frederick Law Olmsted, *Forty Years of Landscape Architecture: Central Park*, ed. Frederick Law Olmsted, Jr. and Theodora Kimball (Cambridge, MA: MIT Press, 1973), 250: “The pleasing uncertainty and delicate, mysterious tone which chiaroscuro lends to the distance of an open pastoral landscape certainly cannot be paralleled in rugged ground, where the scope of vision is limited. But a similar influence on the mind, less only in degree, is experienced as we pass near the edge of a long stretch of natural woods — the outer trees disposed in irregular clusters, the lower branches sweeping the turf or bending over rocks, and underwood
mingling at intervals with their foliage. Under such circumstances, although the eye nowhere penetrates far, an agreeable suggestion is conveyed to the imagination of freedom, and of interest beyond the objects which at any moment meet the eye. While elements of scenery of this class would both acquire and impart value from their contrast with the simpler elements of open pastoral landscapes, their effect, by tending to withdraw the mind to an indefinite distance from all objects associated with the streets and walls of the city, would be of the same character.”


5 Frederick Law Olmsted, *Forty Years of Landscape Architecture: Central Park*, ed. Frederick Law Olmsted, Jr. and Theodora Kimball (Cambridge, MA: MIT Press, 1973), 46: “The time will come when New York will be built up, when all the grading and filling will be done, and when the picturesquely-varied, rocky formations of the Island will have been converted into formations for rows of monotonous straight streets, and piles of erect buildings. There will be no suggestion left of its present varied surface, with the single exception of the few acres contained in the Park. Then the priceless value of the present picturesque outlines of the ground will be more distinctly perceived, and its adaptability for its purpose more fully recognized.”

6 Both of these, the cityscape and the camera, redefined the picturesque in the park and situated it as a portal — as a frame controlling motion into and out of situations. The portal functions can be seen in multiple works of art. Robert Nathan’s 1940 novel *Portrait of Jennie*, in which the artist Eben Adams meets a girl which, he learns, time-travels to him from the turn of the century. His choice of the park as the portal for her appearances and disappearances contrast the park’s unchanged grounds to the transformed metropolis containing it. In Jack Finney’s 1970 novel of time travel to the 1880s, *Time and Again*, the author used Central Park as the place where his protagonist could travel back into the nineteenth century. These examples showcase how the brand new park for the city turned — in a couple of decades — into the sustained void where atemporal relations could be evoked.

7 It is important to note that this works, because all the voids that were left in sight by the designers served as placeholders for the buildings to come. If the park lacked its spaciousness and empty frames, the addition of towering buildings would have made little to no impact on the visual relationship of the park to the city.

8 Isaac is dating a much younger girl, who loves him deeply, but he gets interested in a woman his friend is seeing, an extra-marital affair. Isaac, however, turns from this binary to challenge the extra-marital relationship of his academic friend, Yale Pollack. As Isaac becomes interested in Yale’s new girlfriend, Mary, the film’s romanticized aesthetic framing of New York contrasts with scenes of ego conflict. Throughout these conflicts, the young girl, purest of them all, stays faithful to Woody Allen. Despite his neurotic pessimism, partly in reaction to their great age difference — “I’m 42 and she’s 17. I’m older than her father!” — Isaac becomes increasingly attached to her.


10 Parallel storytelling (jumping from one sub-plot to another) and exaggerated J-cuts (voice before image) are two of the filmic devices used in the film to lace these together. In the essay “1979: Movies and the End of an Era,” Lester Friedman explains this contrast between the portrayal of the city and the characters: New York provides dynamism, context, romanticism, and a certain amount of distance to the story of Manhattan, for one imagines that multitudes of people are experiencing the same problems as Isaac and his friends. [Emphasis mine] Lester Friedman, “1979: Movies and the End of an Era,” in Lester Friedman, ed, *American Cinema of the 1970s: Themes and Variations* (New Brunswick, NJ: Rutgers University, 1979), 236.

11 He has been actively courting Gordon Gekko, one of the biggest stock speculators on Wall Street. Gekko manipulates the market using insider information. His motto best describes his approach: greed is good. Nothing will stop him from pursuing a good deal, and he takes advantage of Bud’s burning to desire to succeed. Soon, Bud finds himself getting information from any source and using to gain an advantage. It all comes to a head however when Gekko targets Blue Star Airlines, the company where Bud’s father has worked for twenty-four years. Gekko secretly plans to break it up and plunder the employees’ retirement fund. As Fox is faced with the dilemma of money vs. morals, he grows into character and faces Gekko in what’s to be the resolution of the antagonism between them. “*Wall Street* (1987), IMDB; URL: https://www.imdb.com/title/tt0094291/.

13 This action-driven style of shooting which simulates the quick movement of one’s head in a battlefield, is probably influenced by some of Stone and Richardson’s earlier collaborations on two war movies Salvador (1986) and Platoon (1986), the latter winning him the Best Cinematography Academy Award.

14 Interview with Robert Richardson: “Movie Geeks United,” Art of Cinematography (2012); URL: https://www.youtube.com/watch?v=oYVvW2nAOVM.

15 The confrontation scene in Central Park is a showdown. After Gekko breaks his promise — of reviving the airline company’s stocks — and instead boosts his own benefits. Bud Fox decides to stand up to him. Through a manipulation of market and using insider information, he tricks Gekko with the help of another elite broker and — by saturating the market — manages to persuade Gekko to dump all the airline stocks for a much lower price than he had initially bought them. Gekko soon realizes Fox’s betrayal and confronts him in Central Park’s Sheep Meadow.

16 Ideas of using the void to contrast the excess happened also in Scorsese’s Casino (1995), also shot by Richardson. In the showdown between De Niro (Sam) and Pesci (Danny) — who share a similar power structure to Gekko and Fox (established, principled versus rebellious) — happens in a desert outside Las Vegas. Scorsese himself recognized how, that in that scene, the nothingness of the desert would formally and conceptually negate the excess in the rest of the film. This nothingness is also at the core of the relationship between the two characters in Wall Street, and that is how the space becomes the character of the relationship.

17 The question of identity is one of the key issues of this film, as Bud Fox struggles to position himself between his real father — the hardworking union member — and his ideal father — a successful Wall Street broker. About midway through the film, while looking out his terrace to the city, he asks himself “Who am I?” This question is challenged many times.

18 This “growing into character,” however is not so heroic, as we come to see in the following scene when Fox walks out of the park and to the police, to hand them the hidden recorder he had worn.

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Digital Assimilation. Digital Parameters and Animation Techniques as Generative Tools of Architecture Form.

Author:
Severino Alfonso Dunn

Affiliation:
Pratt Institute, School of Interior Design [New York]

Digital Turn
In The Alphabet and the Algorithm and the Digital Turn, Mario Carpo establishes three phases that aim to structure the changes that architecture has undergone during the ubiquitous implementation of the digital technologies in the design process starting in the 1990s. The first phase is related to Form where he comments on the alterations that have affected digital morphology in architecture. The second deals with Process and regards to the decision-making strategies in the architecture project. And the last is on Agency where he investigates the generative transformations behind the collective identity in the design field. Under the title Digital Turn, Carpo analyzes the fluctuating appreciations undergone by the contemporary architecture project in a digital immersed professional environment. The three mentioned phases should not be read separately or independently, nor its unambiguous linearity should be appreciated as firm. These phases need to be assimilated as a single intertwined concept on the influencing forces between technology and architecture. Given such a broad and complex path undergone by the design fields during their digital assimilation, Mario Carpo manages to mature his ideas with a direct and pragmatic literature, yet with the immediate consequence of having to embrace a more reductionist approach. By doing so, the author synthesizes and classifies, in clear and precise arguments, a powerful cartography on the newly born dynamics in the production of architecture during the world’s digital emergence. For Carpo, a disciplinary redefinition has become evident and its fundamental source is closely linked to the tools that have surged out of the information age - the computer and the internet- which have influenced the seeing, the making and most important, the thinking of architects in the last 30 years. Mario Carpo is therefore interested in narrating the evolution of the architectural representation and production techniques and their correspondence with the built new environment that has arisen during the digital revolution. For that purpose, Mario Carpo analyzes the beginning of the modern era in his earlier books, that is the renaissance with Rafael Alberti as the main protagonist. He continues by structures the origin of his thought in a way like other historians and critics of modern and contemporary architecture. It is important to analyze each of the phases mentioned by Carpo and some of the architects involved in each one. The article looks closely at some components of the first phase: Form.

Curvilinearity’s Assimilation
Mario Carpo’s first phase within the digital turn -form- marks the ignition point established under the digital manifestations undergone by the architecture discipline during the 1990’s. On this phase, Carpo refers to several aspects arising from the new techniques of digital geometrical formalizations in architecture. Form directly regards to the integration of the personal computer into the global market and focuses importantly on the notions of parametric design. As an extension to the logic of
parametric design formulated because of the digital tools, digital animation techniques have played an important role as a form search reproduction engine directly linked to the notion of the parameter. There is a direct correlation between digital animations and the parameter as part of any algorithmic structure; both need to understand the logical pretensions of the other given the complete relevance and necessity of the parameter to produce digital animations and the direct acceptance of a geometry in perpetual change or animated latency within any parametric system. Both technical operations have been introduced by architects to recreate a geometric formulation that would shape a new formal conception of architecture—these happened in the initial stage of computer design but also continues with splendid strength in the present-. Architecture design controlled by parameters on the one hand and animations as a form-searching strategy on the other has led to a fruitful global experimentation on architecture form to the point of marking a series of style movements. These architects had the pretension to clearly position themselves against the deep-rooted and rigid formal range coming from the modern movement. They distanced themselves from all pre-established forms as their ultimate pretension. They requested a formal reboot that could free the architect from its limiting ties with previous formal expressions. Here arises a historic reiteration regarding the architecture discipline as a global intention—the formal ones at least-. The moment signified a rejection of the form of the modern movement which already had occurred during the late 1950s and most of the 1960s with proposals aiming at the same exact concern of rejection. Back then, these ideas were proposed by prototypical projects found in the inflatable architectures, the cave-like curvilinear proposals, or the dome structures to name some of the most noticeable examples of that time. Later in the 1990s, a greater power in the computer processors allowed for the recreation of the first spline curves which develop thanks to the advanced modeling software erupting concurrently. In consequence, a more accurate approach towards the formal assimilations of organic, biological, amorphous typological geometries became feasible to architects with the proper means and a more experimental vision. This new search introduced the possibility of using new mathematical models related to hypersurfaces which permitted the generation of new species of curves and surfaces enhanced by the digital production. All of it, prompted a new way to represent curves not only orthographically but also in its three dimensions which ultimately allowed for the integration of a multi-state multi-test curve; a curve that the architect could change infinitely, immediately and in simultaneity to the design process. In relation to the spline curve Mario Carpo writes:

“The calculus-based parametric notations of the curves themselves thus became practically irrelevant, but two mathematical aspects of this spline-dominated environment have had vast and lasting design consequences: first, digital splines should be continuous (otherwise they could not be derived, mathematically, and the system would stop working); second, spline curves are variable within limits, as they are notated as parametric functions.”

With such parametric stipulation found behind the spline curve and together with its animated potential, makes this geometry the best enhancer of one of the most popular contemporary architecture styles today. By accepting this curve, the architecture practitioners would initiate one of the staunchest models to the promulgation of parametricism as a new global style. This shift can be examined through Zaha Hadid’s architecture proposals and their evolution. The office shifted, from an architecture that preceded the dynamization of a space of interconnections, to an architecture which expresses its fluidity through the materialized curve. From a fluid space—the curve is present in the abstract following the spatial boundaries—to a curvilinear object as a literal representation of fluidity. The spatial boundaries of the later are defined as the materialize envelop made of curvilinear objects. The latest phase in Zaha Hadid’s projecting evolution is more direct and honest regarding its
constructive logic and to its technical curation because it follows the same curvilinear representation both in the early design conception phase and later in the building that is constructed. These projects focus on a materialized curvilinear object that is entirely parametric and therefore, promotes a spatial search that is closely encountered already after representation and prior to construction. The architecture project, in this spectrum is being thought and proclaimed primordial from its material entity and not from the spatial one. On the other hand, the spatial configuration of Zaha Hadid’s earlier projects followed a different logic. The representation of these projects was misleadingly in their artistic connotations and followed a profound research agenda aiming to dislocate the components of the project and to find a dynamic space that would blur the organizational conventions in architecture. These early projects aim to defeat the thresholds of the programmatic clusters that architecture had been conducted to comply with. The curve is thus present as a ghosted curve flowing between spaces. Zaha Hadid’s early projects aimed to detach from the modern movement alliance towards a neoplasticism strict logic of alignment distribution and orientation. By thinking of the space as a dynamic “curvilinear” entity, a strict linear correlation of the parts shaping the project had to be put aside.

Figure 1 & 2. Interior and Exterior View of Contemporary Arts Center in Cincinnati by Zaha Hadid

THE BLOB AND THE PARAMETRIC CURVE

Architect Greg Lynn has also become a pioneer in the use of parametric and animation techniques during the late 1990s and early 20th century. His architecture office FORM, through their Animated Form from 1999, has proposed a series of interesting projects from a projecting strategy. Quoting Greg Lynn in a 2008 conversation with Caron Chan from the online platform 023c: "I do everything 100% in animation, the project is to solve the problem between one and many: how to do something generic and 50,000 variations of that something, I'm not doing 50,000 to choose the best, I'm doing 50,000 because I'm going to make 50,000 perfect."

He also admitted an amateur and erroneous approach with his use of uncertainty -happy accident- as a form search protocol in some of his early projects. However, he continues in defending the importance in the use of animation as a thought and search process in a design project. The Embryological House from 1997 to 2001 sums up these notions from conception to materialization.
The Embryological Houses assume a direct relationship with Greg Lynn’s architecture studies regarding the blob. In the project, Greg Lynn proposes a system of curves controlled by twelve points, each parameterized and only bounded by "prescribed limits, beyond which would result in some impractical designs." After vertically superposing this cartography of curves, Gregg Lynn groups them to generate a series of blobs - in this case, the blobs are hermetic and have the sphere as the basic or initial input. There is an attempt to also categorize the curves within the overall cartography according to attributes such as organization - concave versus convex - , scale, similarities to the original sphere, etc. all of which are of interest to the designer. From this point on, multiple curve variations are proposed by animating each group of curves - by extension, each blob associated with the curves is also animated-. Is between each of these points of animated interpolation where the narrative of the house takes place - the 50,000 perfect projects described by Lynn-. In doing so, Greg Lynn disintegrates the individual frames of the animation one by one and glorifies each formal result as fully intended and realized. This operational search contradicts most studio logic fundamentals that architects have dwelt in for centuries since early modernity ignited in the Renaissance. To think through multiplicity of perfect results - different not just in its material finishes but in its actual formal constitution-, rather than through a search process following an inverted pyramid filter that at the end produces a perfected unit, sets an important theoretical paradox; a paradox only possible through the repurposing of the digital tools viability and logic.

The house project eliminates randomness as it is controlled by parameters. This working methodology resembles the ambitions of a film cinematographer with a perfectionist ambition who has the intention of composing each of the frames with compulsive rule-based attention and imagery preach. It would simile with a Wes Anderson film and his planned sets of carefully designed symmetrical compositions and cultivated and rich range of colors that have been precisely governed and controlled. Like in Wes Anderson photography composition, Greg Lynn aimed to design his Embryological House project with a solid theoretical and formal support that ensures the generative processes have been rigorously measured and decided throughout.

Through the Embryological House, Greg Lynn furthered a research on the modes of architecture production, on the uniting of all the decision-making principles during the project conception and development into a single animated formulation. The generative process behind a curvilinear animation as the one utilized in the house project, needs of the computer as the mastermind supporting its technical requirements. The control guarantees in the project are assigned to a previously selected set of integral parameters that constitute the overall system. Greg Lynn presents a project with a simple meaning; using a set of control parameters to establish a new design language. Thus, the
iterations in Greg Lynn's project occur within the animation and more precisely from the established interpolation points that constitute the general organization of the animation. The mentioned points mark the boundaries for each of the smallest fractions in the animation and between each of these points, multiple intermediate frames arise. These are generated subdividing the given fractional time frames between two conditions as to reproduce a transitional continuity between the first frame and the second and then integrate both smoothly into the overall animation. The software identifies the formal expressions and how they should change during said interpolation process. The iteration resides both in the interpolation points and in the sum of all the intermediate points existing between each pair of interpolation operations within the animation.

In one of the images by Greg Lynn's office - a photograph of a series of diagrams printed in a piece of paper - where a set of digital curves that shape the project of the Embryological Houses are shown, a second set of curves, in this case drawn by hand, can be detected. The designer aims to anticipate or correct/improve the results given by the computer - possibly to be digitally processed in later printed iterations -. It presupposes a manual step anticipating its digital finalization. It would be logical to assume that the architect understands the computational processes established by the computer software and thus decided to absorb and imitate its logic in a manner close to that of an automaton. In this case, the human and the machine are in direct conversation and speak the same parametric language. At first, this apparently anecdotic feature of the hand sketch completing the digitally printed curve relates to the computers’ surrendered logic to the designer’s added value of her human hand + human thinking. But also, it is manifested here, under this critical moment, an assimilation of the computer language by the same human being, in his/her intention to govern and develop digital design strategies after and during the conceptualization of the project itself.

Figure 4. Embryological House, Parametric Curves by Greg Lynn

The parameter build-up in Greg Lynn’s projects support a previously machinated concept, but the result does not follow a process like that of the 1995 Chemnitz Stadium design8, in Chemnitz, Germany by Cecil Baldmond in collaboration with Peter Kulka, Ulrich Königs, and Arup AGU. A cloud and a forest were the design’s initial concept and yet ended up triggering an algorithm aimed to
properly deliver a final morphological and structurally stable result. In contrast, Greg Lynn does not proclaim that his projects need an algorithm to perfect a previously developed conceptual diagram or sketch, but a different thing, that the concept is the algorithm -the algorithm that conforms the animation- and that altogether it coincides with the generative diagram that is also the project. There is a unifying factor behind the animations that Greg Lynn proposes. The concept, the diagram, the sketch, the project representation and the project building are one and the same thing: a set of shifting parameters. The distinction is relevant since the design processes implemented by each of the designers is significantly different. With Cecil Balmond, the first manifestation on paper is a conceptual diagram or sketch and only after the algorithm is introduced as the project’s adjusting actor, by sedimenting or purging the information towards a final singular result. As the final stage, the purged final proposal must be compared with the original sketch prior to declaring its success as a project. In Gregg Lynn’s on the other hand, we are confronted with a computational diagram alone and throughout. This diagram integrates and is associated with the concept and the project’s algorithm serving as a tool that drives and directs a multiform expression all at ones. The differences come from the idealization of a single product perfected by algorithmic control, to the idealization of an embryological architecture product -families of forms that belong to the same embryonic origins-. In both Cecil Baldmond and Greg Lynn proposals, the importance of their project’s computational logic is evident in their ability to allow for the emancipation of the concept first and for the mediation of the later decisions thereafter. However, the evolution of their signifier actions follows a different pattern in each scenario: in Baldmond’s, the evolution is branched yet with a linear tendency in its decision protocol, while in the case of the Embryological Houses, the actions follow a cyclical strategy that evolves as a system of sequences of variable parameters, reproducing infinitely, following endless search patterns.

Figure 5 & 6. Chemnitz Stadium Sketch and Plan by Cecil Balmond

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1 At the conference given at the AASchool in London, Mario Carpo titled these phases as Form, Process and Agency.

2 In his book The Alphabet and the Algorithm, Mario Carpo follows the path of historians and architecture critics such as Sigfried Giedion in his books Space, Time and Architecture and Mechanization Takes Command, the book The Work of Art in the Age of Mechanical Reproduction by Walter Benjamin, several texts by Peter Eisenman like his article Diagrams of Anteriority, or texts by Robin Evans such as his article Translations from Drawings to Buildings. These texts understood the Renaissance and Rafael Alberti more specifically, as the cradle of the modern era in architecture. They have referred to several novel aspects: For example, they
coincide conceiving architecture projects distanced from the new modes of contemporary representation and therefore of thought. They affected the change of an architecture promoted as a constructed entity -about the being of an architecture- to an architecture promoted in appearance of a built attribution -about the appearance of being an architecture). On the other hand, they have given great importance to the new technical methods of dissemination and replication of the architecture information -such as plan drawings, etc.-. They investigated with great interest the methods of mechanization and industrial standardization to find new theories in the field of art and architecture. The assembly line and the serialization of production became aspects of great theoretical depth. There is a conscious and intentional decision found within these texts that fundamentally aim to analyze the technical principles associated to the production of architecture more than the architecture itself.

In geometry, a hypersurface is a generalization of the concepts of hyperplane, plane curve and surface. A hypersurface is a multiple or algebraic variation of dimension $n - 1$, which is embedded in an ambient space of dimension $n$, generally a Euclidean space, an affine space or a projective space. The hypersurfaces share, with the surfaces in a three-dimensional space, the property of being defined by a single implicit equation, at least locally (near each point), and sometimes globally.


6 The term ‘blob architecture’ was coined by architect Greg Lynn in 1995 in his digital design experiments with metaball graphics software. Soon, many architects and furniture designers began experimenting with this “bloppy” software to generate unusual shapes. Despite its apparent organicism, blob architecture is unthinkable without this and other similar computer-aided design programs. The architects derive the forms manipulating the algorithms and the parametric settings of the computer modeling platform.


8 The Estacio Chemnitz is proposed as a project that symbolizes a pioneering architecture within the methods of production of architectural forms representing an engineer approach, fostered by the structural analysis of the building rather than by the search for purely formal approaches.

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BRIDGING THE GAP, FILLING IN THE VOID: PUBLIC ART AND DIVERSE COMMUNITIES

Author: 
SANA S. BURNLEY

Affiliation: 
INDUS VALLEY SCHOOL OF ART AND ARCHITECTURE, KARACHI, PAKISTAN

INTRODUCTION:
Karachi is the provincial capital of Sindh, and is the largest city with an estimated population of 21 million today. Every year millions of people migrating and pouring in the city there is no disbelief that Karachi is the most rapidly expanding and burgeoning city of the world. Karachi is the financial and commercial center of the nation being located on the coast of the Arabian Sea it is the largest port of Pakistan. The diversity in people predominantly makes Karachi different from the other parts of the Pakistan in the same fashion, as New York is dissimilar from the other parts of the United States. Both the cities are liberal, diverse in communities and cultures and life is more rapid as compare to rest of the country. Karachi is famous as the city of lights, it is being thought that the economic growth of the city of Karachi is due to its diverse populations of migrants, refugees from different parts of Pakistan and from different nationalities. The language of the city is Urdu that is associated with the locals of the city. Locals, those born in the city are called Karachi-ites. This multi-ethnic, multi-religious, multicultural population of megacity essentially needs to be empowered with basic education of culture, art, music and nationalism.

Certainly, video is one of the most powerful means of communication for improvement of education as it attracts people’s curiosity, overcomes illiteracy barriers and adds to narrative culture. Due to technical innovation video is becoming more accessible, affordable and now countless people creating their own materials. In Karachi, the medium of video projection is also being used as method of Public art to discover the infamous and unknown effective expressions in the increasing securitized and segregated public spaces.

PUBLIC ART:
The multi-dimensional field of exploration that involves eclectic creative vernaculars in the public realm can be expressed as Public Art. With boundless potentials it includes historical monuments, statuettes, contemporary installations, performance events, public screenings, and mural paintings to name a few. Definitions and summaries of public art are not commonly thought; each project objective varies.
Communities have different views about the public art. Some view it as activating a space and generating civic discourse that provides community a channel to express its identity. Others perceive it as a method of enhancing impersonal spaces.

The field of public art is burgeoning on a fast pace; it is arduous to comply with one fixed definition. However, it is essentially significant to establish the legislations and educate bigger audiences. Nevertheless, most art agencies and artists describe public art as “work created by artists for places accessible to and used by the public”, but heterogeneity of public art involves much comprehensive range of actions and styles.

Fig 1. Mural art by Madiha Sarwar for I AM KARACHI

Fig 2. Monument of Quaid-e-Azam Mausoleum in Karachi
Art that incorporates, its location and the relative issues, is public art and it is essential to differentiate significantly between public art and public places. Simply installing a statuette/monument on a civic center does not fulfill the meaning of the public art whereas the sculpture that has created by encompassing the site specifications, contextual backgrounds considering the audiences, environmental conditions etc. Nevertheless, art placed in the public is mostly valued and provides an experience to common public outside galleries and museums. Especially in Pakistan where there are no museums and hardly few galleries and that also located in limited societies public art is more vital and engaging.

As public art offers multifaceted avenues, many artists have entered to this realm and practicing social activism, cause-related art, sound installations, performance events, community-based initiatives, and much more. This open-endedness can support public agencies seeking to serve diverse communities.
SIGNIFICANCE OF PUBLIC ART:
Public art such as; historical monuments, landmarks and public events plays an important role in augmentation of excellence in life. It generates the sense of pride and cultural identity. In developing countries like Pakistan where predominantly people are uneducated and below the standards of living, these landmarks and public events not only educate people to enhance their knowledge of the cultural and community identity but also offer exciting experiences outside the museums and galleries. For instance, nowadays Pakistan Super League of Cricket is happening and hosted between Pakistan and Dubai. This year Karachi is hosting a Final match of the league for which the entire city is an arena of Public gatherings. Streets and buildings are all light up with green LEDs, many standees of international and national players are placed around the city life-sized sculptures of the favorite players are exhibited all across the city. People are happy and excited and having the life time experiences. These experiences of public gatherings, art and crafts enrich the beauty of everyday life.

Jack Becker, a founder of museums and senior scholar, in his research titled “Public Art: An Essential Component of Creating Communities” raised few pertinent questions that,

“How important is the design of our shared public realm? What is the value of a park or plaza, or of a free exchange in a welcoming environment?”

Becker explicitly answered these questions as:

‘Public art projects offer us a way to participate in the planning, design, and creation of communal space. For this reason, many refer to public art as a democratic art form. And while democracy can be a messy process, public art is an integral part of the fabric of American culture. Public art does many things, most of which can be divided into four areas. It can: Engage civic dialogue and community, attract attention and economic benefit, connect artists with communities and enhance public appreciation of art.’

Certainly, it also has an important facet of community development and education that has much significance in the demographics of any society predominantly in third world countries like Pakistan.

MERA KARACHI MOBILE CINEMA:
Mera Karachi Mobile Cinema is one of the public art projects launched in 2011 by artist Yaminay Chaudhri and her team at Tentative Collective in Karachi, Pakistan. The organization works with local communities in diverse neighborhoods across ethnic and economic backgrounds facilitating
residents to create intimate narratives of everyday life by answering the question: ‘what do you do on your day off?’ using low-cost, accessible cell-phone technology. The public involvement is by word of mouth, social media and people networking.

Using a rickshaw powered projector these personal archival documentaries later in a sequence projected back on the various surfaces of the neighborhoods, ordinary urban spaces dematerializing the barriers that separate upper and lower class neighborhoods. Their aim is to forge connections between people, create intra-ethnic discourse and new zones for warmth and friendliness. These archival documentaries later communal screenings acted as changing cinematic events momentarily interrupted the hierarchies of quotidian socio-spatial relations. These screenings constitute the miscellany of urban experiences and violates between private and public life.

Mobile Cinema Rickshaw was especially designed using local vernacular of transportation and ornamentation in mind. People who participated encouraged to equally share and produce ideas and to learn from each other, avoiding a top-down approach. Technology is shared as much as possible, promoting the use of easily accessible and common mediums, such as cell phone cameras. Every piece
of this project was accomplished over the vigorous time period of many months created by the diverse collaborations across class and places within Karachi.

Another project to some extent of similar nature is ‘Laser Dhamaal’. It is a brainchild of entrepreneur Humza Awan. Awan works with different themes predominantly patriotism and nationalism. The laser videos are created to be synchronizing with music that is why the project is titled as Dhamaal. Dhamaal is one of the dance forms in Sufism that has recognition all over Pakistan and abroad across diverse cultures. These ‘Laser Dhamaal’ shows happen occasionally on festive events like Independence eve, Pakistan Day, Finals/Semi-Finals of Cricket etc. These shows, projects on different urban spaces of distinct communities such as Pakistan Chowk that is located in old city region and has greatest population of Bohra and Khoja communities. These projections also happen in different schools of varied neighborhoods. Mera Karachi Mobile Cinema created a new avenue in the realm of Public Art and Art world. It has evolved the medium of video projection into a new direction and challenged the art object, light, pixel and event, as fleeting series of images. Moreover, it has opened up the cross cultural and cross perceptual discourse.

Correspondingly, the rethinking of the existing identities and spaces has been explored also by mobile cinema rickshaw that became an auxiliary metaphor. That allowed manifold artistic practices to grow in the city by navigation through distinct neighborhoods and segregated regions.

CONCLUSION:
Art when overpass the boundary of galleries and museums enters into the public realm engaging diverse public multi-dimensionally is called Public Art. Public art has widespread popularity in the medium of Video installations and projections. Video Projection has also been used as developmental tool for communities across cultures and religions. It has also been used as part of protests and civic movements to generate critical discourse. A video projection on public spaces evolves diminishing significant use of public spaces as meeting point of art and politics. For that matter Quebec students’ protests in 2012 when sudden increase in the student fees from $2,168 to $3,793 imposed by the government millions of students protested through strikes and large public gatherings. The wide use of video projections engaged millions of students at various public places and re-established the concept
of meeting grounds for critical dialogues. That resulted as halted in increase of students’ fees by the government.

The four leading standards of Public art as defined by Dr. Jack Becker have lucratively triumphed by the project of Mera Karachi Mobile Cinema. The project of Mera Karachi Mobile Cinema integrated the use of video as developmental tool for distinct communities in Karachi educating the inhabitants about the multi-layering fabric of the city. Also opening the economic avenues by using existing spaces as local Rickshaw transforming into Rickshaw powered projector – mobile cinema for innovative artistic practices. Archival screenings revived the potential public spaces as meeting grounds for critical and diverse range of dialogues. This project bridges the gap and filling in the voids between segregated and securitized communities. Furthermore, connected diverse group of artists with dissimilar communities enriching the spectrum of public appreciation of art.

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ARCHITECTURE AS A SILENT STATIC SUPPORTING ACTOR IN FILMS

Author:
ZAIN ADIL

Affiliation:
BEACONHOUSE NATIONAL UNIVERSITY, PAKISTAN [LAHORE]

INTRODUCTION
This study attempts to understand the role of architecture in a film as an on-screen character or performer to elaborate the narrative instead of only functioning as scenery, stage or backdrop. Architecture can be perceived as a storyteller suggesting itself on films taking into account the particular components such as stairs, overhangs, entryways, yards and so forth. The work of accomplished directors from both Hollywood & Bollywood are under observation. Directing a film is the parallel utilization of diverse elements like light, set, acting, sound, script, story, editing. The use of architecture as a significant element to assist the narrative, whether it is fictional or non-fictional, is very diverse. Whereas, the filmmaker’s manifestation of architecture helps them to visualize and achieve the essence of the narrative. The design components vary from scale to texture, materiality to the physicality, transparency to the opaqueness, suggesting the relation of actors and built environment according to the narrative.

The consistency in accompanying the architecture as an on-set character contributes in the form of design. Architecture as a scenery sets the mood and its components accomplish more by creating an experience to translate the scene. Sometimes a director constructs a scene around a particular component of architecture which complements the scenario to express the emotions of performance. For instance, Romeo and Juliet which was adapted by Baz Luhrmann in 1996 for the silver screen, updated the setting to a modern city named Verona Beach. In a scene where Juliet is standing on the balcony opening in the courtyard with the delightful setting of a wellspring looking at the stars pondering about Romeo, the architectural composition instigates Romeo’s need to demonstrate his passionate struggle giving him a chance to move up to the balcony. In this scene, the director tries to stage the architectural composition to hint the forth coming struggle of Romeo. There have been multiple remakes of this classic story, but the most successful depiction of the emotion was achieved in this rendition of 1996.

The shortlisted films where architecture characterizes as an on-screen silent actor are Psycho (1960), Gattaca (1997), Andaz (1949) and Awaara (1951). The shared conviction these movies offer is the utilization of the stairs as an essential compositional component around which the narrative unfolds. In these movies, the circumstances and prerequisite of the plot define the type of stairs which vary in scale and shape. It is the design of the stairs that suggests its role in the act. That is how architecture performs as a silent actor in film, a fact confirmed by watching and highlighting the scenarios.

Psycho by Alfred Hitchcock, 1960
Psycho is applauded as a work of cinematic art by international film critics and film researchers\(^1\). Hitchcock worked as a set designer in the 1920s in Weimar, Germany\(^2\). That is how his application of art direction was developed from his conditioned so-called “German Background”, to the point that for
him, the set itself turned into a dynamic character in the story. While Patrick McGilligan, Hitchcock’s biographer, expresses that “German cinema was more architectural, more painstakingly designed, more concerned with atmosphere.”

In a passage for the Encyclopedia Britannica, Hitchcock wrote, “an art director must have a wide knowledge and understanding of architecture.”

The film focuses on the experience between a secretary, Marion Crane, who disappears winding up at a motel in the guilt of stealing cash from her boss, and the motel’s psychologically disturbed owner-manager, Norman Bates, and its consequences. Norman Bates lives in the house which is right beside the motel. (Figure 1) The outlook of the motel is orderly and well maintained whereas he lives in an old gothic house next to the motel with his mother. The architectural set-up enhances the split personality disorder of Norman Bates, as Steven Jacob explains in his book “The Wrong House”:

“The buildings are spatially related to each other as the crumbling house on the hill is juxtaposed against the rectilinear geometry of the motel strip. Norman’s infirm mental state is a direct result of his inability to locate himself between the anonymous modernist box of the motel and his mother’s Gothic house.”

![Figure 1](Time: 00:44:56)

In the interior view of the house, when the door opens for the first time, there are stairs used as a foreground which is covering half of the frame suggesting its significance for the plot (Figure 2). The stairs are moderately lit from above, compositionally the scale of the stairs is dominant and welcoming as it has a striking appearance. In this encounter with the stairs, Norman does not climb them to see his mother. Meanwhile, he holds the railing and gazes unable to gather the courage to go up as he was miserable about seeing her.
Later in the film, when a private detective comes back to the motel in the absence of Norman, he secretly enters the house in search of Marion. He finds out that all the doors are closed, suggesting the hidden plot of the film that has not been revealed yet. On the contrary, stairs are directing the private detective to climb them and unfold the plot (Figure 3).

In the next close-up shot, the director registers the detective’s first step on the stairs where he wants to show the curiosity of the detective. The light of this close-up shot is very dark over the first step anticipating the thrill (Figure 4). In the next shot, the top view angle of the camera shows the detective climbing the stairs expecting something to be there (Figure 5). Once he reaches the top of the stairs, about to find answers for his suspicions, he is suddenly attacked (Figure 6). The detective falls down the stairs (Figure 7). He twists his foot on the same first step that he took showing that the path turned out to be the reason for his death (Figure 8). The stairs play a supporting part in the plot by provoking the curiosity of the detective and trap him in Norman’s psychotic plan. Norman is not registered as Psycho in the film till this time.
Figure 4 (Time: 01:16:38)

Figure 5 (Time: 01:16:39)

Figure 6 (Time: 01:17:00)
After the murder, Norman climbs the stairs confidently, starts a dialogue with his mother (Figure 9). During this conversation, the camera moves up from the stairs to the top perspective of the stairs, showing the lobby while Norman convinces his mother to bring her down. The following retreat of the camera in this situation slides from top to down while he is carrying her in his arms (Figure 10). It seems to be a planned reason for utilizing the stairs as a silent supporting element for Norman’s character, a meaningful connection to justify the split-personality disorder.
Later, Sam and Marion’s sister go by themselves to find out the truth. While staying at the motel, Sam engages Norman in a conversation, and Marion’s sister sneaks into the house. Again, the first thing she finds is the stairs (Figure 11). She instantly climbs to look for her sister. When she sees that Norman has found out about her intrusion in his house and is coming for her, she runs down the staircase and hides underneath it looking through the grill of the stairs which led into the basement (Figure 12). This architectural setting shows her trapped in a cage while Norman looks for her. The suspense of being caught is evident in this frame as he is standing right beside her. Norman climbs the stairs while in the meantime, the girl ends up in the basement. She moves down cautiously and horrified, step by step, where she eventually finds Norman’s mother’s corpse right in front of her.
The whole scenario depicts the importance of the stairs being connected to each other directing both living characters into a controlled setting. The entire pathway of the basement staircase was the missing link throughout the film. It became the element of surprise that was kept hidden deliberately. While stairs assisted in identifying the whole scene creating instances that were to be visualized in the narrative. These instances substantiate that it was the presence of the stairs that concludes the whole plot. It is the staircase that is performing silently, directing the actors through a limited and set pathway of the architectural setup.

Jean-Luc Godard, a French producer, acknowledged that Hitchcock’s impression of the silver screen is not confined just to the storyline but rather to the frames which propose a strong association with architectural inspirations: the recreated tumble down of the staircase, the vantage point that watches the entire neighborhood through the window. These arranged attempts of elementary similarities in blending with the plot of the story show the motivation behind utilizing reliable compositional components as an on-screen character. Such kind of silent performers in a narrative by Hitchcock are extensively and timely used than any of the expert’s convoluted plots⁶. Providing such common stairs at the start, blending in with the background, creates a scenario that helps the director to build the narrative more finely in the following disclosure of the plot using them as a silent actor.

Gattaca by Andrew Niccol, 1997

The story is set “not long from now” where one’s life is dependent on technology which facilitates in the future providing the possibility to choose the genetic traits of a person before they are even born. This story builds around two characters, Vincent and Jerome. Vincent is one such human being who was born naturally in this race of genetic mutation. This film portrays his journey of survival of his dreams as he illegitimately overcomes the protocols of the system to make a place in the society by using the fake identity of Jerome who is a genetically modified human being.

The opening of the film shows how Vincent struggles to keep his fake identity like superior humans. He dispenses his DNA traces on a regular basis before leaving for the house and repeats this routine, systematically depicting his enthusiasm to remain part of the Gattaca space program. This routine makes him excessively trained, and robot-like.

In (Figure 13) at the entrance of the headquarters of the space exploration corporation “Gattaca,” (the organization in which Vincent infiltrates under a fake identity), the escalator is correctly adjusted to the focal point of the space and the frame, signifying Vincent’s objective. Vincent uses an escalator in a routine which reminds him that he is moving one step forward towards his aim (Figure 14). The escalator being a stair type in a more futuristic manner stands in contrast to his struggle to achieve his
ambition, as the plot provides him with a linear pathway and a set pattern to advance. According to his character’s need, everything is so orderly and disciplined that he does not have to struggle to climb. Only this stair type, the electrical escalators provide the function for him to move up effortlessly and contradicts his character as per his sabotaged identity.

Jerome’s character is portrayed as a disabled man, whereas he was born with a genetic mutation. The presence of a sculptural spiral staircase at his residence completely rejects his disability contradicting his character’s situation (Figure 15). The compositional significance of the stairs at the start was to assist the narrative. The staircase designed for that place is to support the scene that translates the climax of the story. The stair was utilized in the plot when Jerome’s physical disability was challenged while Irene and the detective were on their way to his place for the confirmation of his sickness. Jerome’s sole struggle is contradicted by the twisted almost anguished circular stairwell that penetrates and practically unimaginable for him to climb. The importance of this twisted spiral staircase with metal railings is registered when he tries to pull himself up by grabbing each step and the round pipes of the railing. The ergonomics of the stair and the railing are as such that he could put his hand through the steps giving him the grip to move or pull. Whereas if the stairs are considered solid, and there is no space between the two steps and the railings are solid, it would not have been possible for Jerome to take himself up. The monotony of Jerome’s isolation and frustration breaks in this scene during his struggle to climb (Figure 16, 17, 18 & 19).
Figure 15 (Time: 00:53:26)

Figure 16 (Time: 01:19:59)

Figure 17 (Time: 01:20:16)

Figure 18 (Time: 01:20:50)
At one place, the escalator was supporting Vincent to achieve his dream on the other hand, in Jerome’s case, the spiral staircase highlights his misery. The type of stairs contradicts the characters and then comes in as a supporting performer. Also, the positioning and the time when these components are introduced into the plot register their intention.

**Andaz by Mehboob Khan, 1949**

Film stars Dilip Kumar (Dilip), Nargis (Nina) and Raj Kapoor (Rajan) are tangled in a love triangle. The plot of the film shows the oppressive theme of the poor, class warfare and rural life. In Andaz, Nina lives in an expensive house, wears monogrammed robes, goes riding in Jodhpur and dances with men. Similar plots are very commonly used nowadays, but half a century ago, Mehboob Khan raised storms of debate with the same issue in this romantic melodrama. The plot of the film focuses on the consequences of the sudden death of Nina’s father that left her troubled and lost in grief. Dilip takes care of her and her business. Whereas, Dilip misinterprets her emotion of trust with affection. Later he finds out that Nina is already in a relationship with Rajan. Rajan is a childhood friend of Nina whom she marries after her father’s passing away. Now the story builds around Rajan’s curiosity about Dilip and Nina’s relation, but Nina tries to seek her husband’s attention.

Nina’s mansion was revealed when she excitingly breaks the news of Rajan’s return to Dilip. This pivotal moment was critical as this will transform the plot. In this scene, the central lounge area of Nina’s house was lavishly decorated. The most striking architectural element of the interior is the staircase with a unique extended platform at the center intersecting it (Figure 20, 21). The stair is positioned at the corner of the lounge connected to the walls just below the upper corridor. These stairs possess the power of leading towards the upcoming screenplay. Steps are overly broad, dominating their presence in the whole frame. The handrail is perforated giving it partial visual transparency. While singing a song for Rajan’s return, she is standing at the extended platform. Whereas, the placement of this platform is representing the forthcoming position of Nina in the plot when she will be trapped between the misunderstanding of Dilip and Rajan.
All the tragic events in the film were choreographed around these stairs. First the escalation of Rajan’s suspicion about Nina’s relationship with Dilip. In this scene, Nina is standing in the upper corridor between two monolithic columns, listening to the conversation of Rajan & Dilip; while, Rajan was leaning on landings handrail, teasing Dilip about their affair. The positions of the actors in the scene reveal the state of the characters suggesting the rising conflict in the plot (Figure 22). Whereas the stairs were performing its role silently and reinforcing the stiffness of the scene, plot and the chemistry between the actors.
The second event is when Rajan is leaving for tennis practice. On his way, he misunderstands Dilip’s apology and Nina’s loyalty to him. In the frame, Nina is again standing where she was in the first encounter while Rajan is again standing in the middle of Nina and Dilip. During the disputed conversation, Rajan hits Dilip with the racket. Dilip falls down the stairs, and Rajan leaves the room (Figure 23). Here the importance of the platform with the stairs is again used to evoke Rajan’s dispute with Dilip. Thus, the character played by architecture in this conflict made the scene more expressive and well-articulated because of the level shift all between. Conscious use of the stair landing in this scene illustrated the tension among them more significantly.

![Figure 23 (Time: 01:57:05)](image)

Throughout, Mehboob Khan hints at the role of the extended platform. He willingly uses the stair landing to support the scenes and the plot. In the last scene, the ultimate climax was shot over the extended corner of the platform that wasn’t utilized before registering its importance. In this scene, Nina was trying to attempt suicide while Dilip caught her red handed. Initially, Dilip stops her from committing suicide, but simultaneously following the steps towards Nina, he tempts her affiliation for him (Figure 24). Climbing the stairs backwards, she confesses to Dilip about her true love for Rajan, intimidating Dilip to stop provoking her false emotions, pointing a gun at him (Figure 25). Dilip contradicts her justification and forcefully invigorates his emotions over her, traps her in the corner of the extended landing but she shoots him with the gun (Figure 26). These rationally choreographed scenes, according to the plot, create room for architecture to jump in as the silent performer. The portrayal of architecture in the screenplay and connections among the characters was established through the unspoken relationship choreographed on set. At this point, we see that the stairs begin performing yet being quiet.
Awaara by Raj Kapoor, 1951

The film portrays the struggle of a vagabond, Raj Kapoor himself. The story focuses on the societal norms and the revenge of Bandit Jugga from his father. Raj is a victim of class-struggle in which oppressive capitalists exploit the uneducated masses, and benefit from their ignorance and their powerlessness. This Dicken’s-like plot concerns the estranged son of a judge who has been raised by a criminal. His surrogate father trains him for a life of crime, yet a reunion with a childhood sweetheart leads him to an attempt to change 8.
At the start of the film, the director takes the audience in the flashback of the judge where he clarifies how he left his wife. Bandit Jugga kidnapped One-day Judge Raghunath's wife Leela as revenge from her husband. They take her to some old ruined building in the mountains. From inside, the building looks like a dungeon: dark, surreal set standing on monolithic columns. It was Jugga’s hideout. The primary source of light entering space is coming from outside between the two columns precisely from where Leela enters, and the secondary source of light is flambeau placed on the wall next to the stairs. While coming down from the ruined curved stairs, Jugga reveals his tragedy about why he is stuck in this situation. The condition of the stair in the scene is damaged as seen in (Figure 27). The edges of steps are broken, and there is no handrail. The use of curved stairs instead of straight stairs registers the turn in Jugga’s life according to the screenplay. The spatial order, lighting, and monumental scale of the set/space reaches out gluttony of his vengeance and illustrates the misery of his past. The prelude appearance of architecture suitably portrayed at the start of the screenplay.

Later in the movie, Raj (Son of Judge) and Rita (Raj’s childhood friend) meet again as grownups. Raj accidentally comes at Rita’s mansion where she lives with her guardian Judge Raghunath, Raj’s actual father. He enters the house and is left speechless after experiencing the lavish lifestyle of her. The interior of the house is in baroque Deco style, comprehending the dramatic quality of the space. The most prominent element of the mansion’s interior is the wavy/intertwined stairs expressing the state of Rita in the plot (Figure 28). The scale of steps is more extensive than any typical stair step, especially in a house where only two people live. The smooth flow of stairs also symbolizes the comforts of Rita’s life. The carpeted steps and handrails are decoratively carved out of the wood with a women’s statue at the end. The placement of stairs before the decorative wall and columns filled with motifs at the backdrop elevation leading to Rita’s room illustrates the use of layers, which helps the director to expressively demonstrate the dream-like life of a woman living behind that decorative wall. The communicative sets of the screenplay, add vitality to the direction of Raj Kapoor. It helps him to elaborate on the suffering of society through the angle of architecture and condemns the socio-political class discrimination of that era.
Another exceptional role choreographed through architecture and was expressed cinematically is one of the best dream sequences ever in the twin song where Raj’s soul is in a tug-of-war situation between the surreal recreation of heaven and hell. Often cited for its glittering, white set, the number Ghar Aaya Mera Perdesi (‘My foreigner has come home’) features a spiraling staircase with fog machines that evoke the hallucinatory but the distant euphoria of a heavenly space. The scene features a tower with a spiral staircase (Figure 29), with fog overflowing that appears to link the earth and the skies, however, we can neither see its base nor its top, suggesting it as an infinite spiral stair tower. The role of this mythical stair tower with no typical representation of stairs becomes the defining scene of this song registering that we are in a dream world. Later, Rita is standing at the highest point of the sea of clouds next to the stair-cased mound with an abstract twisted marble column standing behind her (Figure 30). While the music is perfectly synchronized with the descending movement of Rita on steps, Raj is fighting in hell for his escape and climbs through the clouds above the mountain. Over the clouds, he finds stairs leading to Rita in paradise, and three of Hindu God’s – Brahma (the creator), Vishnu (the preserver) and Shiva (the brave) – are there. Rita guides him to the infinite spiral stair tower, and they reach Shiva above there. Now, he is led to the ramp through which he will accomplish his dreams. Suddenly, Jugga appears ten times bigger in scale than they are; Raj tumbles down, and everything starts to collapse. This architecture symbolically echoes an evocation of heaven and hell.
The struggle shown in the storyline of one song is the summary of the entire screenplay, and with the right use or performance of architectural elements in this song, Raj Kapoor has shown his sharp eye for the directional challenges. The whole dream song took three months to shoot. Directors like Raj Kapoor were successful to pull out improved productions due to western influences. As mentioned by Mr. Anupama Kapse in his paper on “Awaara”.

“Kapoor opens Awaara with a flashback, with Rita defending Raj in court. The flashback may be a nod to Citizen Kane (1941), whose influence is apparent in Kapoor’s use of rich interiors and light and shadow to evoke social dysfunction and psychological alienation. Kapoor adapted Hollywood-style continuity editing to tell an essentially Indian story based on popular conceptions of the vagrant as a seer imbued with practical, wise insight.”

CONCLUSION

Storytelling has been a form of art for ages, due to which cinematic visualization has evolved with the passage of time by utilizing the right elements. Often seeming coincidental or even effortless, the influence of architectural design is more often than not a deliberate effort on the part of a film director, struggling to manipulate scenes in ways that might propel the narrative along a more dramatic direction. Architecture has elaborately justified itself as a focal component invigorating the plot of the films. Indeed, even the right use of light over the plain background with a solid color can be framed in a movie as an infinite space. General viewers usually watch the film for visual entertainment, but an accomplished director always approaches architecture more than the environment of the scene. Hitchcock’s films always have a series of key features that could be noticed as connecting dots for the storyline which can be reconceived as one of the many “architectural gestures” that contribute as a silent actor/performer for intensifying suspense or psychological tension. According to Jacob’s, “These architectural motifs often relate to specific narratives or plot constructions such as a secret that is hidden within the confines of the house and the family.”

Similarly, in “Andaz” Mehboob Khan’s reason to introduce an extended platform in the middle of the stairs was not apparent throughout the film. It was a pre-decided director’s motive to place that architectural element in composition to define the end of the story. Considering this example from the movie, it illustrates that the architecture has been a vital part of the plot that sets its role for the established scene. However, the execution of both film and architecture lies in its direction. In such cases, the director acknowledges the stair as a silent performing character.
Citing the role of architecture in these four movies, it can be considered that architectural design elements can be conceived as a necessity for the plot of the narrative as the foundation of the scene. Without this, the director could not have accomplished what he had envisioned it to be. The significance of the stair design lies in the execution of the director. The architectural components (stairs) wait for their turn to act as a performer, whether it’s Norman Bates’ split personality, Vincent’s sabotaged identity, Jerome’s disability, tension among (Nita, Raj & Dilip) or dream sequence from Awaara. Such films have explored the potential of architecture’s role way beyond the ordinary.

Directors’ understanding of an architectural language is paramount as it allows the directors to engage the audience in a less immediate but effective manner, as can be observed in these films, where the manifestation of stairs unfolds supporting the plot. These architectural elements display about themselves the tone that the director hopes to preserve in the film. Without even revealing any aspect of the plot, the director will inform the audience of his architectural vocabulary, the particular theme the film will occupy.

Other films however, that do not make use of this technique, project their architectural setting along a different tangent where instead of embodying the quality of the narrative, it personifies the traits of various characters. This utilization of architecture needs to be highlighted or emphasized on as a way of ensuring the audience is not distracted from the development of a character through the course of the film. In Gattaca, the director displays traits with a sense of irony. Vincent’s association to an escalator in the civic center displays ironically how full of struggle the development of his character has been while Jerome’s struggle to climb the spiral staircase in his home mockingly attempts to depict how effortless his character’s development has been until that point. Despite the compelling nature of these approaches, working in contradiction to them has also proven itself as being very useful, particularly in films that revolve around the theme of humor.

Use of architectural elements have not only enhanced the ability of film directors to communicate ideas across the medium of film but have also provided new insight on how to use elements of architecture to frame a particular narrative. This understanding can be seen most apparent in the film “Rear Window” where Alfred Hitchcock makes use of the element of windows to display multiple narratives within a single frame.

There are scenarios in which we can mark doors, windows, stairwells, balconies, elevations, etc. as a key member of the film cast as architecture is dominantly present in all examples. From this study, it can be understood that film has become a powerful tool for the communication of an architectural language. It helps provide a unique perspective by which the value of architectural elements can be highlighted to show their significance in films.

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FILM AS AN EDUCATIONAL TOOL TO UNDERSTAND THE ESSENTIALS OF ARCHITECTURE

Author: ZAIN ADIL

Affiliation: BEACONHOUSE NATIONAL UNIVERSITY, PAKISTAN [LAHORE]

INTRODUCTION

This study explores architecture in the domain of film as an educator. It focuses on film as a tool to communicate the sense of architecture. There is a broad range of meaning to study and analyze the correlation of film and architecture, which motivates the premise of this experimental study, which is to understand how film as a tool can work to educate people. Many academics from the architecture sector adopt the cross-disciplinary framework of education which involves illustration, paintings, photography, film, comics, music, etc. This approach aids them to communicate better and leave a powerful impression on students regarding the subject 1. The exploration of the cross-disciplinary perspective of film and architecture from the position of an educator will help to advance design understanding and enhance the capacity to observe critically and experientially. Architecture can be understood as an integral part of films. It is the resultant of intangible natural forces with the layers of history and culture. Architecture works as an aspiration for its benefactors like artists, poets, writers, photographers, and filmmakers. It is a commonplace that light, space, gravity and time are the essentials of both film and architecture making their correlation a natural one. These phenomena however within the limits of architecture exist as intangibles that transform into tangibles when translated into film. Students of present generation associate with things and ideas more convincingly when shown through films. Isolating the use of these phenomena within a film and separating them from an elaborate narrative can create a product of architectural education, communicating complex ideas to minds unaccustomed to deliberately reading them. Visible synchronization of these elements generates a communicable translation of complex ideas in the format of a scene or a film.

Across all schools of architecture, “Light, Space, Gravity & Time” are considered the essential constituents to understanding the evolutionary process of design. There are thirty-five architecture schools in Pakistan. All of them have five years’ program of architectural education 2. At the School of Architecture, Beaconhouse National University, Pakistan (Lahore), these essentials are introduced to first-year students as the first step towards the understanding of architecture. To explore these essentials, the students have to draw, photograph, build physical models and read literature. Multiple methods of teaching are used to reinforce their educational upbringing. In the domain of alternative pedagogical approaches, the film is a useful mode of communication for teaching students about architecture. One of the most prominent evolutions in education was the use of a slide projector at the end of the nineteenth century. The partnership of photography with the technology of the magic lantern in the 1850s made it conceivable to transform any classroom or studio into a museum or a site visit to the Nile Valley, the Athenian Acropolis, or the view of the city from Empire State Building during construction 3.

On the other hand, architectural education has had a somewhat underexplored connection with photography. Although architectural photography achieved a higher degree of precision but was not
that effectively moved into the classroom. The very minimum required to reproduce the building in the classroom, even in a fragmented way, the spatial and structural reality of a building or an urban space, is a range of various perspectives of the exterior and interior. The portrayals of a building through photograph lends coherence to the individual perspectives as seen in the orthographic projections that have since the Renaissance been the favored method for considering and recording architectural designs: plan, section, and elevation. These are not just fundamental for relating the photographic perspectives to the totality of the building, but they also confirm that architectural language had an effective means of representation long before the photograph became an added option. However, while photographs and drawings might be juxtaposed together on screen to present the design of a building, the actual physical experience of a building might not appropriately be communicated in its real meanings. The use of moving pictures allows us to incorporate films in methods of representation that would bring us closest to experiencing the building in person or create another point of view to look at and understand them.

As it can be stated that light, space, gravity, and time are the essence of both film and architecture, therefore the correlation between the two is a natural one. However, any individual who has held a video camera up to a building begins to experience the challenges of filming architecture, and anyone who knows and adores a building knows how rarely a movie fulfills a thorough impression of a building. A still camera can be used to capture a two-dimensional image while the film allows the capturing of vast depth of space within a fixed visual frame. For instance, a skyscraper or the urban setting of a city must be captured from afar with a distorting lens in case of a still image photograph, while the video camera allows a constant vertical panning to capture the same setting, as experienced in multiple films. Also, the advancement of technology has equipped us with the possibilities of looking at cities from the top as a flat surface with ease of drones.

The film camera can mimic the footstep and the eye; however, it cannot capture the logical connection amongst vision and body that is a part of the physical experience of a designed space. Though the experience of the building involves the selection of a path for the user, a film provides a dictated approach to the architectural space that inevitably replaces our perception with the rendition of the director. The filmmaker is in control of the syntax of representing space and of the tempo and rhythm of architectural elements throughout the shoot and the editing. This study leads to a possibility that is opened once the film’s nature as a tool for education is acknowledged and embraced. Film or video, in reality, can possibly move toward becoming, if not the new spouse of architectural language, at least an additional form of pedagogy for the discipline. Some films lend themselves more fruitfully to teaching than others, and not coincidentally they tend to be films that have set out in an approach where architecture is a subject. Whereas, many films are of interest simply on an archival or narrative level for example an interview with an architect (for instance, filmed interviews with Louis Kahn), or they record footage of a destroyed city or building, or they record the design, construction or concept of a famous building (Britain from Above, Grand Designs). Effective films usually find a way to express the importance of their subject matter through technical prowess. Considering the expressive power of film, its potential as a teaching apparatus becomes significant. In the book “Film, Politics & Education: Cinematic Pedagogy Across the Disciplines” by Kelvin Shawn Sealey, Barry Bergdoll explains that:

"As a participant in the experimental Production Laboratory 12 in the late 1980s, in which for a number of years in the late 1980s and early 1990s the Program for Art on Films, a joint venture of the Getty Foundation and the Metropolitan Museum of Art, set out to investigate the qualities that
make a good documentary by fostering collaborations between filmmakers and art and architectural historians, I was struck by the interest shared by the overwhelming number of teams exploring the ways we look at works of art.

Several films in the series took particularly innovative approaches, some with origins in feature film making but novel in their application to documentary film making. For instance, Takahiko Iimura and Arata Isozaki’s film Ma: Space/time in the Garden of Ryoan-Ji (1989) presents no historical information about the famous Zen garden in Kyoto, but provides a powerful visual commentary on the intentions and experiences of looking at such a garden. Gradually the film powerfully conveys the idea that the garden exists not as an iconographic construct but as a stimulus to the imagination in which space and time, the essence of the architecture experience, are interrelated. The film itself then becomes an experience of “ma,” which the authors feel is an inherently Japanese concept.”

This example suggests the possibilities of the interdisciplinary perspective of film and architecture from the position of an educator. Therefore, freedom of interdisciplinary teaching illustrates the point that is consciously addressing the nature of filmmaking, making the awareness of its limitations and possibilities for representing architecture as a useful part of the architectural curriculum. This approach can convert film from a passive simulation of visiting a building into a powerful tool for involving students in the analysis of architecture. Therefore, the outcome of this study is the production of a film with the purpose of highlighting the presence of architectural elements such as light, space, and gravity seen in time. The mentioned elements will be paired in sets of two, i.e., “Light and Space”, “Light and Gravity”, and “Space and Gravity”.

**FILM**

The total duration of the film that had been produced to share with academics to teach architects is eighteen minutes. The whole film is monochromatic to amplify the role of each element (Light, Space, Gravity & Time). It consists of four sections. The first section is based on a studio setup to experiment. The purpose of this experiment is to isolate light, space, gravity & time. This experiment was to understand the possibility of controlling intangible phenomena through a camera where they become tangible. The rest of the three sections consist of the combinations of these elements: Light & Space, Light & Gravity and Space & Gravity. In each part of the film, the importance of each essential in correlation to the other is highlighted. The relation of these elements in multiple ways has been recorded from poetic to practical, rational to irrational, literal to metaphorical.

**Light, Space & Gravity (Film by Zain Adil)**

[https://youtu.be/OEEfWFoXG1g](https://youtu.be/OEEfWFoXG1g)

**Light & Space**

All things in the natural world exist in perpetual darkness until the light introduces them by visually materializing them. A plane that did not visibly exist in darkness is capable of manifesting itself when the light is made to fall on that surface. In the same manner, light can expose the three-dimensionality of space or object by developing contrasting tones around the point at which multiple surfaces meet to create a space or object. This quality of three dimensionalities can be made to further exaggerate itself through the lens of a film camera whereby the contrast creates a powerful impression that brings even the orientation of space into question. Light can be further understood as the most significant element in a space because it contributes to the comprehension of the space that it occupies. Manipulating light along various ideas can induce multiple interpretations of a single space, and with the added influence
of time, the quality that a single space can enjoy is never static. The film allows such moments to be understood in time, making for a powerful tool in bringing the documentation of light’s involvement in influencing the quality of space. The visual vocabulary of this section of the film is based on high contrasts, to keep bright cynosure in the space it is dwelling. This visual treatment helps to understand the ever-changing quality of a static space due to the animating behavior of light.

This frame (Figure 1) from the section Light & Space shows how light acts to expose the surfaces of the steps that in darkness would not exist. The non-existence of light on the sides of the frame creates the perception of spatial insignificance. Whereas, the light falling over the stairs from the elongated window reciprocates the opposite of non-existence.

This frame (Figure 2) is the last scene of the section Light and Space. In this scene, the light modifies the experience of the particular space and washes its surface on all axis without unveiling the actual persona. The stimulating presence of light in this space utilizes its static occurrence into a poetic one with the collaboration of time. Although, the impression of the light in this space is not restricted to the point of illumination, it also morphs the transcendent quality of the space. The above frames from the film establish the diversity of the light in a space, accentuating various aspects of it while drawing attention away from others.
Light & Gravity
The relation of light and gravity is expressed more often in the forms of skylights. The combination of light and gravity can be observed as exposure of mass by light. Massive spaces enclosed by large surfaces can often seem visually burdensome while the slow intrusion of light into it allows it to breathe and feel almost weightless. The direct contrast can be highlighted by the use of film to slow down or even speed up the intrusion of light as a means to observe the change in the didactic quality of the space. The documentation of this change will help inform the relationship of light with the visual mass of space.

Elaborating further on the qualities produced by the pairing of light and gravity, it can be discovered that they can also be expressed when the distinction between the interior and the exterior is blurred. In an enclosed space, the exterior is segregated from the interior, and their respective experiences are terminated where they meet. However, in using light alongside gravity, that enclosure can be broken due to which the experience of the exterior and interior blend and work along with a symbiotic relationship. This relationship, however, can often be observed from perplexing perspectives. For this reason, the mediation of film allows these perspectives to be documented to express the workings of light and gravity.

The opening frame (Figure 3) holistically constructs the correspondence of light, gravity and time. Showing the growth of trees against the gravity towards the light while firmly standing on the ground. Whereas, the light penetrating from the foliage of trees suggests the time and affirms the sense of orientation. Here, the light is reincarnating the experience of space each time it penetrates from the sky, suggesting the ever presence of gravity.
This frame (Figure 4) shows the indulging relation between these two elements. As light intrudes sculpting through the voids, revealing the monumentality of the building’s envelop carving through the mass of the structure. The intrusion of light reveals the form of the building reflecting the presence of gravity.

**Space & Gravity:**
Gravity is a force that has existed as a constant throughout the history of the natural world and has influenced a more significant part of the evolution of the urban fabric of cities. Gravity can establish its relation to space as enclosures when carved out to resist force, leading to a particular form. Standing on a ground level on which the scale of urban expansion can be seen to expand at the higher vertical levels lie beyond the range of human observation. The medium of film offers a unique approach that allows for these planes to be traversed, revealing the multitude of levels that exist along the single span of the cities’ fabric. Through film, these levels can be distinctly represented, and their working in creating unique typography of land about space and gravity can be understood in a manner which is different from the experience one would receive while driving.

The frame (Figure 5) is taken from the top of the city’s main road network intersection point. The diversity of this system keeps the city running. At the center, there is a canal flowing downward coming from the opposite direction and parallel to that there is a belt of a landscape. This language
ripples out with two underpasses and roads next to them. All of these systems exist in the same context carving their pathways with the help of gravity creating a space. Another road cuts them from the top which from this angle of the camera looks at the similar level but is a raised bridge from the road. These multiple levels of road network working altogether reflect the clockwork of the city derived with the help of space and gravity.

In another frame (Figure 6) the film shows the physical development of a dense urban fabric created due to the formulation of these elements. The visual of this centuries-old city without mentioning the name of it pivots the focus of the observer around the ideas of architecture and the relation of the essential elements of nature that derive them. This visual raises a number of questions and evokes curiosity to understand the relation between space and gravity in this context.

**CONCLUSION**

From this study, it can be understood that film used as a pedagogical tool for communication of an architectural language providing a unique perspective by which the value of architecture elements can be highlighted to show their significance. If the information provided to the students about these elements in sixteen weeks is condensed into a film of twenty minutes, making them understand even half of the concepts and their possibilities concerning these elements in architecture, then the method of pedagogy works as a time capsule. Therefore, it can share, translate and communicate the complexities of ideas in a lesser period with more constructive understanding. It is similar to the idea of documenting site or designing an architectural intervention while analyzing its potential capacities, in reality, an example study shared by the authors Richard Koeck and Mathew Flintham in their article “Geographies of the Moving Image: Transforming Cinematic Representation into Geographic Information.” Such possibilities of architecture within the domain of film can help academics to explore for other valuable discoveries to develop advanced modes of communication and produce valuable platforms for others. At University of Cambridge Department of Architecture, Digital Studio for Research in Design, Visualization, and Communication (DIGIS), François Penz (Professor in Architecture and the Moving Image) has extensively addressed the potential prospects of this approach. This substantiating evidence for education the value of film within the academic area of architecture, a case can be drawn for the use of film. With these films, architectural educationists will be able to provide an alternative perspective on the influence of time on light, space, and gravity.
Therefore, using this method to make such films will allow educationists to transcend the limitations of expressing the capacity of architecture by breaking down the notion of time and scale.

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WHAT WILL BE THE FUTURE OF ARCHITECTURE WITH OUR INCREASING PARTICIPATIONS ON SOCIAL MEDIA?

Author
AMEERA ZAHID MALIK, ZAIN ADIL (Co – Author)

Affiliation
BEACONHOUSE NATIONAL UNIVERSITY, PAKISTAN (LAHORE)

INTRODUCTION
In the recently accredited film “Ready Player One”, the year 2045 has been depicted where the world has sunk into disarray where a dystopia of dilapidated architecture is seen everywhere. Rows and rows of dingy apartments stacked upon one another housed residents which are shown unattached to the physical space around them. They are lost in a world of virtual reality, a gaming world where they meet each other in form of game characters. Although architecture was not central to the movie’s plot, the destruction was too conspicuous to ignore. While this research debates the different outcomes of the fascinating combination of social media, technology and architecture, the architectural scenery of the movie is quite relevant to this futuristic debate.

The multifaceted nature of the modern society has given rise to technological advancements that were not considered possible before. The meaning and extent of architecture as creating feasible physical space for people has long surpassed its previous definition. With the advancements in the realm of social media, the concept of space is not what it used to be. While on one hand, the connecting features of social media are instrumental in projecting architectural projects to the world; on the other hand, such projections void of the real feel of such buildings makes the entire exercise merely mechanical in nature. The idea here is to find out whether the future of architecture and social media can be predicted together and if it can then what would it look like?

Architecture being both science and art has always had the ability to shape social structure. An architect when drawing up a certain design for any building has the power to influence the lives of those who choose to live in it. Not only the residents but also the geometrical space around it, are also impacted by the design that the architect is working on. Social set ups are intertwined with the type of buildings that have been constructed in those societies. Parallel to architecture, social media also has a rapidly widening range of impact on social structure. With advancements in social media mounting, distances have shrunk and with people getting closer to each other; buildings from all over the world have also been brought to people with access to internet connection.

Sociologists all over the world are currently debating the impacts of social media usage for people. Both positive and negative impacts of this technology are currently experienced all over the world in different countries and societies. This research is quite relevant to the contemporary discipline of sociology. Future of architecture as being able to impact the sociological well-being of people is also a popular topic of discourse these days. Contemporary architectural goals are not merely limited to beauty or attractiveness of the buildings in question but they are also aimed at making people feel comfortable, enlightened and creative in social settings. Architecture as the tool to resolve social issues with respect to how peoples’ well-being is affected by arrangement of living space around them is an old trend. However, its inclusion and substantiation within inter-disciplinary research is more significant. Social
Media has a role to play here which could be both constructive and challenging and this is precisely what this paper ascribes to research. Other uses of social media in the world of architecture are numerous which include marketing, social media networking and what not. It can be believed that architecture as a socialization tool could potentially have to rival social media itself. It is a debatable possibility that architecture as the physically tangible provider of space for social contact could be replaced. Although there are no illusions regarding the unlimited possible scenarios of the future that social media can present to us. Infinite possibilities of confining distance, creating space in the world of virtual reality and reaching out to people who live on even the furthest corner of the globe are the gifts of this technology. Yet the existential utility of architecture cannot be emphasized enough. The virtual lives that we live aid in dulling our day to day lives in the real world and hooking us to the social media technologies. Not only has this but the dire need of being “online” overshadowed our basic requirements like a roof above our heads (architecture).

**USES OF SOCIAL MEDIA FOR ARCHITECTS**

Imagine the world long before social media existed. It was a world where man was not aware of buzzwords such as Facebook, Twitter, Instagram, Snapchat, etc. Such words which are now the media for modern communication and relationship building, did not exist. People were likely to meet one another in restaurants. Contact with exotic foreigners depended upon the state of tourism in any particular place. Long-distance communication was impeded due to slow means and lack of cell phones. Architects traveled the world if they could to study masterpieces built by their contemporaries. Today you could simply enter keywords into any of the social media applications that you use to look upon any building, any architectural masterpiece or any location at all. Your search results will show you not only images but also peoples’ experiences and their ideas related to your keywords. For architects, this untapped potential of social media utility is a blessing and a curse at the same time.

**Making History**

Just as Alexandra Lange tweets, “Architects need to start thinking of social media as the first draft of history”\(^4\). Lange is of the opinion that social media debates and discourse about architectural work is a mark of history that our generation will leave for the future generations to discover and comprehend. The comments on posts or tweets about buildings or architecture as general can become a database of both constructive and negative criticism. It would be a sanctuary of valuable concepts, images, advice and inputs that would substantiate the grounds for a certain design to be altered or completed or praised or even improved upon. Leaving behind self-promotion campaigns on different social media platforms, one could instead invest in more time engaging and praising the work of fellow contemporary architects. By doing this what we forget is the main idea behind any constructed architecture which is the spatial experience of the building itself. By appreciating a fellow architect’s work on social media deprives the viewer of the aura of the place which should be acknowledged as the crux of any design.

**Architecture and Social Media as Communication**

Architectural design whether on paper or a building is the most profound way of communication. Social media is nothing but communication. When buildings are shared on social media, the useful comments rendering advice or solutions are what truly assist in a foolproof way of building a physical place in a social setting.\(^5\) Combining these two means of communication has borne fruit in form of social media expert groups and consultants who fix problems but only through social media can this be made concrete. Then again, should the people hung on social media be the only jury for the architecture that
is being made in the world? It is of utmost importance that proper architectural awareness is present before criticizing it.

**Learning to improve Architecture through Social Media**

Maria Lorena Lehman says “As an architect, it is important that you keep an eye out for advancements in mobile devices that allow for information to be everywhere. Think about ways that you could use such technologies to help your architecture improve its own potential. Also, see if your buildings are being ‘spread’ using social media. If so, what personality are they taking on? And how will this inform the design of your next building?”

As architects, people are aware that their job doesn’t simply revolve around singular buildings but are instead focused on infrastructure for the entire community. In this context, the learning process for beginners becomes vastly easy through different platforms of social media. Young and old can learn from these forums alike. Although this should not be the only platform which the beginners should be learning from and looking at. Physical experience can also be of immense help and can be more useful than just looking at mere pictures of good architecture. For example, in a country like Pakistan where infrastructure is flimsy due to lack of funds and expertise; such social media learning platforms are more useful than localized classroom study. Even the annual monsoon rains are enough to turn the roads into pools in just about any part of the country. For such cases, ideas could emerge from architects living in other parts of the world where rain is also a common occurrence such as London, Mangalore in India, Kuala Terengganu in Malaysia and numerous others. Near Mangalore in India, the world’s wettest village Mawsynram is located where the architecture of households is easily destroyed by the heavy rains and accompanying winds. Such places could be discussed to help local architects build better houses in the future. Although, all of this information and comparative analysis of the architectural design in various parts of the world would never be possible without the internet still it is highly imperative that the person connects physically to the architecture as well and uses it and experiences it rather than just admiring it on social applications.

**‘Invisible Cities’**

The plethora of information available to people on internet is unlimited, hence more and more difficult to manage. However, with the help of social media, this information is sorted into useful learning through discourse and debate. With renowned and amateur architects scouring the internet alike, the chances of advanced learning and interactive education are plentiful. In this manner, many who have researched the relationship of architecture and social media have coined the term, ‘invisible cities’. Then again the term in all its glamor is a beautiful one but this term cannot properly be understood and experienced as all these “invisible cities” are all virtual and behind the screens of laptops or mobile phones. According to this term, bringing together all kinds of interactions between architects and critics, the social media has helped build cities upon cities which are as alive as the material cities around us. These digital ‘cities’ might be even more sensibly populated and vibrant than the real ones as they have specifically brought together people from all walks of life to a forum where their communication is not interrupted by the rude realities of life. In such cities people are more responsive and for the fear of becoming irrelevant on social media, they put more effort into the advice that they give other people. Poignant, vulnerable and real responses are much readily available on these social media sites as people are not held back by the fear of their identity being discovered although we should always keep this in mind the fact that it is highly likely that made up names and fake identities are being used on social media platforms. People tend to show only the best happenings of their life to gain following or either
sympathy by isolating the other less pleasing parts of their lives. Social anxiety is also much easily conquered here where in person meetings are not that necessary for the shy ones. Their physical attributes carry little weight in front of their intellectual ideas. Therefore, whether you are aware or not, if you are an architect or a student of architecture who uses social media sites, you’re probably already a resident of one of these incredible ‘invisible cities’ as engaging and adventurous it may sound this city brings with it taboos which can be everlasting on our physical lives by erasing any sign of our physical lives.

**Saving Architecture through Social Media**

About two years ago during the previously elected government in Punjab, the Chief Minister had projects in mind that he wanted to build in the provincial capital of Punjab, Lahore. Lahore as a city older than Pakistan itself, proudly displays buildings that were constructed during British rule of India. The Erdogan inspired ex-CM of Punjab had thought to build an underground train project throughout Lahore and for that project to materialize, he was adamant to demolish the old G.P.O building in Lahore. Countless people upon hearing the news had used Twitter to inform their fellow countrymen and the world of the atrocity that was to be inflicted upon that red bricked masterpiece of old but classic architecture of the 1800s. This campaign that gained momentum through Twitter was then strengthened on other platforms of communication and thus the idea to protest against any such measure was originated. G.P.O was saved. This however will not be a recurring practice and as the coming generations would not know and will not consider history as something important thus losing our roots to this social media addiction. It is of massive significance that we move around the city just to attach ourselves to it and not let it become an invisible one.

There are many who might not be saved in the same manner and social media campaigning might also not be the sole reason that this building was saved but it did create awareness. The awareness to salvage something ancient that reminds one of their roots and makes for the unique nature of every respective city was surely spread through such measures. This is just one example of saving architecture in a country where the ratio of people using social media platforms to voice opinions is much less as compared to other progressive cosmopolitans around the world.

**Social Media Marketing for Architects**

It seems the most practical use of social media for architects perhaps, is marketing. There are numerous social media sites out there and thus the opportunities for marketing are also countless. One should normally start with one site as the range needs to be more focused in the beginning. However, later on in accordance with the type of followers and responses can help expand the marketing campaign to other sites as well.

**COULD SOCIAL MEDIA COMPETE WITH ARCHITECTURE IN SOCIALIZATION?**

While social media brings criticism, interpretation, dialogue and history into the daily life of architectural discourse, it also debatably stands to give it competition. Imagine an inspired architect who painstakingly designs a beautiful park envisaging an open-air salon where discourse and debates would be held when people would feel refreshed in fresh air and green surroundings. But then Twitter, Facebook, Instagram and what not were popularized. It confined people to their comfortable beds where there was no harsh weather or piercing eyes judging their physical appearances. They could with the slight of their fingers create online salons for discussion and interactions and could freely discuss conflicting ideas and controversial topics.
Architecture as a tool to build environment to help socialize can be greatly impacted by the swift and ubiquitous nature of social media interaction. People who struggle with social anxiety are more comfortable in conversation with their smart phones rather than go out and meet prying eyes. But this does not mean that such social media interactions are harmless. The hidden identity of the people that one is interacting with makes the entire exercise dubious.

Architectural marketing being done via social media has also created a community of architects whose work reflects unabashed levels of self-obsession. Their pages on social media reflect that they only use such platforms to broadcast or rather brag about their successes and achievements. Instead of looking at social media interactions as R&D inputs, they are used by many for egomaniacal satisfaction. Then there is also relentless repetition of famous architectural monuments through social media sites. This repetition also leads to shameless replication of ideas and even entire monuments such as the Eiffel Tower of Paris copied in Atlantic City, Bahria Town Lahore and many other part of the world. Such thoughtless replications not only reflect lack of innovation but they also isolate the architecture from its very context. How the vicinity of the Eiffel tower in Paris enhances its own structural beauty has been completely neglected in other replicas. This takes away from architecture, bit by bit and finally the essence is all but lost.

CONCLUSION

Social media and architecture in the fast paced world of today must be used to complement each other to create more human contact. It is a very simple premise that has made architecture basic to human needs; where humans have the need built space to feel comfortable and protected. Hence nothing, not even social media or deftly created ‘digital cities’ can take away from the real feel of a building brimming with human voices. Architecture changes the way people relate to space, every place is distinct for every distinct person. People grow attached to a place through their culture, history, essence. And although what Lange has tweeted about social media being the first draft of history may be very accurate, the experiences that social media provides everyone is similar, their perceptions may differ but the content is same. The preconceived notions on social media have started to embed in the minds of everyone. The distinctness of space cannot be felt through social media like it can be through the real physical experience.

As mentioned in the very beginning of this research, the future may not hold any regard for intricate architecture but then what would it be replaced with? An aesthetic disaster with box-like dimensions where future generations will sit wearing masks on their faces connected to virtual reality devices, fighting monsters that only exist in their heads.

As real cities start digitizing, and with the emerging of smart cities, it can be predicted that in the future life may become very easy, everything achievable with the touch of a button. The smarter the city gets, the more it will control humans and their emotions. Eventually emotional detachment may lead to humans becoming disconnected to any physical realities of the world, even their own physical reality. This physical detachment to oneself is present even today through fake representations on social media profiles.

If built environments are not salvaged and their purpose not fully understood, then the world of tomorrow will have humans who not only escape reality but hardly ever visit reality. Why? It will be because the intricacies and spacious beauty of virtual architecture will be more comforting than the concrete buildings that the future generations will live in. There is need for these two sociological realms to combine their gifts to give to people a space that is ultramodern but more importantly is more human friendly. Or else what we call architecture will cease to be architecture. Then what would it become? It would become nothing but an elaborate set stage. Devoid of socialization, it will become increasingly
obsolete and limited like a container rather than the bowl of diversity, culture and civilization that it ought to be.

There are questions that need to be asked, questions regarding architects and their social responsibilities. Questions in reference to humans who are acting inhumane. People are so wrapped up in the wonders of social media and technology. They forget that there is a built world that surrounds them, a world they cannot physically escape and a world they must come back to when the cycle of social media comes to an end.

In an interview in reference to his book, Neil Postman re-emphasized that as a solution to technopoly, students should be educated in the history, social effects and psychological biases of technology, to become adults who "use technology rather than being used by it". Similarly social media should be studied in its entirety.

This raging storm of social media has engulfed every little emotion and has made us cruel enough to not feel it and post it over the internet. Our loyalties lie with the majorities now and this need to be desirable over the internet has made people do the most astonishing things imaginable. Architecture is merely one thing that we are losing to this plague of virtual realities and social media postings, it is important that we work hard and fast to stop it and realize and be aware of what’s real and what’s not before we have to bury emotions right next to architecture in this invisible world.

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MELANCHOLIC ARCHITECTURES: THE CASE OF VIDEO GAMES

Author: ANGELIKI MALAKASIOTI
Affiliation: ARISTOTLE UNIVERSITY OF THESSALONIKI, GREECE

INTRODUCTION

In 1983, Electronic Arts published an advertising manifesto with an innovative approach, in which they were declaring: “Can a computer make you cry?”. This challenging question was introducing new aspects of the videogame industry which risked to tackle with issues that relate to the ‘touchstones of our emotions’, through the use of the idea of ‘software artistry’, but also of a ‘language of dreams’ - a language which, in other words, employs the potential of a computer to communicate with its user on a mental dimension.

This former provocative position is still contemporary and well-timed as digital culture has become widespread and ubiquitous in the contemporary world. Especially, the new generation, which Marc Prensky aptly called ‘digital natives’\(^1\), has grown up fully familiar with the use of new media and on a daily interaction with computers, smart phones, tablets, and other kinds of interfaces, that both encourage and facilitate the ‘habitation’ of the digital-analog reality.

Focusing on the video game industry makes this observation even more explicit. Recent statistic data verify that the number of players worldwide has exceeded 1,8 billion since 2016\(^2\), while the video game industry has outgrown in number the powerfulness of the grand film industry. Videogames are nowadays a complex cultural phenomenon which is open to numerous interdisciplinary approaches. Researchers explore videogames as an educative or training tool, as an entertainment industry, as a cultural product, as a media expression, or as an innovative technological field with exponential growth. In all cases, the video games’ ability to generate emotions is of high importance.

The Mental Landscape of Digital Experience

One can observe a multiplicity of psychological experiences that evolve through the use of digital technologies. The modern manifestation of contemporary digital ‘selves’ is related to fragile, ‘visceral’, deeply personal experiences of mental landscapes, stemming from interactivity with electronic or virtual environments\(^3\). At the same time, the current notion of the ‘self’ is transformed and mutated, permeated by the contemporary digital culture that reflects back to the subject fragmentary aspects of a world with new dimensions. Individuality meets the cultural sphere and adopts the ‘symptomatological’ characteristics of this new era.

Focusing on the context of videogames, contemporary players are offered the opportunity to explore and immerse in a plethora of novel environments, each with a distinct and unique atmosphere, forming the ideal ground for new mental experiences to evolve. Undoubtedly, videogames constitute the ideal fruitful ground for the design of new experiences – their powerfulness lying in the game characteristics themselves. Designers make use of game elements such as human interactivity, narrative features,
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decision making, or the overall player’s sense of immersion as potent tools for the creation of a unique experiential and emotional architecture. Nowadays, it is a well-established fact that there is a strong relationship between design aspects and digital, interactive spaces that are capable of affecting their users on an emotional level. Players nowadays are experiencing extremely complex and exciting emotional states through the act of gaming, and their psychological profiles are affected in a short-term as well as in a long-term distance. This fact is also underlined by the evident association of videogames, and especially the most contemporary titles, with art. Games generally, make use of elements deriving from music, film, literature, “mediums that have been long used for inspiration, emotional stimulation or representation of inner mental states, since antiquity”

Additionally, the experience emanating from the interaction between the player and the video game environment can be read as an act of reading poetry - it lies in the meeting of the reader with the poem, in the same way Jorge Luis Borges describes “the taste of the apple lies in the contact of the fruit with the palate, not in the fruit itself”

And carries on stating that “…what is essential is the aesthetic act, the thrill, the almost physical emotion that comes with each reading.” This observation is underlining the importance of the player’s subjective experience, which manifests an expression of the individual’s encounter with the world. “In essence, games are artificial constructions based on the real world. We come to them armed with a set of pre-set responses learned from the real world, and we apply them to the fantasy. […] Games confirm our ability to understand the world in emotional and practical terms.”

Therefore, emotional design in video games can be regarded not only as an act of creating tailor-made experiences which offer stimuli for a multiplicity of emotions, but also as a composition of affective artefacts capable of delivering a fertile context for potential subjective and mentally driven interactions.

The Art of Melancholy

One of the most popular emotions in video game environments is melancholy. Especially recently, many games have been in dialogue with melancholic atmospheres, addressing issues such as societal problems, psychological conditions, sadness, sublimeness, beauty, utopia and dystopia, and other mature content. Melancholy is a timeless concept, as well as a phenomenon with philosophical, scientific artistic, or even cultural implications. Over the centuries, the melancholic condition has been translated as a sin, a disease, a type of idiosyncrasy, an expression of geniousness, or a source of inspiration. Either stemming from a philosophical discourse, or from a theological, medicinal or artistic discourse, the phenomenon of melancholy raises interesting issues of spatiality and perception which share a common ground. The melancholic condition has an inherent relationship with space, since its expression is manifested through spatial metaphors and vocabularies. It also refers to a kind of symbolical or anthropological space, a space that is unmeasured and inconceivable. Thus, in this study, the role of design is explored from an architectural point of view – “architecture elaborates and communicates thoughts of man’s incarnate confrontation with the world through ‘plastic emotions’” - posing the question of how melancholic literature can be collocated to video game experiences in order to showcase multiple spatial, temporal or narrative characteristics that are capable of instructing the user’s experience.

In this context, spatiality is discussed as a potential factor of melancholic experiential design, making reference to a series of common melancholic features that can be employed in terms of representation, concept design, audiovisual language, or interactivity processes of video games. Thus, the notion of ‘space’ forms the guide through which the ‘art of melancholy’ is translated, revealing examples of elements that the melancholic phenomenon introduces such as ‘shapes’, ‘materials’, ‘structures’, ‘relations’, ‘transpositions’.

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Darkness

The melancholic phenomenon is rather commonly expressed through the metaphor of darkness. A dark, undecipherable, or unclear environment is usually related to a strong personal experience of sadness, grief or despair. Peter de Brune connects the use of light with that kind of architecture that affects the most imperceptible and unconscious dimensions of human existence. «Light affects the state of mind in a way that goes beyond its simple functional role»9. Besides it is known that “in intense emotional states and deep thoughts, vision is usually suppressed”10. Similarly, any absence of light, or death, blindness, blackness and the night seem to ‘haunt’ many videogames, which thus render the awesome internal processes of a melancholic condition. For example, in video game ‘Inside’, space representation is dark and mostly silent, making an interesting association with its title, which reminds of Minkowski’s description of darkness as a deeply personal space. In this case, melancholy, is just like darkness, “dark space envelops me on all sides and penetrates me much deeper than light space”11.

Shadows

In other games, melancholy is translated as a lack of color. In ‘Prune’, a colorless representation forms the setting for growing up beautiful trees that struggle to overcome obstacles and finally move from shadow to light and finally blossom. The use of shadow in melancholic representations is very popular in games that make use of silhouette and layered design. Games such as ‘Limbo’, make use of a plethora of shadows as gestures of atmospheric design that denote the melancholic ‘presence of an absence’. Shadows can be interpreted as memories, bearers of thoughts, artefacts related to inwardness, rites, mysteries or quietness. In video game ‘Where shadows slumber’, which takes place in a shadowy, abandoned world, shadows are interestingly taking part in the transformation of the character as well, denoting a sense of creative use of darkness itself: “Anything that is not touched by light has the freedom to change […]. After all, if you are not touched by the light, you - too- can change. What will you become?”12

Descent

Another spatial translation of melancholy is the use of descent. The idea of descending refers to a psychological state of moving downwards, either in the context of depressive emotional state, or towards the depths of one’s soul - in other words “a retreat from the void of the external world”13. In ‘Alto’s Adventure’ the player can enjoy the uncommon experience of a continuous descent during which evolves a melancholic feeling of awe and inspiration. The case of ‘Silent Hill 2’ also employs the feature of descending in a deliberately disproportionate amount of time during the game. “James (the character) is constantly moving in a downward direction.” […] The amount of time spent descending is, from a purely logical standpoint, impossible.”14

Dysfunctionality

‘Survival horror’ video games, frequently depict places and entities that confuse and confound, spaces that are dysfunctional, uncertain and sometimes unreal. In the same way, the melancholic subject is regarded as a haunted being: ‘the beast’, ‘the dragon’, ‘the blue devil’ are some of its symbolisms that depict its flaws and failures. One of its phenomenal dysfunctions is a sense of rigidity of movement, heaviness or even paralysis of the organic body, states which at the same time underline the vigor of the melancholic mind. Through this lack of action, the subject delves into the thoughts, ideas, associations. In ‘Heavy Rain’, action is not really advancing through this technique, “everything is balanced to take the player down to passivity,
to almost non-activity, obliging him/her to take the time to feel the emotional experience the game is proposing — almost driving him/her to inhabiting a kind of slow time, a kind of pause.

**Wilderness**

This kind of melancholic experience is sometimes accompanied by the idea of silence. Or other times it is translated as a symbolic representation of a deserted world. The use of wilderness always evokes a sense of melancholy, since it manifests the absence of activity, life, or interaction with other human beings. In ‘Journey’, the player enjoys a unique process of wandering in a vast desert which makes an interesting association with the journey of life. It is interesting to note that if he/she finds a companion it is impossible to communicate with speech. In ‘Dear Esther’, a lost man explores an uninhabited island, with shipwrecks and dilapidated structures, listening to a series of letter fragments about his wife who is gone. The solidarity of the hero meets the solidarity of the island in a melancholic atmosphere that blends present and past, life and death.

In all these cases, the landscape is reflected back to the self, stimulating a kind of psychological transference of the spatial features. According to Freud, the subject internalizes his/her relation to the world projecting it inwards. In dystopian or postapocalyptic games, the wilderness or ruins of space are additionally combined with a melancholic narrative that comments on loss, transience or vanity of existence.

**Remembrance of Death**

This ‘memento mori’ effect is also achieved through the use of spatial representations that include historical, temporal, mnemonic artefacts. The melancholic aura usually refers to a nostalgic absence which is distant in the past or even in the future. Thus, Bowring describes melancholic spaces as both retrospective and prospective. Space either takes the form of a relic of the past, or manifests an obsession with the inevitable end of things, death. The melancholic subject meditates on the impermanence of life, almost following a Baroque tradition of futility that reconciles us with mortality through videogame paraphernalia like skulls, tombs, poisons, morbid figures dust, bats, and hourglasses. This is the reason why beautiful environments stimulate a sense of melancholy — Alain de Botton describes that melancholic zealots “those most in thrall to beauty who will be especially aware of, and saddened by, its ephemeral character.” Additionally, features such as liminality or seasonality emphasize on this emotion. Bowring explains that melancholy “inhabits the liminal, the times and spaces of transition, the threshold places” — or the threshold between seasons, which, in an anthropological context, can be translated as well as a ritual passage. Any passage can refer to a season, an age, or a life stage. This experience of transition can be interpreted through elements of nature, such as the twilight, the sunbeam on a window after the rain, the touch of the wave on the shore, the eternally moving shadows of all objects. The homonymous game ‘Passage’, directly comments on the transience of life by condensing the journey of life in just a few minutes of deeply emotional gameplay.

**Weather conditions**

Weather conditions, and especially the use of rain or snow are strongly related to melancholy. In video game ‘Heavy Rain’, “the weather changes right after the rupture, from being very sunny to being very rainy, lasting for the entire game and so giving the game its name. The father’s apartment is smaller than the previous house with much darker light and almost no colour; everything seems grey.”

**Contradiction**

All melancholic characteristics offer an ambivalent feeling of combined joy and grief, genius and demonization, nostalgia and relief. Pensky refers: “melancholia appears under the dialectic of illness
and empowerment”22. In ‘That Dragon Cancer’, an autobiographical game about a young boy who was diagnosed with terminal cancer, the use of spatial dipoles and contradiction is crucial in the expression of the narrative. Also, in ‘Entwined’, the player experiences a journey to unite the souls of a bird and a fish, two souls that are mentioned as ‘always together, forever apart’.

CONCLUSION
The study attempts to translate the abstract melancholic condition into a readable spatial structure, which aims to capture and therefore shed light on the almost ‘sacred’ interior landscapes of the subject during gameplay. This entails the externalization of these emotional landscapes, their hermeneutic decoding, their placement in a more objective and accessible world of ideas, their further juxtaposition in the end with physical spatial experiences as well as important design issues.

This presupposes the introduction of a new vocabulary that experiments with spatial perception and its relation to the new psycho-composite individual experiences in digital environments. This vocabulary is necessary in an ever changing and rapidly evolving digital world. Nonetheless, the art of the gently sad expression of ‘mono no aware’ - the ‘pathos’ of things - is interestingly placed next to the almost immortal and fleeting nature of digitality, outlining a new form of melancholy: one that reconciles ephemerality with permanence, emotion with choice, or video game environments with rather fluid mental states.

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Author:
ELENA ROCCHI

Affiliation:
ARIZONA STATE UNIVERSITY, USA [TEMPE]

INTRODUCTION

Rome is a form of metamorphosis, suspended halfway between a virtual portrait made by travelers and scholars as a collective artwork, and a real skeleton reborn from its ruins as ‘a story of crimes’ (Quaroni, 1969) with Romulus’ original foundation at its bottom. Of all its changes, the most surprising one is its endurance through the eternity of images, a “survival without resurrection” (Yourcenar, 1993). ëRoma is aeterna because of the fleeting instant of time-past captured in many images as condensers of impressions and memory of events contemporaries revive by downloading with the eye. Ranging from works of art, manuscript pages, archaeological finds, to the testimonies of the culture of the twentieth century, images of Rome are the immediate way of speaking of Rome. The images of Rome permeate all of Rome: by producing them, outsiders traveling to the eternal city as painters, writers, and movie makers add parts to it. Their images are the prominent framework for the development of this particular conception of “disposition” someone has toward Rome, even when traveling there for one day. To cross-read some of them, as excavating, processing, and recording metaphoric archaeology of city’s experiences, reveals how it is the “fabrication” of the image of Rome that informs its physical reality.

ROMA CONDITA

Like a head of Janus Bifrons, Rome firmly connects to symbolic elements attributed to it over time through images. As still moments of multiple temporalities crossing an actual urban space, moving and static images of Rome are a writing workshop on the city happening over time and of two categories that do not always coincide: the ones that immortalize the physical space and the other ones that immortalize the experience in that physical space. Like a collection of notes of reality, the second ones form a large yard of marginal pieces as the perfect habitat for visitors’ imagination, obscured by the shadow of the great physical bulk of a city. They are numina in the sense of being symbolic visions of Rome’s many characteristics. Rome’s assumption of many attributes as images — for a strange coincidence — speaks of the same thing: ëRoma Condita, a Rome hidden in the interpretations of picture-makers, built “symbolically” as an evocation, a trace or a symbol that points to the principle from which it draws its foundation and origin — an impression. In being loudly and apparently far from the city’s reality, they are equally compelling for those who never travel to that city: surprisingly, the giant artificial sets of Federico Fellini (1920–1993) or the etchings of Giovanni Battista Piranesi (1720–1778) are more real than the city itself because, through them, the artists condense their memories and impressions with higher intensity than its natural scenery. The juxtaposition of Fellini and Piranesi’s images of the Trevi Fountain reveals that they have in common a core element as a detail of greater significance: the image of Rome. It is natural to detect that the background of Fellini’s visions is made by the same historical fabric of superimposed layers Piranesi portrays in his etchings. ëItalian neorealism films are set just like Piranesi drawings in their being the ambiguous presentation of something “beyond reality” that emerges in the dense urban landscape when architecture and
phenomena come together in a labyrinthine of streets — where the solemnity of the old buildings gets in touch with the carefree lifestyle of its inhabitants. Wanderers get lost in the reality of Rome as observers looking at Piranesi’s etchings, therefore, as the audience watching a neorealist movie. Both, Fellini’s movies as Piranesi’s etchings can be intended as zooms into reality to give “to the image the word” (zum Bild das Wort) as to augment the intensity of a message within the image. They are details of a city necessary to grasp the virtuality of that city — numina artists post-produce in continuity as to build ideas of a city, as a “survival without resurrection.” Since they are all moments that mark the experience of viewers, they are a part of the city. By scrutinizing images of the city, the links between the real city and its visual alter ego produced by experiences become visible. The recreation of the urban space of Rome in the space of the image shows what matches, what it is replaced or what reality reinterprets while learning a tool to understand other cities in-depth in the making of images, expression of the infinite exploration of a historical reality that is one of the keys to modernity.

**PHYSICAL AND MENTAL FORMATION OF THE IMAGES OF ROME: FROM ROMULUS TO GOETHE**

Rome begins to exist with Romulus’s superimposition of the image of a square on the Palatine’s natural hill. One day, he chooses to occupy a physical location to no longer move. In breaking the physical relationship with things by representing them in the primal square, he creates a hidden Rome as an image. He is a logos — as a ground as well as a word: he has a hand full of earth he throws in an excavated point. However, before this, he traces a line on the surface as a frame around him to mark the boundary — as of a place suspended between the rational and the irrational — to found Roma Condita (hidden Rome), born from nothing on April the 21st, 753 BC. For modern historians, this is a myth or a legend, perhaps an invention. For others, an absolute belief: archaeologists such as Andrea Carandini (1937) have discovered that it is true that on that day the city of Rome was born as an image with the blessing of the Palatine hill as the augere, the inauguration. Over time, Romans have rebuilt and kept Rome always where it is, with its appeal and its image being the result of two completely different ways of conceiving the world, the Pagan and the Christian one, consequently and figuratively. From this primal square as the first image of Rome, numerous alternations of powers develop over time by wearing, consuming, transferring, and refunding Rome, expanding from a story of demolition to the one of reuse as the ‘eternal return’ (Serres, 1983) to the sacred proto-square. Rome follows Rome; Rome grows by digesting Rome; Rome adapts itself to itself accordingly to cultural ideas that manifest over time. However, Rome wants to stay in Rome, in the same place as where Romulus started it by digging a sacred line and a hole: Hic manebimus Optime. Titus Livi reports in his Roman history, “here we will be fine,” as the famous expression a centurion pronounces as the exhortation not to ever abandon the city. Deep inside, all Romans as Centurions, Emperors, Popes, and Kings, believe in something that is the reason behind the chaotic beauty of Rome: that the Urbs is a mythical and symbolic concentration of power in a specific place rather than a form. It is a system of objects mixed with elements of humanity built spontaneously and transform over time, with patience and imagination, using ruins from the actual formation of the forum as the proto-square and myths. Rome follows Rome because “Rome never ceases being founded; its history or its time is simply what happens between two occurrences of the founding gesture. Even when it becomes the city of Augustus, it is still a city of auguries; Rome is the city of beginnings. The beginning that we know is simply the time in which many beginnings accumulate.” Just like the title of Rossellini’s neorealist movie, since Romulus’s act of foundation Rome is a city open to new beginnings as interpretations of the primordial image frame: its built form shows the link between some well-known and respected mythical urban objects and virtual perceptual processes of interpretations. As shown in the fresco preserved at the Vatican Apostolic
Library, the act of re-symbolization of the enduring monumentality of objects as obelisks — made by Pope Sixtus V (1521–1590) to order the old city’s chaotic beauty, best represents how the perceptual composition as the virtual reorganization of specific physical urban objects always replaces the reality of Rome with the image of Rome. Adding text to the exterior of an existing monument or a new statue above an ancient column is about introducing a new function and a new image within a mythical frame, taking further the lesson of Roman political propaganda of transferring mythical and imaginary history to artworks. The sculpture of the she-wolf or the map of the Forma Urbis Marmorea, xii are images of Rome created by virtual myths, “dead” objects of history processed over time to contribute to the formation of that image of Rome that, as a prominent framework, enters remote places — as for example, the Goethe’s family house in Frankfurt — to develop the “disposition” toward Rome.

The most eloquent image of Goethe’s time in Rome (1786–1788) is not the famous portrait of the poet in the Campagna Romana, xiii but the one that his friend Wilhelm Tischbein (1751–1829) depicts of him in his apartment at the Casa Moscatelli in Rome in 1787: xiv Johan Wolfgang von Goethe (1749–1832), a man in a robe as seen from the back, is at a window facing Via del Corso, observing in silence the noise of the city. Few months before, on the night of September 3, 1786, he left for his Grand Tour at three o’clock in the morning, unbeknownst to everyone. He is thirty-seven years old when under the false name of Jean Philippe Möller, and with only a portmanteau and a briefcase, he begins an initiatory journey. On November 1, 1786, Goethe arrives in Rome, which he so longed to see. His anxiety to reach the eternal city is so high that he cannot think of stopping anywhere and delay the moment when all the dreams of his youth will realize before him: paintings, drawings, engravings, woodcuts, plaster casts, and cork models as the indelible memory of the Rome brought back by his father, a learned jurist, that he has probably seen in a diffused light of an anteroom of his family’s house, finally “stand bodily” before his sight. He is lastly in Rome to observe and meditate on the nature of the ancient where it has developed. It is all just as he has thought, “and yet all is new”: his thoughts of old Rome turn so alive that those old images of Rome “almost pass for new ones.” xv Very subtly his words acknowledge the impossibility of city’s reality to match the interpretations of Rome he built during his childhood by reading books and looking at images. After the first four days of wandering in the city, he confesses in his diary that “it is a sad and melancholy business to track out ancient Rome in new Rome” xvi exposing Rome’s nature of dyadic settlement of reality and its image, antithetical couple of opposites that, facing symmetrically as the two-faced Janus head, are entirely equal.
Rome doubles as the more archaic and mysterious god among Roman cults to chair the eternal return to the mythical origins (as to the primordial image of Rome,) introducing itself as a built reality presiding over boundaries, a door to a space of two territories — not only the Etruscan and the Latin one, but the one of a hidden myth and the other of an exposed reality created twenty-seven centuries ago by an extraordinary man. In a Bramante’s sketch for the Saint Peter’s Church access from the city, these two concepts seem to be represented as the two sides of a wider road, rich in buildings of various kinds and all in the same height; on the left, in between buildings, there is a high spiral Roman column; and on the right, an Egyptian obelisk is mirroring the position of that column. The two sides of the road line up in a parallel way, with a taller building in the background: it is the dome on the burial site of St. Peter. The creative re-combination as an edited collection of Roman sites as temples, churches, obelisk, and columns, pairs Paganism and Christianity as well as reality and image. They frame a blank space in the center as Romulus’s proto-square.

As in the Bramante’s sketch, Rome follows Rome and exists in between all its images — incarnated indistinctly in the architecture of Apollodorus of Damascus (2nd century AD), the sculptures of Gian Lorenzo Bernini (1598–1680), the neorealism of Federico Fellini, the Carmen Saeculare by Horace (17 BC) — and the reality of its scenographic machinery built in the vast desert filled with domes, the olive trees, and the disorder of houses. As an object awaiting for Maler Müller, Joseph Anton Koch, Goethe or other spectators’ interpretations, it is a theater that begins to exist in the viewer, the maker of all its images. Giovanni Battista Piranesi’s etchings or Lanciani’s map put together with sensitivity and fantasy the same concrete Rome Pasolini virtually builds in his movie Mamma Roma (1962.) In portraying the mix of Middle Age/Renaissance palace mounted by Baldassare Peruzzi on the second order of the Marcello theater, the Italian director depicts the essence of the image of Rome, as the same organic disorder of the Arch of Constantine, the wall of the last order (attico) of the Colosseum, or the tomb of the baker at Porta Maggiore. Pasolini as Goethe shows the need of an eye to excavate the image of Rome to unearth its trick of an edited and evocative collection of Roman sites, not so much different from the historical portrayal of the View of the Roman Forum (1735) by Giovanni Paolo Pannini. Imaginatively recombining images of ancient Roman monuments, Pannini places them in one painting that is a Roman ruin itself: as shifting obelisks from Egypt to the Urbs, he creates his image of Rome by combining
monuments from miles away while eliminating some of the modern buildings in order not to obstruct his vista. As the two-faced Janus head or Giulio Aристide Sartorio’s *Roman countryside with poppies* (1893), Pannini’s painting transmits ideas of Rome as the explanation of what cannot be perceived of its reality: the time density that needs many dissections as observations filtered through the subjectivity of artists. Of his or other’s depicted images of Rome, it is impossible to identify their precise locations: they are ideally *somewhere else*, in mind. By spending most of their career in Rome, artists as Paul Bril (1554–1626) sublime subjects they observe both in the surroundings and in the ruins of the old center, into imaginary landscapes that move a careful observation of Rome’s reality to its idealization, from foreground to background. As in the canvas of *Villa in the Roman Campagna* painted in 1645 by Claude Lorraine (1600–1682), elements of images of Rome are rigorously engineered to create idealization through the representation of golden light, for example, or a phenomenon perceived by foreigners while roaming around Rome. Either at dawn or in the twilight, the most romantic times of day, they paint images with a strong idealized naturalism that doesn’t belong to Rome but one’s state of mind. Only after several days, Goethe as Bril can gradually form a general personal idea of the city. They continuously walk to acquire a knowledge of the city in plan, needing the time to contemplate the ruins, to stop for a long hour, to walk up and down: “always with open eyes, looking at everything” they prepare for a city that has stood for two thousand years on the same ground in the sense of getting it out of itself and reality. In this process, the image of Rome as one of history ends up becoming somehow contemporary. Trying to discover the ancient parts in the new ones walking or standing still, one can choose which image of Rome to draw with only one hand and at once. The images of Rome correspond to all the times that someone, exhausted from the continuous seeing and admiring, stops and selects a moment in history to represent. Once Goethe is at those actual sites he saw in his father’s prints, in a specific moment of the day, the romance of the place carries him through a timeless space where an atmosphere and landscape emerge. That is the moment when the image of Rome comes to life with metaphysical echoes, when images of Rome bring Rome from the past into life again, to make it eternal through landslides, erosions, and natural or human-made disasters. In images by Piranesi or Pasolini, Rome is paradoxically much more alive than today, when we begin to preserve it. They repeatedly bring to life the city of Julius Caesar, Augustus, Nero, Trajan, Pope Sixtus V, Pope Julius II, The King, or one of the dictator Mussolini, depicting as Janus with two faces, a city as both a myth and an architectural promenade. Kings, Emperors, and Popes’ rhetoric image—“transmitted from a crown to the mitre”—uses physical heritage as a process of re-adaptation of the magnificent ruins that photographers, poets, painters, and movie directors dissect to show the same expertise of Romans for putting things together as people, cultures, and cities, with the sensitivity and fantasy they consign to time by a desire of immutability.

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1 This paper goes together with a movie *Imaginary Walks: narrative of the spatial dimension* online presented during the conference in Istanbul on April 2018. The movie adds a spatial dimension to the narrative of the paper, intercepting links existing between a real contemporary American city and images of Rome. Together, they are exemplary of the results of the iCourse “the Image of Rome” the researcher developed as a cross-disciplinary joint venture among ASU The Design School and the School of Film, Dance, and Theatre from 2014 to 2016. It is currently offered to ASU’s student population as a demonstration of the willingness to provide the primary basis for addressing the study of the complex matter of the image of Rome that can be part of the study of history and overcome the traditional boundaries between disciplines. The twenty-minute movie compiles moving and still images of Tempe’s students based on their experience of built space, while the paper summarize the original idea of the image as a *numen*.
Moving Image – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design

Altunbaş University; AMPS; Architecture_MPS; PARADE
12—13 April, 2018


9 The Latin word numen refers to the divine power typical of the most archaic phase of the Latin and Roman religion, to a system of indeterminate divinity, to a god as to an indefinite and powerful superior entity, not a specific god but something linked to the natural phenomena in which is glimpsed. The numen is therefore not personified in a specific god, but widespread in the natural and artificial elements rendered sacred by the divine presence. In the context of this text, numen is intended as a ‘name,’ the word by which each person or an object qualifies, to be distinguished and recognized it among others.

10 Fellini referred often to Piranesi as in one of his last interviews, released to Damian Pettigrew, in “I am a great liar,” 2003.

11 Zum Bild das Wort is the motto that Aby Warburg chose as representative of his work Mnemosyne, a figurative atlas (Bildertatlas) consisting of a series of plates made up of montages of photographs that bring together various works of art. “In the Bildertatlas, ... the images are the subject of privileged study because they provide an immediate way of” speaking the world “... In the Atlas, the juxtaposition of images, impaginated as core element and details of greater meaning, creates energy fields and induces the beholder to an open interpretative process: “the word to the image” (zum Bild das Wort).” Retrieved at http://www.ingramma.it/eOS/core/frontend/eos_atlas_index.php?id_articolo=1177&lang=eng, on July 27, 2018.

12 ‘Logos s. m. [Traslitt. of the gr. λόγος, which is from the theme of λέγω «to say», with vocalism ο]. - In Greek thought, the term indicates the ‘word’ as it is articulated in the discourse, therefore also the ‘thought’ expressed through the word. A precise affirmation of the logos as ‘reason’ is found in Heraclitus: the principle of universal rationality, the law of harmony and the dynamic principle of becoming (also the material principle, ‘fire’). In Plato he covers the meanings of ‘discourse’ as expressed in words and as ‘proceeding with thought’; in Aristotle it is ‘discourse’, with the concepts it expresses, and “faculty of thinking, reason”. Great development has the logos theory in stoicism: in logic (a term which, as a science of λόγος, is of Stoic origin), the distinction between I. interior and I. external (the first, object of the dialectic, the second of the rhetoric); in physics, the λόγος is the rational and physical principle (“fire”) that governs reality. In Greek-Hebrew wisdom literature divine wisdom is the λόγος, which in the philosopher Philo (c.30 BC - c.45 CE) assumes a precise personality as the first power expressed by God, with a mediating function between creator and the manifold. In ancient Christian literature the λόγος is, according to the Gospel of John, the verb of God (lat verbum Dei) that became flesh, the Christ (v. Verb). In modern thought the most consistent theorization of the logos as a reason is in Hegel (see panlogism).” Retrieved from Enciclopedia Treccani http://www.treccani.it/vocabolario/logos/ on July 2018.

13 The Latin verb condere means ‘to found’ but also ‘to hide.’ Founding is to be intended in the sense of starting a territory first perturbing a place and digging after a central pit where to hide that place from reality, from time and space.


15 *The Latin term urbs, rendered in Italian with ‘urbe’, properly indicates the Latin city par excellence, understood however as the set of buildings and infrastructures; civitas in the strict sense, with its own sacred border, the pomerium, and therefore consecrated to the gods. The presence of this sacral enclosure distinguishes it from the oppidum; that is, the simple fortified city, deprived of the religious and political prerogatives of the city.” Retrieved from Wikipedia at https://it.wikipedia.org/wiki/Urbs on July 2018.


17 Rome, Open City (Italian: Roma città aperta), 1945 Italian neorealist film, director: Roberto Rossellini.

18 “Carved in the beginning of the 3rd cent. CE, the large marble plan of Rome (variously referred to as the Severan Marble Plan, the Forma Urbis Romae [FUR], the Pianta Marmorea [PM], or as the Forma Urbis Marmorea [FUM]) depicted in astounding detail the ground plan of all architectural features in the ancient city. The map (measuring ca. 18.10 x 13 meters or ca. 60 x 43 feet) was incised onto marble slabs that hung on a wall of a grand room (aula) in the Templum Pacis in Rome. Time, and the need for marble as a building material, gradually destroyed the Plan. Today, only 1,186 pieces, or 10-15%, of this gargantuan city map exist.” Retrieved at https://formaurbis.stanford.edu/docs/FURmap.html on July 2018.

19 Johann Heinrich Wilhelm Tischbein, Goethe in the Roman Campagna, 1787.

20 Johann Heinrich Wilhelm Tischbein, Goethe at the window of his apartment by the Corso in Rome, 1787.
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WHAT MODERN EYE DISPLAYS: “CINERAMIC” NARRATIONS OF SOCIAL SPACE

Author: GÜRBEY HİZ

Affiliation: KADİR HAS UNIVERSITY, TURKEY [ISTANBUL]

INTRODUCTION
The construction of “modern” is strengthened by being exhibited in the field of narratives. Through many novels, newspapers, magazines, films, photographs, new imaginations and experiences infiltrate into everyday life and reveal common forms of seeing and perceiving. Within modernity, the architectural production shifts towards a medium based on images such as photographs, films, printed publications and exhibitions. A new conception of space defined by images arises as different from the perception of physical walls in the pre-modern era. In today’s fast information network, the architecture described by the mass media seems certainly understandable. On the other hand, for the second half of the nineteenth century, when the flow of everyday information from different geographies to another was happening for the first time, it must have been a striking phenomenon.

As it occurred in Europe and USA, the illustrated newspapers spread rapidly also in the Ottoman geography. The focus of these newspapers was filled with urban space and new experiences. Newspapers such as Servet-i Fünun (Wealth of Sciences), Malumat (Information) and Resimli Gazete (Illustrated Newspaper) present a highly efficient excavation area to understand the encountering with modernity of the late nineteenth century. These illustrated newspapers, which were mostly weekly published, present periodical representations of the imaginations and construction of the social space, as well as visual depictions of the experiences of modernity.

Like in western media, Ottoman popular periodicals also celebrated the transition from static image to moving image. Before films and cinematic experiences, both confused and amused authors show how urban space is represented through moving images in many newspapers’ static pages. These representations as it will be described as “cineramic” narrations are thought to bring new ways of perceiving and experiencing the social space through newspapers’ pages.

In this paper, a debate will be proposed on motioned images in illustrated newspapers before cinematic experiences in cinema halls. Firstly, a summary will be given on Ottoman illustrated newspapers and their visual narrations. Secondly, it will be examined how “cineramic” narratives build possibilities in the context of the imagination of moving space, how it has shifted over time, and what motifs it has strengthened in urban social life. Imagining, constructing and experiencing motion will be given as examples through found images in selected newspapers. Finally, the role of the moving images in newspapers and the shift from “cineramic” to cinematic experience of social space will be evaluated.

OTTOMAN ILLUSTRATED NEWSPAPERS
A common feature that can be specified for almost all of the Ottoman illustrated newspapers is printing the news (information, spaces, discoveries, etc.) by converting them into visual narratives. While constructing the narrative, the spatial description was usually rescued from its stability and was
transformed into a narrative that containing a temporal characteristic. In this sense, these visual representations in illustrated newspapers were different than the architects’ drawings/predictions. Architects from the early twentieth century considered the predictions of the metropolis as an organizational and homogenizing model. While building a hypothetical unity, they tried to catch a stable image of the city and usually the relationship between city and citizen was denied. On the contrary, the language of the spatial images in popular periodicals was heterogeneous, crowded and noisy. They did not impose limits like architectural predictions.

First newspapers started to be printed at the end of eighteenth century in Ottoman geography especially in Istanbul. Within time, occidental interests of the state empowered the press and the printing technology. The first time an image printed in a newspaper was 1862. In this short-lived newspaper called Mir’at (Mirror), masthead was depicted as a mirror and a globe sphere to show both a ‘real’ and a seemingly imaginary representation of World. Within this visual, the editor seemed to state that the content of the media in the newspaper is the World picture as, within modernity, the World is grasped as a picture. Such newspapers like Mir’at pointed out that it is possible to grasp and represent the world as a whole. So, one by one, ‘man of the World’ would capture the World and narrate it in every page of these illustrated newspapers.

Till 1888, various pioneer short-lived illustrated newspapers were appeared and usually were shut down in two or three years. However, after 1888, with the development of printing technology by self-trained editors, illustrated newspapers had their heyday in Ottoman geography. Between 1890 and 1908, not many but stable newspapers appeared in the scene as well as illustrators, engravers as professions. In this period, different narrations from different time periods could be found in the newspapers as fragments. An ancient city, a building which is being built or a future-oriented imagery could be arranged together in the same issue without making a reasonable sense. The illustrated newspapers were presented to the reader as a heterochronic narrative space in which past and future imaginations, recent past and near future constructions, and experiences of today were conveyed.

As heterochronic as the narratives in newspapers were also heterogeneous in the context of geography. Both global and local content appeared together with no logical reasons. The spatial practices of everyday routine and social reality were often referred to as local topics in the newspapers and were represented as real physical lived spaces. In addition to this, the representations of spaces in which the
ideas and designs were depicted were extracted from the global scale and represented as non-real virtual spaces.

Starting from 1908, in the second constitutional era, various illustrated newspapers were being appeared as the censorship and oppression towards press were weakened. The expansion of the printed press ensured common ways of seeing and reading within the society. The `printing capitalism’ brought imagined communities together that share common experiences. Even then, it is possible to read the axis of nationalism as an effect created by the same `printing capitalism’. With the common reading and seeing offered by the periodical printed media; urban, national speaking and a privileged society was formed. This segment of the society desired and perceived the ‘new’ well and was suitable to experience the ‘new’. The content of the narrations in the newspapers could be heterochronic and spatially heterogeneous, the structure of the images was constructed in similar ways. One of these common structures of the visuals were the ones with the motioned images: “cinematic” narrations.

**“CINERAMIC” NARRATIONS IN NEWSPAPERS**

“-cine” as a word was originated from ancient Greek language which means as to set in motion and to move. “-rama” as a word was also originated from the Greek language and derived from “horama” which means to view, to have a spectacular display. When these two concepts are combined together, a new concept called “cinemama” emerges which means ‘motioned view’. This concept is found particularly different than the concept ‘cinematic’ view cause to describe motioned view of static images in paper space. Images that were made with this perspective will be defined as “cinematic” narrations that played the role to get readers ready to receive cinematic experience in cinema halls. Two different structures of making “cinematic” narrations structure was found in newspapers.

First ones are the representation of the motion with the different frames. As followed from Muybridge’s discoveries, this mode of representation of the motion was done by arranging images with the different frames, thus to show the flow of movement within the space as like storyboards. The second ones are the representation of moving narrative that extends beyond the frame of the image. This is a form of moving narrative that after seconds later, reader believes that the composition of the image will change.

![Fig 2: Two modes of representation of “cinematic” narrations](image)

So within these structured “cinematic” narrations, it will be shown different kinds of visual narrations that were printed in Ottoman illustrated journals from different times which will be recollected in three courses; imagining, constructing and experiencing motion.
Imagining Motion

The first course of found “cinemamic” narrations in illustrated newspapers are the images that produce the imagination of the motion. Usually, these images contain future or past content and do not necessarily take place in real physical places.

Dating 1874, illustrated newspaper Musavver Medeniyet[^17] (Illustrated Civilization) used in its masthead a collaged silhouette of İstanbul.[^18] The famous silhouette of İstanbul was placed on the background of the image. On the front side a collage of famous buildings, monuments, artworks taken from different geographies can be seen. Pyramids, cathedrals, monumental arcs and so on were juxtaposed without an ordered composition. Last but not least, a railway bridge and a train passing by was installed in the middle. Around all these monumental static buildings, a generic image of a moving element found as an imagination of motion inspired by European and North American content appears in front of İstanbulscape. This powerful imagery of motion becomes as important as unique pyramids in Egypt, something to desire of.

![Fig 3: The Masthead of Musavver Medeniyet](image.png)

Various new modes of representations of mobilization such as traveling with bicycles, trams, cars, zeppelins, etc. usually detached from their geographical context can easily be found inside the newspapers. When these different new types of mobilizing images were shown to Ottoman readers, they started to imagine new modes of motion even the urban setting was not constructed in lived space yet. Especially, during early twentieth century, various images celebrating different kinds of mobilizing the world were installed. These collaged futuristic images were usually made for militaristic intentions just
before the first World War. The new century brought excited and amused imaginations for new modes of traveling over the lands.

On the other hand, not only celebrations but also the criticizing imaginations were represented enormously with a motioned view. Dating 1909, illustrated newspaper Kalem^{19} (Pencil) printed a future city of İstanbul (50 years later) containing planes, zeppelins, trams, cars passing over the urban scene.^{20} Not only the moving elements of the image brought futuristic imaginations but also the static urban space behind. Zoo garden in an apartment with an elevator sign in street level, grand theater, and the trees on terraces helped out this humorous imagination. Even so, the main chaos was happening because of the new modes of mobilizations. People falling from planes, running away from cars, planes escaping from zeppelins and so on. This chaotic atmosphere of the future city also focused on one woman plane driver who was bad at driving and stopped by the police officer. Like ‘new’ moving vehicles ‘new’ woman in the public sphere was also under satire.
Constructing Motion

The second course of found “cineramic” narrations in illustrated newspapers are the images that are about the construction of the motion. Usually, these images contain near future or near past content that is under a process of construction. The construction usually takes place in local Ottoman geography. During the construction of the railways of Anatolia, the illustrated newspapers followed the process in many issues. Within the photographic representations of the construction usually taken by engineers, the process can be seen via different fragmented sequences of land pieces. The Ottoman reader received the motion from one land to another by looking one photograph to another. Because the photographs were taken from the human eye level, the representations of the constructions appeared with the detailed attitudes of the workers, senior officers and the local people around. Within all the subjects, representations became loaded with various discourses.

Ceremonial first train rides were also part of the representation of constructed new motion. Dating 1892, the photograph of a locomotive’s first trial ride to Bursa was in the cover of Servet-i Fünun with the
words of proud editor putting the newspaper into the position of ‘the visual interpreter of the public constructions’. The man on the front of the train’s first wagon was represented in a way that he was ready to invade the land with his ride similar like North American western narrations. The set of the representation, created in such composition with flags and different people from different classes, was built in a way similar like an open theatre stage. After eight issues later, photograph of people waiting for the same locomotive to arrive in the station was seen on the cover of the same newspaper. In the visual representation, the motion was being waited to arrive in a same ceremonial way. This is seen as a constructive narration that did not end in one issue, but developed within time and constructed into each other with fragmented moments. Therefore, when it was repeated in a ceremonial way in repeated issues, the discourse of nationalization is strengthened within the motioned view.

At the beginning of the new century, nationalistic narrations were being appeared in the newspapers more. 1902 dated special issue of Servet-i Fünun focused on the construction of the Hejaz railways from Damascus to Medina, a perfect case for Ottomans to show their superiority over Arab geographies. Engraving of a train passing over a modern bridge in desert and local Arab prayers were put in the cover of this issue. With their arms in the air, local people expressed their gratitude for this wonder of civilization. Instead of installing moving element on the front, the editor chose to put grateful people welcoming this new mode of mobilization/civilization. Within that example, the discourse of the construction was not only presented as the technologically ‘new’ but also with the nationalist narrations, ‘new’ power over land was introduced to the masses.
Experiencing Motion

Third and the last course of found “cineramic” narrations in illustrated newspapers are the images that are about experiences of the motion. Usually, these images take place in present time, “now”. The experiences of motion are being narrated usually in local already constructed Ottoman geography.

Various types of bicycles were in the interest of the illustrated newspapers. Some wrote ‘devil’s car’, some wrote ‘trains with two wheels’ and some wrote ‘machines of motion’ to name this new invention. The readers were getting excited as well with this easy vehicle after seeing it repeatedly in newspapers.

In the cover of an issue in 1895, the photograph of five bicycle riders with their vehicles was placed. It was written as “Our newspaper has seen a great deal of service in order to foster enthusiasm about those two-wheeled cars that are beginning to appear in our city.” Then the author explained the journey of these five riders and showed fragmented photographs taken from the trip. The images were appeared in the newspaper as the fragmented partials of their urban journey as well as the fragmented experience of Istanbul's representation. Also within textual descriptions, motioned experience of the riders were received by the readers of the newspaper.

Fig 9: Experiencing New Modes of Mobilization

One year later in 1896, one reader wrote his journey from Bursa to Mihaliç with a bicycle, reporting that he was very curious to see bicycles in the newspaper and finally had the chance to own one. He explained his experiences of this new motion adding "How pleasant it is to fly like a bird in this deserted, tranquil place with a bicycle that does not sound at all!" The alienated reactions of the villagers, officers, and even dogs were described. This new motion was presented to readers with experiences so that the reader could follow through the paper.

Another example for experiencing the motion from paper space was about the flight test of the Ottoman military balloon dated 1909. In one of the main public square of Istanbul, the test was occurred in a ceremonious way with curious audiences. The newspaper placed the visual representations of the test with different time frames like a storyboard in whole two pages. In frames, filling the balloon with gas, rising the balloon and the applause of the audience of this event were shown seperately. Within this mode of representation, readers of the newspaper could experience the motion of this new vehicle from the paper space like the people in public space.
FROM “CINERAMIC” TO CINEMATIC PERCEPTION

Within the axis of imagining, constructing and experiencing narrations of motion, it was intended to define the different productions of “cineramic” narrations of social space introduced on illustrated newspapers in late nineteenth century Ottoman geography. The phenomenon of motion, which initially emerged as an imaginary image on paper, gradually becomes built on physical geography and turned into a local image that can be experienceable.

The cases discussed in the article uses various ways of infiltrating different perspectives of modernity to readers. While some have cheering attitude that welcomes the new modes of motion, some have a nationalistic attitude that transforms the local land in ceremonial ways. Within time, the content represented with “cineramic” narrations shifted from global to local issues. Even the intention of the narrations varied, similar representation structures constituted a common sense of perception and a new privileged Ottoman society. Encountering with motioned images, a non-static conception of understanding social space occurred through the paper. Readers learned how to perceive images with the modes of motion while seeing them repeatedly on paper before the moving images shown by filmmakers.

The first film was shown in Sponeck Beerhouse in 1896 in İstanbul. One of the audiences of the screening described this new media as showing thousands of static images very fast so the eye cannot see any single images anymore but perceive the whole as live images.²⁸ The reaction shows the early film watchers still tried to understand the moving images as the sets of static images like the ones appeared in illustrated newspapers. It was shown in the paper that with the “cineramic” perception, readers/watchers got the experience of motion from the newspapers’ paper space, so got ready for encountering with the cinematic perception of the film space.

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5 Resimî Gazete is an illustrated science and art newspaper published between 1891 and 1899 by Kitapçı Karabet.


7 Mir’at is the first illustrated Turkish newspaper in Ottoman geography published only three issues in 1862 by Mustafa Refik.

8 Mir’at 1 (1862): 1 See Fig.1


13 See Henri Lefebvre, The Production of Space. (Malden, MA: Blackwell, 1992) Lefebvre explains in his famous book; the spatial practices, representations of spaces and representational spaces are produced within space and time and bring together the produced social space. In this sense, if representational spaces are thought as illustrated newspapers, both spatial practices and representations of spaces can be found in a heterogeneous composition in newspapers. See also Maria Balshaw and Kennedy Liam “Introduction: Urban Space and Representation” in Urban Space and Representation ed. M. Balshaw and K. Liam (London, Sterling, Virginia: Pluto Press, 1999), 1-21 for comments on the images of lived social space and imagined social space.

14 Ibid.


16 “Cinerama” as a name was invented by Fred Waller and produced a commercially screening which opened on 1952. “Cinerama” is a widescreen process that originally projected images from three synchronized projectors onto a huge, deeply curved screen. However, in this paper this concept is borrowed to define pre cinematic experience of the audience.

17 Musavver Medeniyet is an illustrated education and literature newspaper published between 1874 and 1876 by Mehmed Arif Efendi.

18 Musavver Medeniyet 8 (1874): 56 See Fig.3

19 Kalem is an illustrated humorous political newspaper published between 1908 and 1911 by Salah Cimcoz and architect Cetel Esad.

20 Kalem 17 (1908): 8 See Fig.5

21 “Bursa Şimendiferi” Servet-i Fünun 63 (1892): 175 See the left image of Fig.7

22 Servet-i Fünun 71 (1892): 289 See the right image of Fig.7

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SKATEBOARDING, ARCHITECTURE AND PUBLIC PLACES: RHYTHMIC REFLECTIONS FROM PERTH, AUSTRALIA

Author: MORGAN DYSON
Affiliation: CURTIN UNIVERSITY, AUSTRALIA [PERTH]

INTRODUCTION

Video and film have long been the preferred method for documenting skateboarding and the ‘skate video’ as produced by skateboarding companies has become the dominant form of expression for the presentation of established professionals and innovative amateurs who are sponsored by specific skateboarding brands. For Snyder, “the history of skateboarding is the history of skateboard videos” and as such skateboarding videos “provide an especially vibrant historical record of how the range of these identities has changed over time”. All of these videos contribute to Iain Borden’s understanding that:

videos are then perhaps the most accurate way of reproducing the sound and movement of skateboarding, portraying skateboarding at its most prosaic, ordinary in its accessibility and location, extraordinary in its appearance and context.

It is with these theoretical and practical cues that I have created three separate video sequences for a creative component to accompany this paper. What follows are three brief conceptualizations of each sequence so that the reader and viewer may gain a better understanding of my intentions in exploring how skateboarders use the architecture and public spaces of Perth, Western Australia.

It is advised the reader watch the films first and then read the paper. The three sequences can be viewed at here:

https://drive.google.com/drive/folders/1M60CR3GA0y9NdZdi6EBKHuDQKSN0fPvg?usp=sharing

These films and their exegetical counterparts were created as part of a Master of Media and Communication at Curtin University, Perth. This paper constitutes an edited version of the second half of the written work. The first half is a fuller theoretical analysis of the relationship between skateboarding, architecture and public spaces in Perth city, specifically focusing on how skateboarding can offer a commodity critique and how skateboarders occupy the dormant, unused and unfinished places in Perth.

These films are not for public screening or distribution.
MIRRORS AND REFLECTIONS: THE FIRST SEQUENCE

The first video sequence of my creative research opens with myself walking into frame, sitting on my skateboard in a dark room, and looking up expectantly as if in a movie theatre waiting for a film to start. The curtain is drawn back, and archival footage of myself is shown as if on the cinema screen – my past-self skateboarding at my local high school in 2007. Out of this depiction of my present-self watching my past-self there emerges a complex field of representations and reflections, which I conceptualize in terms of mirrors. The archival footage my present-self watches poses a form of mirror to/of my past-self a decade earlier, offering what Jill Daniels terms “a poetic evocation of the past and engagement with subjectivities”. In this past footage, however, I am performing tricks seen by myself previously in other skateboarding videos but learnt independently, and so I am “reproducing through body-actions the activity of skateboarding as codified in moves and communicated as a set of produced images”. Skateboarders, as Borden reminds us, are exposed to and learn specific tricks from these produced images in the form of photographs and videos of other skateboarders performing the same moves, leading to repetitions and recreations of moves and tricks the world over (figures 2 and 3). This is in effect another form of mirroring – myself, in 2007, was attempting to emulate professional skateboarders I had seen in magazines and videos since I started skateboarding in the year 2000.
Figure 2. Morgan Campbell performs a move at the Fremantle Woolstores in 2006. Photo credit: Leo Sharp, Slam Magazine, 2006.

Figure 3. Quayde Baker performs an exact mirror of Morgan Campbell’s move in Figure 2, at the same location, in 2010. Photo credit: Aidan White, Slam Magazine, 2010.
The presence of a video camera recording my past skateboarding efforts in 2007 has then allowed me to access this footage, ten years later, and stage a reflection on behalf of my present-self, in the form of this short documentary sequence. Invoking memory, mirrors and reflections, this sequence was inspired by, and responds to, Shaun Gladwell’s conception of his work aiming “to make the popular representation of certain subcultures problematic” and also his intention “to be unfaithful to the subcultures own codes and self-image which are, always, incredibly rigid”. As a number of commentators have identified the repetitive and formulaic nature of skateboarding videos, it was a conscious decision on my behalf to attempt something altogether more personal, recognizing the impossibility of objectivity in documentary and aiming instead for something similar to Daniels’ self-reflexive, autobiographical documentaries involving a dialogue with memory, “an excavation, a digging deeper which lends itself to experimentation, the poetic and the uncertain.” Within the field of academic documentary studies, the first sequence sits uneasily within Bill Nichols’ reflexive mode. I have perhaps created something more akin to Carl Plantinga and Michael Renov’s conception of documentary as expression rather than imitation, as the multiple mirrors and viewpoints of my present-self, past-self and audience collide and react. Even more pertinent could be Stella Bruzzi’s performative mode as a documentary “that acknowledges the construction and artificiality of even the non-fiction film”, as the first sequence is easily recognizable as an artificial construction with set shots and framings filmed in front of a green-screen with the explicit intention of a final product. Linda Williams ruminates on the loss of faith of photographic and filmic images functioning as a ‘mirror with a memory’ and notes, Truth is “not guaranteed” and cannot be transparently reflected by a mirror with a memory, yet some kinds of partial and contingent truths are nevertheless the always receding goal of the documentary tradition.

Williams recognizes how quickly the self-reflexive, post-modern documentary can descend into Jean Baudrillard’s hall of mirrors, and this was a concept I wanted to avoid. Rather than take the viewer through the endless reflections and subjectivities possible with the interaction between my present-self, past-self and the entire history of skateboarding, I instead snap back into familiar skateboarding video and documentary territory. As my present-self watches, my past-self attempts a ‘line’ of tricks, ultimately failing and throwing my skateboard towards the camera, towards my present self, and effectively towards the audience. My present-self fades, as if sinking into memory, as a match-shot links the archival footage to the symmetry of the skateboard wheel and bass drum, the rhythmic element of the title. The emphasis on this latter rhythmic element is on account of my own role as a drummer, and a drum beat performed by myself kicks in as the archival footage fills the screen. We hear Iain Borden’s voice provide commentary as my past-self skates to the beat, two filmic techniques not uncommon in skateboarding videos such as Menikmati (2002) and the Transworld video series, (1996 – present). However, skateboarding videos rarely have such an explicit description of what the skateboarder is doing, and as such can tend to alienate and bore non-skateboarders, so the addition of Borden’s clear explanation aids in Gladwell’s ideas about problematizing representations of subcultures – in this case a subversion of ‘traditional’ skateboarding video tropes. Match shots are provided between the archival footage and Borden’s voice, guiding the audience through what could be a monotonous viewing of anonymous archival skateboarding footage. My present-self re-appears as the last archival shot of my past-self contracts, and I walk out of frame before the final expansion and reveal of the true attraction and nature of skateboarding – that of connections between friends, congratulations, high-fives and handshakes, a community of shared experiences documented on video, representative of a “desire to be,
at the same time, oneself, oneself as someone else, and all other skaters in oneself".¹⁹

THREE PERTH SKATEBOARDERS: THE SECOND SEQUENCE

The second sequence of my creative research offers perhaps a more ‘traditional’ documentary approach, one that has been widely used within the skateboarding subculture itself – see for example the long running Vice series *Epicly Later’d* (2007 – present). Utilizing interviews and archival footage of the interviewees, *Three Perth Skateboarders* offers a glimpse into the skateboarding histories of Morgan Campbell, Mat de Koning and Tim Yuen, as well as the city of Perth itself. This sequence was originally inspired by the films of Asif Kapadia – namely *Senna* (2010) and *Amy* (2015) in their innovative use of archival footage in combination with an almost total lack of ‘talking heads’ interviews. A similar technique is utilized in Josh Kriegman and Elyse Steinberg’s documentary *Weiner* (2016), with the titular character Anthony Weiner being the only formally interviewed person in the film – observational footage, archival news reports, past interviews and press conferences are elaborately stitched together to form the narrative. These examples produce Williams’ conception of documentary films as not being “complete, totalizable, apprehensible” but as “fragments, pieces of the past invoked by memory, not unitary but representable truths”.²⁰ The fragments and memories, not of myself as in the first sequence, are of the three skateboarders in their interactions with their urban environments, as filmed by friends and themselves over the past thirty years. The filming of some of this archival footage could be perceived as amateur, reflecting both the individual learning process of skateboarders as they experiment with how to physically portray the activity on camera and the wider subculture’s attempts to demarcate a set of rules and techniques for the aesthetic reflection of skateboarding on film. Documentary scholar Keith Beattie posits amateur documentary works as possessing the ability to reflect both the authenticity...
and subjectivity of what was filmed,$^{21}$ and the hope in using archival footage of the three skateboarders was to channel some remainder, or memory, of those two components. Conflating experimental film with documentary, Timothy Corrigan and Patricia White note the power of the latter to “reveal new or ignored realities” as well as the “power to challenge and expand how we see, feel and hear”.$^{22}$ Over the course of seven minutes, these ignored realities are revealed in the form of the three skateboarder’s perceptions and usages of architecture and public spaces in Perth. If we take as granted the futility of the pursuit of objectivity, and even perhaps consider Jay Ruby’s contention that “documentary filmmakers have a social obligation to not be objective”,$^{23}$ then the various interlinked subjectivities of the interviews might go some way in aiding the audience to formulate their own alternate perceptions of architecture and public spaces. Ethnographer Roxana Waterson$^{24}$ rebuts film-maker David MacDougall’s$^{25}$ dismissal of interviews with an argument for an understanding of the audience as being critically engaged enough when watching documentaries to sufficiently comprehend the subtleties of each person’s stories, and thus realize that the archival footage does not present an exact mirror of an interviewee’s memory. In readily acknowledging and accepting the subjective nature of interviews, in abandoning a chase for a singular truth through testimony, the audience might come across previously unknown subjectivities to enhance their understandings of how skateboarders in Perth use and perceive the city’s architecture and public spaces.

THE SKATER’S EYE: THE THIRD SEQUENCE

Figure 5. Morgan Dyson in the third sequence. Photo credit: Mitchell Yeats.

The third sequence is my attempt at creating a skateboarding video ‘part’, representing the chronological journey of myself as a skateboarder from age 11 to 28. Inspired by dozens of videos with perhaps hundreds of individual parts, some important ones include Andrew Reynolds in This is Skateboarding
(2003), Bryan Herman in *Baker 3* (2005) and Guy Mariano in *Fully Flared* (2007). Beginning with a personalized photo introduction, the sequence then charts a personal history of a skateboarder on film, sound-tracked by a song written and performed by myself and two friends. In assembling and editing my own archival footage, the idea was to locate myself in a subculture with one of the most accepted means for doing so.\(^1\) I both adhere to and subtly subvert the skateboarding video’s stereotypes, again responding to Gladwell’s theoretical conceptions\(^2\) as well as his numerous depictions of skateboarding in his own video art works.\(^3\) In extending Jeffries, Messer and Sword’s work on skateboarding photography,\(^4\) I posit that skateboard videography “can be both documentary and also aesthetic object”, and that it can even be a form of experimental documentary. Daniels discusses her work in this category and notes that experimental documentaries can “offer the freedom to call upon the imagined, to evoke and to engage with subjectivities to enrich and expand the spectatorial effects of realism”,\(^5\) which again raises the notion of subjectivity that necessarily runs through all three conceptualizations of my sequences. As a long time skateboarder, emerging documentary filmmaker and amateur musician, this third sequence responds to and embodies several co-existing identities of my own, and so constitutes also a form of autobiography, a fragment of the narrative of my whole. Beattie considers autobiographical texts, specifically documentaries, to be an attempt at a representation, at least in part, of a person’s identity, while understanding the impossibility of reducing this identity to any singular aspect.\(^6\) To me, this sequence establishes a history of my identities, with an eye to the future hinted at in the last shot – the only shot filmed specifically for the sequence, showing me rolling dangerously fast towards Perth city. Borden hints at what future histories of skateboarding could entail when he suggests “history as film, history as music, history as media-montage might all be possible responses”\(^7\) – in an encapsulation of all three of these things, perhaps my third sequence can offer a step towards a new history of skateboarding, in Perth at least.

**ROLLING FORWARD**

This paper and its accompanying creative works have shown how skateboarders can re-conceptualize, re-appropriate and disrupt the architecture and public spaces that make up Perth city. In the grand scheme of history, skateboarding’s development as an activity that can accomplish these re-imaginings in the urban centers of the world is relatively short. The scholarly and academic analysis of these disruptions is shorter still, and perhaps shortest of all is the engagement in the act of skateboarding as a research tool in and of itself.\(^8\) These latter examples champion the idea that in thinking about skateboarding, one must actually do it, and indeed integrate their own skateboarding practice into their research methods and process. It is with these guides that I have aligned myself; a natural alliance on account of being a skateboarder, and as such, I have been able to bring a heuristic angle to this research that so far has not been utilized in any other research involving skateboarding in Perth city. In analyzing how skateboarders use architecture and public places in Perth, my subjective viewpoint as a skateboarder in this city has demonstrated the benefits of using skateboarding as a research tool, particularly in my creative works. As Nichols reminds us in regards to documentaries, “subjectivity itself compels belief”,\(^9\) and the emphasis on the personal and experiential in my written research also highlights the potential for further study of skateboarding’s alternate uses and visions of Perth city. Iain Borden concludes in his 2001 book, “the study of the performative and everyday may require an integrative consideration of sound, vision, movement and even touch and smell to convey something of the experiential nature of these processes.”\(^10\) For further research of skateboarding in Perth, I propose an interactive, mixed method approach; combining as I have here the written and audio/visual, as well as tactile investigations into the physical objects skateboarders use – this could be
aided by walks, tours and collaborations between skateboarders and non-skateboarders. Exposure and communication to the general public is essential, in an effort to show people not just how a certain subculture uses architecture and public places differently, but how everybody else could, and should, too.

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INTRODUCTION
Against the backdrop of the current second wave of Virtual Reality, the interdisciplinary research project theoretically and artistically deals with adaptive audiovisual architectures. It combines methodologies of media art, design research, architecture and media theory. Building on the observation that architecture’s medial turn has led to the liquefaction of its discipline boundaries, the project investigates IT-setups for the real-time generation of augmented experience spaces.

This paper presents the framework for an interactive audiovisual AR-installation with Ambient Intelligence (AmI). The Immersive Architectures Generator (IAG) allows users to interact and play with architecture as if it were a musical instrument. The IAG visually and aurally augments physical architecture and creates immersive environments which can interact with audiences, musicians or other performers. The novelty of the approach lies in its understanding of architectural spaces as musical instruments as well as spatial design as a musical activity/task. After explaining the conceptual background of the project, this article gives a high level overview of the design and the operating principles of the IAG and goes on to describe three use cases of the architectural instrument in installation and performance settings.

CONCEPTUAL CONSIDERATIONS AND OBSERVATIONS
Starting point and inspiration for this project was the perceivable outward-projection of digital logic into and onto the physical world, which leads to an increasing gamification of architectural spaces and our perception of them. The understanding of architecture as a rigid, static art form, which is poetically coined in the famous aphorism „architecture is frozen music“ by Schelling, is currently undergoing a reframing.

Our perception of reality is ever more mediated by information-technological processes. Our gaze through the proverbial data glasses, which are factually graspable in the current trend of head-mounted AR and VR displays, invisibly and silently pervades practically every aspect of our lives. IT and its underlying quantification paradigm overlays the physical world with an invisible skin: a grid coating. The boundaries between physical and virtual world also liquefy increasingly in architecture.

Augmenting physical architectures with the logic of interactive computer game environments leads to a whole new architectural vocabulary. Concepts like Benham’s “unhouse” or Negroponte’s „responsive architecture” are becoming an Augmented Reality.

I’d like to briefly discuss the gamification of the experience of architectural space and some of its implications, by pointing out three phenomena.
Reality Computing

Reality Computing, a term coined by Autodesk in order to strategically position themselves in an emerging market field, describes the projection of physical spaces into virtual spaces and vice versa. On the “Reality Computing Blog”, created by Autodesk in April 2014 and maintained until July 2015, the company goes on to explain their vision: “Put simply, we see a new category of technology emerging around spatial and shape data describing the physical world. We call this Reality Computing. […] Reality Computing is a new meta-category, a category of tools and technologies that break down the barriers between the digital and physical worlds, and enable direct modeling, analysis, and fabrication.”

This projection of physical object data into the virtual realm and the consecutive projection of virtual object data into and onto the physical space, can be broken down into two paradigms: “Data from Things”, and “Things from Data”.

Data from Things

“Data from Things” describes the data gathering in physical space and the projection of the resulting big-data sets in virtual space in order to make them visually graspable and navigable in an intuitive way. Examples are photogrammetric scans of buildings and the resulting virtual point-cloud models. See figures 1-3.

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*Fig 1. Seminar Imaging and Interaction, 2015-2017, Pointcloud Rendering of TU/ UdK Berlin Library Data Set*
Things from Data

“Things from Data” describes the realization of virtual objects in physical space – hence a projection of data-based models from virtual space into and onto the physical space. This can happen by means of video projection or automated production processes, like i.e. 3d-printing or robotic production pipelines. It is interesting to observe to what extent the virtualization of production processes causes, or at least facilitates the decomposition of discipline boundaries. The three media, film, architecture and computer games are in the process of merging for a couple of years already due to the virtualization of production processes, for example in Virtual Production and Previsualization (Previs).

The following examples not only elucidate the “Things-from-Data” paradigm; they also illustrate the postulated overlapping of production methodologies of film making, architecture and game design.

For the filmic staging of the physically impossible “Penrose Staircase” in Christopher Nolan’s Inception (2010), methods for planning and previsualization of formerly unconnected disciplines were merged. The “Penrose Staircase” and its positioning in the film set were planned by means of architectural visualization. In order to achieve the illusion of a seamless alignment of the endless stair case, it had to be photographed with a specific lens, focal length and from a distinct camera position. The exact positioning of the camera, the camera crane as well as the choice of lenses were determined by means of CG renderings through the viewfinder of a virtual camera positioned in the virtual model of the film set. The novelty here was, that the Visual Effects (VFX) – department, normally in charge of postproduction image generation and manipulation, was involved in the preproduction previsualization of the set design.7

ShotPro³, a previs app for the iPad, merges the overlapping previsualization methodologies, just pointed out in the previous example. The software is extremely simple to use and offers the user in one single interface the design paradigms of architectural design, set design as well as story boarding.

In a production methodology called “Virtual Production”, the above described idea of outlining and designing film scenes in virtual film sets, is elevated to an interactive real-time prototyping tool. Using game engines, film scenographies are produced as virtual reality experiences in which it becomes possible to shoot the movie in a virtual model. Also, actors and their movements are depicted in the virtual film set; either by deploying classical animation techniques or by projecting motion-capture data onto avatars of the actors in virtual space.9 The so called “Virtual Camera” is the interactive Interface between physical and virtual space and allows for an intuitive interaction with the virtual film set.10 The camera operator moves in physical space and looks through the viewfinder (a computer monitor, assembled on a shoulder rig11) like through a window into virtual space. Her or his movements are motion-tracked in physical space and are projected in real time into the virtual film set. At the same time the gaze of the virtual camera onto the virtual film set is rendered in real time and displayed on the monitor in front of the camera operator. It is remarkable to note, that real-time interaction with a virtual model is used to determine certain parameters of the film design before even considering shooting the movie: camera perspective, camera movement, lenses, focal length, zoom, positioning and movement of actors, etc. In “Virtual Production” one does not only gaze through a window into virtual space,
though; the monitor on the camera rig also actually realizes the virtual space in the physical space. Virtual space is permanently stretched out as an intangible informational layer in physical space. Physical space gets imbued by virtual space. The viewfinder of the virtual camera, de facto an augmented reality (AR) use case, reveals the virtual space, which has been spread out around the camera person in physical space.

In architecture, 3D-printers are used to realize construction forms and structural shapes in physical space. These shapes and forms have been designed as data models in virtual space before being realized by robotic processes. As an example pars pro toto I’d like to point out the research project MX3D Bridge, a 3d-Printed Steel Bridge. The “Lightbox”, which has been developed for the production of Alfonso Cuaron’s Gravity (2013), is an exceptional example for multi modal outward-projection of virtual spaces into physical space. In it the above described virtual model of a film set, as it is used in “Virtual Production”, was being projected into the physical space and realized around the actors by means of a combination of video projection and automation technology. The “Lightbox” represents a combination of all previously described methodologies. An LED-wall was shaped into an inward-pointing cube – the screen was folded around the actors. The virtual sceneries, which had previously had been designed in 3D-rendering softwares, were played back on, or rather, in the LED-cube. The “Lightbox” realized the virtual environments in the physical space. The camera movements, which had been designed in virtual 3D-space, were realized in physical space by industrial robots commonly used in car manufacturing. Also, the actresses and actors were fixated on robotic rigs in order to be moved in perfect synchronicity with the projected backgrounds and the automated camera movements.

Physical architectures get overlaid by virtual content and herby become screens or digital canvases. Physical spaces get permeated by digital (media) content – be it robotic production pipelines, films or computer games. These digital contents are either realized in physical space by humans, but more and more by robotic and automated processes.

Physical perception of space is ousted by virtual worlds unfolding around us. This leads to an interweaving of the analog and digital domain, resulting in a new hybrid, analog-digital materiality, perfectly depicted by Matsuda’s hypothetical research-by-design case study “Hyper-Reality”, yet already brought into reality by Google’s Project Tango around the same time in 2016.

Multimodal, multi-agency Sensponsivity in adaptive Architectures

Sensponsivity, a term coined by Oungrinis and Liapis, describing the shift from mere reactive behavior of interactive systems to an “Ambient Intelligence”, which would “imbue space with cognitive skills and provide it with a sense of why, how and when to act”. Interactive spatial experience is negotiated between designer, user and the media-technological apparatus. Consequentially interactive medial design becomes an architectural problem; also, the design authority of architects experiences a shift towards the user and the agency of media-technological systems.

Media-musical engagement/ Musical performance of Architecture

From a media-theoretical point of view, interaction with real-time-reactive systems can be understood as musical engagement, analogous to playing a musical instrument. In the spirit of Harenberg’s and Grossmann’s understanding of media-technological configurations as musical instruments, I propose to apply the term “medienmusikalisches Handeln” (“media-musical engagement” – author’s translation) towards interactions with adaptive architectures.
RESEARCH APPROACH

Based upon these observations the project investigates with 3 main topics.

**Interfaces and models of interaction for computer-mediated architectures**

Areas of investigation herein are the role of architectural spaces as interfaces, the complex mesh of relations between designer, media-technological apparatus and the user/player, and not least the role of ambient intelligence in settings of co-actively negotiated design decisions for interactive environments.

**Sound and Time as new dimensions of architectural design**

In light of the relevance of time based design paradigms for medially augmented spaces, the relation of the disciplines architecture and music are investigated, namely interdisciplinary approaches for the design of time, space and sound.

**Artistic exploration of AR and VR**

Focus here is the investigation of aesthetical qualities of said hybrid analog-digital materiality in augmented reality settings, deploying real-time CGI and real-time sound generation.

In order to achieve these, the framework of a generative audiovisual environment was developed, which facilitates the playful interaction with immersive adaptive architectures as a VR- as well as an AR-application. The system is based on state-of-the-art Game-Engine-Technology\(^\text{20}\), has its own agency and is therefore capable of taking autonomous design decisions.

The open and modular conception of the system allows for a multitude of interaction models. Inputs can range from motion detection to video, controller or sound to raw data. For the exploration of multi-modal paradigms and methodologies of interaction, different user groups are observed and analysed in their interaction with the IAG. Time-based design paradigms for generative architectures are explored in collaboration with musicians, composers and architects. For this purpose, digital scenographies and dramaturgies for medially orchestrated environments are conceived and realized as live-performances, installations and VR-experiences.

**IMMERSIVE.ARCHITECTURE.GENERATOR**

The system follows a modular design principle from the core; for maximum flexibility the modules can be used independently of each other but can also be combined arbitrarily, which allows for the realization of a multitude of diverse use cases. A possible use case could be the visual augmentation of a physical space on the basis of reacting to aural stimuli; equally possible is the mere sound augmentation of a physical space, which might be based on visual- or other data-input. Obviously the combination, the audiovisual augmentation of a physical space is also possible.
Installation Setup

The installation is comprised of sensors and controllers, a real-time video-processing unit, a real-time audio-processing unit, a multi-channel video projection setup or a head mounted display, as well as a multi-channel speaker setup or headphones.

As controllers, multi-modal input-devices like the HTC-VIVE-controllers or MIDI-controllers are used. Deployed sensors currently range from, but are not limited to, cameras, microphones, depth- or motion-tracking-sensors.

The real-time video-processing unit is comprised of one, or an array of computers, real-time video-processing software (UNITY, MAX/MSP), open-source software and self-developed software.

The real-time audio-processing unit is comprised of one, or an array of computers, real-time audio-processing software (MAX/MSP, Ableton LIVE), open-source software and self-developed software.
**Operating principle**

The sensors and controllers gather data on user action and behaviour, for example users’ movement in space; real-time audio and video softwares process these data and feed them either directly in certain parameters of the audiovisual design, or gauge the data semantically by means of computer-vision and computer-listening analysis. These meta-data on users and their behaviour – for example the activation degree of a crowd, or the tonal qualities of a musical performance, etc. – also get fed into controlling certain parametric design decisions.

The IAG is capable of translating the gathered data autonomously into visualizations and auralizations. Models for IAG’s autonomous behaviour range from basic randomization functions to complex AI-based models (see Use Cases). The amount of IAG’s autonomy in design decisions is seamlessly adjustable by the designer. Granular control over the design parameters can also be granted to the user.

The real-time rendered videos are projected onto the physical architecture of a space; ideally, they cover the room in its entirety and therefore unfold a virtual space around the user. This can be realized by deploying multi-channel projection-setsups, AR-HMDs or VR-HMDs.

The real-time rendered sounds are played back through a multi-channel speaker-setup and therefore unfold a virtual sound-space around the user. In VR-use-cases, surround-sound earphones are imaginable.

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**Fig 4. immersive.architecture.generator, Processing Schematics**
Use Cases

AR-Performance within the exhibition "Imaging and Interaction - Virtuelle Architekturen", 2017

For the exhibition "Imaging and Interaction - Virtuelle Architekturen" in 2017, the IAG was played in an AR-Performance of the KairosTheory Trio, augmenting the architecture of the shared central library of the Technical University Berlin and the University of the Arts Berlin.

KairosTheory Trio played two 20-minute long electro-acoustical live improvisations. Alberto de Campo and Hannes Hoelz played live surround audio and electronics, Alexander Peterhaensel played live surround video and drums. The digital scenographies for the performance were designed by the author and controlled by aleatoric design decisions of the IAG and by controller-input.
AR-Installation and Performances within the "crescendo" music festival, 2018
At the 2018 edition of “crescendo”, the yearly classical music festival at the University of the Arts Berlin (UdK), a site-specific interactive AR-installation on the basis of the IAG was presented. Situated in the auditorium of UdK’s Media House, the installation was played in two performances, translating music into an immersive environment.

Fig 7. immersive.architecture.generator, AR-Performance at crescendo Festival, 2018

AR-Performance
The audio layer consisted of a live-performance by Trio Ambra with Yuki Ishihara on violin, Haruma Sato on violoncello and Ken Nakasako on piano. The repertoire of the two evenings was „Piano Trio Nr.43 in C-Major“ by Joseph Haydn, „Kammersonate“ by Hans Werner Henze and „Memory: in memory of Isang Yun“ by Toshio Hosokawa.

The visual layer consisted of 3 interactive digital scenographies designed by the author. During the performances the immersive environment was driven by design decisions of the IAG, based on qualitative sound analysis and aleatoric processes. For this, each of the musicians’ instruments was individually miked. Therefore, each instrument could be mapped onto specific design parameters of the environment. The acoustic signals simultaneously underwent different qualitative sound analyses. For rhythmical analysis the open-source- IBT-module for Max/MSP by Oliveira et al was used; for sound pattern recognition the open-source deep-learning module “Wekinator” by Fiebrink et al is utilized.
AR-Installation
Before and after the concerts the environment was controlled by the activity level of the crowd as well as aleatoric design decisions of the IAG. The system improvised over a digital scenography by the author, taking into account certain observations about the spectators’ behaviour, and thus created unforeseen lighting scenes for the augmented environment. This sensponsiveness of the environment was attained by a semantical analysis of the room acoustics, which allowed for conclusions on the crowd’s degree of excitation or commotion. This functionality was facilitated by a use-case-specific implementation of the open-source-IBT-module for Max/MSP by Oliveira et al.25.

CONCLUSION AND FUTURE WORK
This paper introduced the immersive.architecture.generator, a system for the realization of interactive digital scenographies, its design and functioning principle, as well as three example use cases. Furthermore, I have presented the projects’ motivation and conceptual background. The presented use cases are merely the first steps in a novel field of research. Many new research questions and possible collaborations with other scientists have already arisen. Next steps of the research project are, amongst others, a collaboration with scientists of the Joint Research Center of the European Commission; the experimentation with other sensors and combination patterns of different sensors; the implementation of more complex AI-systems for semantic analysis of user-inputs; the implementation and visualization of scientific big-data models; also, but not least, a detailed analysis of users’ multimodal interaction patterns with the IAG.
I’d like to thank the University of the Arts Berlin, my research groups, the crescendo music festival, Prof. Anna Anders, Prof. Dr. Alberto de Campo, Prof. Dr. Norbert Palz, Asst. Prof. Hannes Hoelz, Julian Netzer, Christopher Höhn, Roman Gebhardt and the Trio Ambra for generous support and suggestions. Last but not least I’d like to thank the anonymous reviewers of this paper.

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3 See Reyner Banham, „A Home is not a House,” in Art in America, April 1965, 109-118.
4 See Nicholas Negroponte, Soft architecture machines, (Massachusetts: MIT Press, 1975), 131 – 133.
6 In the interdisciplinary research seminar “Imaging and Interaction: Perspectives on Mediated Realities”, which has been led by the author over several semesters from 2015 to 2017, different photogrammetric methodologies have been tested, studied and refined. Researchers and students from the fields of architecture, moving image, visual communication and art and media produced several high-resolution photogrammetric scans. They then went on to explore models of interaction with the resulting big-data point-cloud models and conducted aesthetical experiments in VR. Research results were published in 2017, see Alexander Peterhaensel and Nathalie Bredella, Imaging and Interaction. Perspectives on Mediated Realities, (Berlin: UdK, 2017).
7 Paul Franklin of Double Negative, responsible VFX supervisor for the movie explained: “For the high angle shot of the looping staircase and the subsequent reveal of the forced-perspective trick, the camera had to be placed in precisely the right position above a carefully designed set. We carefully mapped the distortion patterns of all of the camera department's lenses and the Aleks Pejic team used them to work out the exact shape and dimensions of the set and what kind of shot would be achievable within the limitations of the location and the available camera setup. The camera, mounted on a 50-foot telescopic crane, had to swing down through a 45-foot arc. At the apex of the move, it had no more than two inches of clearance with the ceiling, so Dneg's previs had to be spot on.”, „VFX from 'Inception'“, Animation World Network, accessed April 13, 2016. https://www.awn.com/vfxworld/vfx-inception
8 ShotPro, an App for Previs developed by Andrew Mileusnic and first released in 2015, https://www.shotprofessional.com/.
12 See http://mx3d.com/projects/bridge/
14 See i.e. Pokemon Go, an AR game released in 2016.
18 See Harenberg’s idea of the "Universalinstrument" ("universal instrument", author’s translation), in Michael Harenberg, Virtuelle Instrumente im akustischen Cyberspace (Bielefeld: Transcript, 2012), 22.

20 See UNITY3D, https://unity3d.com/

21 See projection mapping or CAVE-technology


23 KairosTheory Trio is a research group at the Institute for Time Based Media at the University of the Arts Berlin. It was founded in 2015 by Prof. Dr. Alberto de Campo, Assistant Professor Hannes Hoelzl and Assistant Professor Alexander Peterhaensel. Main Research topics are human machine interaction in co-creative improvisational settings, specifically the creation of audiovisual augmented reality spaces in realtime, combining machine agency and artificial intelligence.


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ARCHITECTURAL LAYOUTS AS A PROJECTION OF LINEARITY IN A FILM NARRATIVE

Author: SYED HUSSAIN AHMED, ZAIN ADIL (Co-Author)

Affiliation: THE BEACONHOUSE NATIONAL UNIVERSITY (BNU)

INTRODUCTION

Narratives are the immediate consequence of an intrinsic understanding of the world as a series of linear experiences. These individual experiences being seamless in nature come together to form a sequence that can be understood to constitute a narrative. These events that make up a narrative not only define its outward and aesthetic impression but also allow for definitive ideas that mark the undertone of the narrative to become more pronounced. For this reason, narratives since their development have been used as a means by which complex ideas were communicated and even preserved. The earliest example of the narrative’s application in the communication of an idea can be found in the form of pre-historic paintings on cave walls developed by the earliest groups of humans. These paintings not only provide an insight into the lives of those groups of humans but also chronicle and preserve the cultural and tribal mechanisms at play during that time. According to evolutionary psychologist Lawrence S. Sugiyama, the practice of storytelling and narrative building is one that is practiced by all known cultures throughout time. In cities both ancient and modern, narratives have been used to communicate the cultural identity of its inhabitants and inform their social structures. They have thus shared a symbiotic relationship with their inhabitants, taking the form of its most refined expression. The city while appearing static it is able to express itself by elevates and enhances the subconscious of those that dwell within it. Taking forms that range from religious fables to folk lore and epic legends, narratives embody and encapsulate cultural and social sensibilities. The French philosopher Jean Paul Ricœur states: ‘it is in narrative that the search for coherence … finds its first articulation.’

This exchange between the city and its inhabitants is mediated by the interaction of the individual’s seven basic senses towards the city. These seven senses including sight, hearing, taste, smell, touch, intuition and equilibrium (configuration of the body). Each sense corresponding to a series of specific emotions due to which the city becomes a landscape of human experiences that collectively come together produce the impression of a narrative.

During the 1980’s a new medium had been discovered by which narratives could be communicated – the medium of film. As a medium of communication films were able painted a precarious picture of ‘what if’ that otherwise could not be explored in reality. As tools and technology developed film makers grew increasingly more creative in the way they were able to project their narratives on screen. This creativity extended not only to camera techniques and editing procedures but also towards the visual pronunciation of their narratives on screen. From the earliest film producers like George Méliès to a modern-day film director like Alejandro González Iñárritu, film makers have explored qualities of architecture as a means by which they can enhance the projection of their narrative on screens. By doing so they were able to warp the previously understood relationship between narrative and design.

The following research is aimed at exploring how design can contribute to the projection of a film’s narrative. For the purpose of this research the film Birdman or the unexpected virtue of ignorance (2014), directed by Alejandro González Iñárritu was taken as the subject of a case study and studied frame by frame in order to arrive at an understanding of how the architectural layout of spaces within a film contributed to the communication of the film’s narrative.
BIRDMAN OR THE UNEXPECTED VIRTUE OF IGNORANCE

Single shot cinema can be described as a contemporary classification of films within the cinematic world. Originally proposed by the English film maker Alfred Hitchcock in his film titled Rope (1948) the idea grew out of the director’s curious interest with Aristotelian Unities which had propelled him to shoot the film in real time. Limited however by the technology of his time, the film reel allowed for only ten minutes of shooting at a time. As a result, the director concealed his cuts using basic elements of his set in order to give the impression that the film was a single uninterrupted shot. This technique was then used and improved upon with the development of technology to produce films such as Running man (1997), Irreversible (2002), Enter the Void (2009) and most recently Birdman or the unexpected virtue of ignorance (2014). These films possess a unique distinction in the way they not only require the uninterrupted movement of the camera but also a seamless continuation of the backdrop of the film’s narrative.

In the film Birdman or the unexpected virtue of ignorance (2014) this technique of filming allows the viewer to follow each character as he is able to draw a definitive understanding of the spaces that they inhabit.

Through the course of this research the film has been viewed multiple times in order to map out the movement of each character as a means of establishing the architectural layout of the filmed spaces. The film takes place in the St. James theatre which is located on 246 West 44th Street in New York. The theatre is an actively existing building. Its well-known historic significance paired with the theatres tactile qualities made it an appropriate setting in which the film could take place.
Despite the impressions presented by the film it was discovered through the course of this research that the theatre despite its aesthetic impression however had not been designed to cater to the unusual demands of the film’s narrative and style of direction. As a result, it became clear that the St. James theatre was not the only location in which the film had been shot. While the scenes surrounding the stage and lobby were shot at the St. James theatre during a 30-day gap between shows\(^9\), two other locations outside the theatre were used during the filming. These locations include the Rum bar and the backstage which includes the individual dressing rooms.

The rum bar first introduced during a dialogue between the characters Mike Shinner and Riggin Thompson as they walk out the theatre and along the street. Much like the theatre the rum bar is an actively existing space within the city of New York. The bar however contrary to the impression given in the film exists 3 blocks away from the theatre as opposed to being a few paces down the street as the film depicts.

The second location used outside the theatre was the backstage and dressing room. The back stage was a location where a majority of the film takes place. The spaces observed within them were all part of an elaborate set that was artificially created by the team’s product designer Kevin Thompson. It was constructed at the Kaufman Astoria Studios in Queens and was designed as a labyrinth with no end. It consists of a number of small rooms and narrow hall ways that are stitched together in a seemingly sporadic way in order to create a homogenous space. “We built a three-level maze, a labyrinth of
corridors that connected to itself at different entry points,” said Mr. Thompson. “I designed it in a way where I would make it confusing so that people wouldn’t understand the geometry”. The set consists of three levels with Riggin Thompson’s dressing room at the highest level, Mike Shiner’s room in the middle and the prop room at the bottom forming a complete loop.

Each space is an immediate architectural representation of the characters it surrounds and the narrative that unfold within it. It can be understood therefore that each element of the set was deliberately placed or designed in order to enhance the experiential quality of the film’s narrative. As a result, the architectural layout observed within the film become an almost immediate projection of the film narrative and its linear progression.

As a consequence of the director’s method of filming the viewer cannot help but assume that the spaces observed within the film are part of a single and cohesive layout. Yet when taking the findings of this research into consideration it becomes apparent that the impressions left to the viewer by the film are not based on reality. This contrast in understanding highlights how the medium of film is able to distort
the limits of reality and allows for a space to communicate a narrative in a very distinct manner. In having used these very separate locations the director is able to exhibit an expression of architectural intangibles that could not have otherwise been possible outside the medium of film. In the case of the backstage and dressing room it can be stated that in addition to the changing entry points observed within the film, the director adds a dynamic dimension to the overall spaces. This dynamic quality actively allows the spaces to react to the experiential changes within the film’s narrative. Through the course of the film the lead protagonist Riggan Thompson (Michael Keaton) is seen as struggling with episodes of anxiety and schizophrenia that ultimately worsen as the film progresses. This psychological state is not only made apparent through characters own persona but can also be felt due to the active changes that take place in the spaces that surround him. As Riggan Thompson’s (Michael Keaton) psychological state deteriorates, the spaces literally begin to shrink around him. The rooms become smaller while the hallways seemingly feel longer and tighter. In allowing his set to actively participate in the narrative of the film beyond the role of providing a backdrop for his narrative to play out, the director was able to display how architectural elements that are inherently static can – within the medium of film, develop dynamic qualities on both the material level as well as on the subconscious level in order to enhance and communicate its narrative.

**SPATIAL LAYOUT**

As part of this research the layout of spaces observed within the film have been documented in order to arrive at a more comprehensive understanding of how the architectural layout of spaces contribute to the overall narrative of the film. Taking into consideration the earlier findings of the research the process of documentation has been conducted using two very separate approaches. The first approach can be called the closed loop plan that looks at the layout of spaces according to the impression that the spaces, while existing separately in reality, are in fact a single homogenous space enclosed in or around the St. James theatre as the film depicts.

The second approach can be referred to as an open loop plan which is based purely on observations made during the film. This approach is based on making observations that are detached from the constraints of reality and surrenders completely to an understanding that is drawn from the medium of film.

Both forms of approach used in the process of documentation represent an attempt at resolving the polarized relationship that architecture shares with the medium of film. While the closed loop plan represents an architectural understanding of film space, the open loop plan suggests how the medium of film is able to add a layer of distortion on top of an architectural layout, where by it can free an architectural space of the constraints it finds in reality.

**CLOSED LOOP PLAN**

In carrying out the documentation of the closed loop plan the film was studied frame by frame in order to establish each point of contact that the separate spaces had to each other. While each connection contradicted the other significantly, a number of connections had to be immediately eliminated due to
the fact that through no amount of alteration could they actually exist in accordance with those points of contact.

![Figure 3.1 (Layout studies)](image1)

From the number of connections under observation one was selected based on the most promise it showed towards being possible despite still having a few conflicts with the film. The plans were then altered and amended according to basic architectural standards in order to arrive at their final documentation.

![Figure 3.2 (Final layout)](image2)
Figure 3.3 (Plan at +6’)

Figure 3.4 (Plan at +20’)

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These plans can be understood as an architect’s interpretation of the spaces observed within the film, forcibly resolving them into the margins of reality. While these plans seem fairly resolved, it is only when they are cut sectionally that, can it be observed that there are a number of negative spaces within the building that the film made no effort to resolve. Those negative spaces while never actively seen in the film undoubtedly exist as suggested by the plans produced in the process of documentation.
In the second approach towards documenting the film space, the spaces were observed and understood through the lens of the film itself. In documenting the open loop plan any inclination towards being limited by reality were put aside and the spaces were documented exactly as they had appeared in the film. In the dialogue between film and architecture while the closed loop plan can be seen as a purely architectural perspective the open loop plan is a purely film-based interpretation of space. During the process of documentation each scene is isolated to the space in which it takes place while the orientation of the space is determined by the characters movement throughout the space. The open loop plan can then also be taken as a map of character as they move about throughout the film.
As the film begins the spaces immediately begin to reveal themselves based on the characters movement about them. As the film opens we are able to follow the protagonist Riggan Thompson (Michael Keaton) as he makes his way from his dressing room to the theatre’s stage and then back to his dressing room again. When returning to his dressing room the character is observed taking an alternative route which passes through the backstage and dressing room. The alternative route being the longer of the two raises the obvious question of why one over the other. It can be observed here that the layout of spaces occupied
another distinct function which suggest the direct relationship between the length of space and the length of a character’s dialog. While the character of Riggan Thompson (Michael Keaton) could just as simply have returned to his dressing room along the same path that he had taken to arrive at the stage, however the length of that route obviously proved insufficient for the dialogues that were required to take place. It can be established therefore that the number of connections each space had to itself were not the result of convenience but contributed significantly to the play of the narrative.

Another startling observation can be made on observing the open loop plan is the presence of the theatre within that layout. As being the most prominent architectural setting in which the film takes place the theatre displays no centrality within the overall layout of spaces. The theatre can be observed like all the other spaces to move about its place, changing its orientation as it does. While orientation acts as a sacred concept in architectural conception, the film shows a blatant disregard for it.

CONCLUSION
From the images concerning the open loop plan, the stark and almost immediate contradiction to the closed loop plan can be seen as apparent. While the closed loop plan paints a very definitive picture of the film space the open loop plan is much less definitive in defining the boundaries in which the film spaces resided. While the closed loop plan was developed based on architecturally connecting the separate spaces at their entry points, the closed loop plan is based on following each character as he or she makes their way around the theatre. By mapping each character’s movement about the space, we arrived at a layout that, from an architectural point of view, offers no grounding in reality. The arrangement of spaces in the open loop plan can be seen colliding into each other, overlapping at various instances.

From this spatial arrangement it can be understood that the director had a more profound understanding of architectural layouts then might be initially assumed. While the film could have been built around the spatial arrangement observed within the closed loop plan, the director deliberately breaks the constraints of architectural standards and by doing so, establishing the supplementary nature of architecture towards expressing a narrative within the medium of film. From both forms of documentation, the spatial transformation of architectural spaces can be made apparent. While architectural spaces may be understood as being inherently static, the medium of film allows them to become at once dynamic in their experiential qualities – literally and metaphorically.

The following research was conducted as a case study, taking the film Birdman or the unexpected virtue of ignorance (2014) by Alejandro González Iñárritu as the subject of its study. The film can be understood as an immediate representation of how design is able to communicate a narrative within a film. It depicts in the backdrop of its narrative the subjectivity of architectural space. As a tool in architectural education the film is able to give a visual of architectural intangibles as they interact with the subconscious of those who experience it. Within the medium of film, it can be argued that architecture becomes a mediator between the real and the unreal, blurring the distinction between the two. By doing so architecture within the film space occupies a prominent position in establishing the framework in which a narrative can cultivate its expression beyond the screen. As can be observed through the course of this research the roll of architecture within the medium of film extends beyond a coincidental or aesthetic backdrop.

The following research looked into two very separate understanding of the architectural layout observed within the film and how they, in distinct ways defined the linearity of the film narrative. Each layout documented through the course of this research can be viewed as the tangible materialization of the films narrative. From the length of a space to the visual qualities observed within that space each aspect of the architectural interventions observed in the film play a significant role in complementing the films narrative. The films style of direction where by the film appears as a single shot creates a context in which the architectural layout observed within the film are inexplicably tied to the linearity of the film narrative.

In conclusion it can be said that the film is a perfect example of how the medium of film can act as a layer of distortion over an architectural space while an architectural space can establish the foundations on which a narrative can be seen to develop.
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THE BLACK HOLE CITY

Author:
TOBY REED

Author Affiliation:
NERVEGNA REED ARCHITECTURE.

INTRODUCTION
We live in a city of black holes where image in every mutation has infected the surface of reality. Buildings, spaces and zones of buildings create the impression of black hole realities and worlds in which the object and space is infiltrated by image.¹ Our perception of the reality of the contemporary city is affected by the way the political and social express themselves in image, whether it be on screens or as buildings, spaces or streets. How do we conceive of architectural strategies for intervening in the contemporary city where the image and spectacle has seemingly taken over?²

Reality is Cinematic. Although the cinema has almost died, like the title of Roger Boussinot’s seminal 1967 book ‘Le Cinema est Mort, Vivre le Cinema!’, it has left an imprint which lingers in everything around us, as its systems and signs spread out into the environment, infiltrating the morphology of the cities in which many of us live. Due to our constant immersion in the cinemas aftermath³ it is important to look back on the cinematic systems that seemingly started it all in order to analyse the daily effect on our spatial consciousness and understand our relation to built objects. We now live in the post cinematic city.

The Screen is a Black Hole / Buildings as Screens
In scientific reality the black hole is a wormhole to another space and time, and possibly another spatial formation. The television screen (and cinema screen) works like a black hole in our living room, by bringing another space and time into the close proximity of our screen in our present tense world: yesterday’s news from another planet into our living room, now. This space-time disjuncture of the screen is our reality, stuck in the present space and time but surrounded by screens connecting us to other space times.⁴ Our relation to the screen reveals a structure of our existence in the modern world. The space-time disjuncture of the screen is part of our common sense of spatiality that the cinema has left us, and this infects our relation to objects and space. It is part of the DNA of our everyday experience in the post-cinematic city. In this contemporary condition, the screen is like a black hole and buildings are like black hole screens in the city.
This has helped condition us to experience buildings like black hole reality zones. Buildings in the post-cinematic city work like screens in the environment, whether it be like a screen sitting on a building, a drive-in by a suburban freeway or a mobile phone screen. Buildings, like screens, sometimes produce a subliminal experience like a reality-vortex within the environment: a wormhole to another place and time with another object/spatial morphology sitting in our urban field like a TV in a bedroom or a million TV’s scattered in a field. Buildings also can sometimes work like this. With our experiences conditioned by the cinematic, buildings have become like worlds that we can inhabit, each a slightly different morphological structure on the surface of reality. Our everyday spatial relation to the screen has likely conditioned us to this subliminal black hole effect in our relation to objects and space. This is particularly present in our experience of the contemporary city, but also in the sprawling suburbs and the countryside. The everyday space-time disjuncture of the screen, as well as the colliding of different types of architectural morphologies and spaces has likely had an effect on our relation to objects and our experience of interior/exterior relations. Disjuncture, like in a field littered with screen vortices, is now a way of connecting in the post cinematic city, as well as in the endless interior spaces within it. Each room in the buildings that inhabit the black hole city is potentially separated, and connected by, a cut, fade, superimposition, jump cut or dissolve to another space, another experience. The city can now be conceptualised as a field of screen-buildings, or as an urban screen-scape littered with image-objects and image spaces. This experience of the urban screen-scape transforms into the rural screen-scape as we drive away from the suburban sprawl. Objects, and therefore buildings, have traditionally helped us understand and define our reality. Siegfried Kracauer posited that the theory of the cinema, as well as its origins, history and development rest on the binary tendencies of reality/fiction: the documentary cinema of the Lumiere brothers and the science fiction of Melies. The internal dialogue within the cinema has, from its beginnings been based on defining levels of reality. This is second nature to all audiences watching a movie, documentary, or even advertising, where the two poles of the cinematic, reality and fiction are mixed. Architects define and articulate reality through the act of building. The objects we build become reality nodes. Some objects we do not notice because they are ordinary and become subliminal backgrounds to everyday experience, but they still create subtle reality zones. Other objects rupture the ordinary, causing disruptions in the surface of reality and black holes to new experiences. By designing ordinary and disruptive objects, architects, designers and developers of all types alter the city and the surface of reality. We can see how architects change the surface of reality. In doing so we change the experience of reality and how the world is perceived. However we must understand how this world that we build in is constructed, experienced and perceived, in order to build in it
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constructively. As we have seen, this reality that we are constantly hacking into is informed by multiple factors, including the post-cinematic experience of the screen in all its mutations, from the television to the smartphone. In this way, reality is infected by the cinematic.

Figure 2: The PEP Dandenong exterior (L) and interior (R) has perforated screen with optical black hole surface to the public plaza. Nervegna Reed Architecture. 2012 Photos John Gollings

Suture
Buildings are used to create cinematic reality. In movies, buildings, architectural styles and typologies are used to denote certain fields of reality that the film is attempting to evoke. This shows us how on a very literal level various types of architecture are used to convey different types of reality or worlds. In the contemporary city there is a sometimes subliminal experience of disjunctured worlds, or splicing realities, from building to building and zone to zone, similar to the effect of a screen showing another space and time in our kitchen or a screen on a building in the city acting as a portal to an alternate world. This normal situation of the city is enhanced by a more literal sense of black hole urbanism that we see in the theme park inspired Las Vegas system, which we can see in new developments in China, but also infiltrates the everyday urban field of most cities. The experience may be obvious and representational in Hello Kitty World in Anji County China, but in the normal post-cinematic city the situation is more unconscious and does not necessarily subscribe to a representational system, as the urban environment sutures us into its reality like a film sutures its audience into its world.

All contemporary cities share aspects of the simulated theme park and cinematic vortex. Even without the signifying surfaces of the theme park or urban screen insertions, the post-cinematic city provokes an experience of disjunctured realities side by side, in the forms of individual buildings and zones made of clusters of buildings and spaces, each with its own morphology, lifestyle and ideology. It is not just architect designed building which create these realities (however these may account for some of the stranger realities). The normal, boring, messy and badly designed buildings of 90% of everyday reality all help form these impressions.

We can see from the example of the appearance of buildings in films, or the Las Vegas system of simulated buildings in the city, that there is an overt relation between different architectural manifestations and types of reality or worlds. The normal city littered with seemingly abstract buildings, with abstract signifiers, seem to still work like the other more simulated urban situations. Buildings in the normal post cinematic city work a bit like a
screen in the city with abstract vortex to another space. They might be essentially abstract objects but they signify on other levels of spatial/object familiarity. Buildings can be experienced and signify through image association (the abstraction of the Rorschach in the everyday), figure/ground and object/context relations, or how they do or do not fit into the developer driven environment through banality, beauty, strangeness, ugliness or sheer difference.

To help break or expose the role of image in the contemporary city we can use the investigations around ‘suture’ in the cinema which analyse the subconscious process of suturing subjectivity into a semiotic image system, as precedent. In the post-cinematic city each building is a mini ‘reality-monad’ in a scattered universe of multiple objects and shifting points of view. Some of these buildings work subliminally and some manage to trigger a consciousness of this urban situation we inhabit (including the relations between image, space and object), breaking or exposing the cinematic suturing effect through design moves and object/context manipulation.

Figure 3: The Arrow Studio aims to disrupt the suturing process of image through disjuncture. Nervegna Reed Architecture.

Black Hole Zones

Architects do not build images of reality. They build reality. When we design buildings and spaces for the post-cinematic city we understand the situation intuitively and attempt, even in the most banal of design situations, to design what we feel should be there, to manipulate through design how reality should be shaped or altered. In this way, architects can disrupt the surface of reality.

Clusters of these objects and spatial objects form abstract zones with impressions and experiences that vary from zone to zone, often overlapping. Buildings become like micro-worlds, impressions of zones or vortices, worlds within worlds. To understand the post cinematic state of the object can help us design and build architectural objects and interiors that help us understand the folds and depths of our reality.
We can see that, similar to watching a movie in which architecture helps build the reality, particular buildings and zones in the contemporary city seem to work together or separately like a vortex pulling us into their world, with attached lifestyle, ideology and spatial/object morphology. How we perceive and experience these zones is dependent on each of our personal and shared experiences of the physical and virtual environment. Our buildings change the surface of reality. These objects (buildings and spaces) form nodal points that can reveal or provoke a contemplation of our reality, and the political, social and spatial experience of the city. Here lies the possibility of infecting and disrupting this urban morphology from within its spatial/object system. To do this we must understand how our perception and experience have been infected by the post-cinematic through the multitude of image and screen mutations and offshoots. By understanding this context, our architectural objects inserted into the contemporary city can help shift our relation and awareness of the real in all its complexity.

Channel Surfing in the Post-cinematic City
How do we conceptualise the architectural object (and spatial object) in the city conditioned by the disjuncture of the screen? Cohesion in the traditional city such as Paris or Venice, created larger black hole zones with endless pockets of slight variation. The situation of most post-cinematic cities is the impression of a zone of disjuncture: a vague splatter zone of ‘cityness’ made with a multi-vortex impression of black hole objects and spaces. This disjuncture and multi-vortex effect of the contemporary city is closer to the non-chronological sheets of time that we see in post WW2 cinema of Godard and Resnais, or a field of televisions switched to alternate channels or the experience of channel surfing. The cinema of the classic Hollywood system is based on the impression of continuous movement which is close to the experience of the pre-19th century city.
A possible technique for intervening in the chaotic sprawl of the city and suburbs is the space-junk object dropped into the environment with seemingly no regard for context, but actually giving the context exactly what it needs. Urbanism has become a field of multiple conflicting pockets of strategic planning, conceptual acts and random urban insertions like a scatter of asteroids from another planet. We can respond to this chaotic disconnection directly.

Figure 6: The PEP Dandenong conceived as urban ‘space junk’ with unknown functional logic dropped into the public plaza. Nervegna Reed Architecture. 2012. Photo Toby Reed

Urbanism of the Image

We must attempt to understand how image works in this post-cinematic situation, in order to comprehend properly how the architectural object works in the contemporary city, and the relation of image to object and space. In 1960, in his book The Image of the City, Kevin Lynch used the term ‘imageability’ in relation to urbanism and the perception of nodes, paths, districts, edges and monuments. Although he was interested in image and urbanism he did not account for the influence of the cinematic image and advertising on urbanism. The world overtaken by image, that Guy Debord described in The Society of the Spectacle, is here, and Le Corbusier’s dictum that the ‘plan is the generator’ seems to have been replaced by the implicit understanding that the image is now the generator. The Smithsons and Rayner Banham understood this just before the Pop moment and architects since then have been responding to the need for buildings to be structured within or against the logic of the advertising and image machine. Since pop we have seen the emergence of what Hal Foster terms ‘image-buildings’. We can see the complex relation of architecture, image, spectacle and politics expressed in different ways in Gehry’s Bilbao and OMA/Koolhaas’ CCTV. In these building’s we can see very different levels of engagement in the object-image with the socio political issues and attendant political and cultural functions. The plan, as Le Corbusier saw it, seems to have morphed into a more complex entity, one that includes image in a new spatial configuration, not just image as flat surface or sign but image of the object that includes spatiality, the social and the political. The idea or concept has become the generator. Image is now an integral element of the real and of surface. Image is not just the thing we see next to the ghost of space, but has infiltrated all elements of architecture, urbanism and consciousness.

The Feedback Loop

There is a feedback loop within our universe, in which the real feeds into image and then is projected back as an ‘image-of-reality’ into our reality, becoming part of the real, that is then fed back into ‘image’ in a constant loop. Debord wrote “the spectacle is not a collection of images, but a social relation among people, mediated by images.” The mediation of images in the contemporary city, and in the architectural object, is a little like a feedback loop into
which the architect must insert ideas and design actions. To achieve a zero-degree image relation within the object, in which the structure and relations between image object and space is foregrounded, would help us understand our everyday experience in the contemporary city. By making ideas and images into (built) physical reality, architects build reality, or at least alter the surface of reality.

**TV Eye**

How do image and spectacle work in the city of black holes? How can we insert objects and spaces into this reality of the city of images and subvert spectacle? We need to keep analysing the constantly mutating ways in which the image infiltrates the object and our spatial sensibility. This includes the latent scopophilia of the screen effect on our built environment, and the development of a kind of post-cinematic screen-space. If we constantly analyse and try to understand this, we can design in ways that combat and compliment the side-effects of the screens emergence within the contemporary city, and the grafting of image, object, the social and the political.

The perception of the post-cinematic city as a series of subliminal and overt black hole vortices, with possible disruptions of the surface of the real, that can provoke a relation to reality, can help us conceptualise the relation of object to image and spectacle in the present tense. This can be conceptualised with ever-evolving techniques such as the conscious mediation of the image and object via the conceptual feedback loop. We need to design objects that have within them the feedback loop of reality and image, and expose the experiential, political and visual apparatus. This, and other methodologies of working with the image, object and space, can help force ruptures and disruptions in the surface of our built reality that can wake us from an image-soaked urban experience.

Dziga Vertov’s Man with a Movie Camera was prophetic of this relation of the image in the contemporary city. Alexandre Astruc’s notion of the Camera-Stylo has unintentionally mutated and infiltrated our everyday urban experience on a mass scale. Now everyone, with smart-phone in hand, has their own Camera Stylo. Everyone is now a man or woman with a phone-cam. It is possible that this situation can become a design tool, and has within it hidden design methodologies for the city.

*A simple diagram or image of the post-cinematic city that we inhabit, of how its buildings and spaces work, would quite likely be an environment littered with an infinity of dispersed screens, and screens within screens, each a conduit to a micro-world, another lifestyle, another ideology.*
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1 These observations have evolved from many years designing architectural projects, urban design and master-plans, as well as film projects. Concepts used such as the black hole, the screen, suture, feedback loops, channel surfing and TV Eye are used as heuristics in order to generate ideas relating to architecture, the city and the influence of the cinema and media upon them. These also reference film terminology as well as the vast array of ideas on film spectatorship, perception and identification in film theories such as Jean-Louis Baudry’s “Ideological Effects of the Basic Cinematographic Apparatus” 1974. This writing combines the analysis of film and media with the phenomenological experience of the city.

2 There is a clash between traditional academic writing and the often more propositional writing that emerges from practice and research practice from which this writing has been generated. Practice research writing often has a double concern with generating new ideas and concepts which can help architects and designers creatively interact with the situation that is under analysis. The writing style, by deviating from the traditional academic style, can become a meta-reflection on the ideas as well as styles of discourse, and can help generate ideas for future practice.

3 Gilles Deleuze in an interview relating to his books on the cinema describes the cinema as a model for the world, which is overrun by a cinematic logic. Gilles Deleuze. “On The Crystalline Regime.” In Art and Text. Melbourne: Spring 1989. 20.


5 Suture was first utilised in Lacanian psychoanalytic film theory by Jean-Pierre Oudart.


10 Alexandre Astruc, La Camera-Stylo, was originally printed as “Du Stylo a la camera et de la camera au stylo” (L’Ecran Francaise,1948).

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DIGITIZED BODIES AND THE CRISIS OF THE ARCHITECTURAL DRAWING

AUTHOR NAME: GEORGE THEMISTOKLEOUS

AUTHOR AFFILIATION: LEEDS BECKETT UNIVERSITY

INTRODUCTION
The representation of an architectural object comes into being by working at it from a distance. Robin Evans states: ‘I was soon struck by what seemed at the time the peculiar disadvantage under which architects labour, never working directly with the object of their thought, always working at it through some intervening medium’. As such, the architectural drawing functions as an intermediate that translates ‘an object of thought’ into a building. These projective drawing media are based on established geometrical principles. Thus the ‘object of thought’ is to a certain degree, informed by certain rules. Yet the geometrical determinism implicit in drawing media is somehow, according to Evans, countered by imagination. Through imagination it becomes possible to unhinge the drawing’s geometrical determinations. Evans asserts this when he says ‘more in accord with our prejudice that architects of genius must wrest themselves free from the restriction of geometrical drawing rather than use it’. But what in-forms an imagination of a certain space in the first place? In this case, is the architect’s imagination of space already not inhibited by projective geometry? Before thinking of the intentional act implicit in translating drawing to building, what produces the ‘image of space’? And to what extent is this ‘image of space’ geometrically determined? While these nebulous questions might imply a search towards origins, what will be considered here is how the digital re-articulates these issues. This article attempts to probe the questioning of the architectural drawing through a digital multi-media installation of my own making entitled the diplorasis. Through this media installation the participating body becomes entwined with space. The distance assumed between body and object in this case ceases to exist. This particular media experience will offer a means from which to re-think media constellations by re-visiting the work of Marshall McLuhan, and Gilles Deleuze and Felix Guattari. The latter part of the paper investigates the medium that is central to the diplorasis, i.e. stereoscopy, and considers its more recent analog to digital transition in more detail. By looking at the digitized stereoscope through Deleuze and Guattari’s notions of smooth and striated space it becomes possible to speculate on possible tangents where it is no longer the drawing that inter-mediates between ‘an object of thought’ and a building, but rather it is the body that is positioned at the interval between actual space and virtual image. If the body in drawing projection as articulated by Evans implies forms of distancing through geometrical projection and experience, then how do we account for the contemporary body that is open to technological manipulations of distancing and proximity?

A MEDIATED SPACE
I would like to begin unfolding this line of enquiry through a media installation project of my own making entitled the diplorasis – the word derives from the Greek compound terms: diplo – double and orasi– seeing. The diplorasis started in 2014 as an installation, a kind of a hyper-mediated walk-in
‘corridor’, in an abandoned house in Nicosia, Cyprus. The external structure of this ‘corridor’ holds up 140 mirror panels made from either acrylic or glass each measuring about 60 x 40cm. Eight of these panels are one-way mirrors (stop sol). The frame also holds up a sandblasted glass piece (120 x 120cm) with a hole that supports a rectangular cavity in the form of a human head. Excluding the curtain entrance and the translucent glass panel at the far end, the inside of the corridor is composed entirely of mirrors. The outer shell of the corridor – the exposed timber frame - contains various cameras and electronic wires. The juncture between the outside and the inside is negotiated via one-way mirrors.

When one enters the brightly lit corridor, the viewer, or more appropriately the ‘participant’, will be drawn towards the sandblasted translucent screen at the far end of the corridor with a cavity in the shape of a human head and two peepholes. As the participant walks through the space, the lighting condition changes frequently in response to changes in the movement, which creates further disorientation in the infinitely-mirrored space. Inducing a difficulty in grasping the entire volume. This is also due to the fact that black (or one-way) mirrors are not positioned in any clear order and there is a slight split in the main volume of the corridor that is not obviously perceptible. This split occurs about two thirds of the way inside the corridor where the height of the ceiling is lower. This has a strong effect on the perception of the mirrored corridor, as the floor appears to be suddenly receding, whereas in reality it is constant. When finally arriving at the far end of the corridor, the participant will be drawn to position his/her head inside the cavity. Through the peepholes s/he will encounter a stereoscopic projection of themselves from previous instances inside the corridor space. These stereoscopic images will then be sequentially replaced a few seconds later with another view of the participant. As images change, they become increasingly misaligned and manipulated, making the participant suddenly self-conscious of their own movement from unexpected angels (from sides, from behind), but also the movement in time in the duration of the walk along the entire corridor (spaces beside and behind).

Behind the scene various Raspberry Pis are connected to Arduino micro-controllers, DSLR cameras, LCD screens. The arduino micro-controller is in turn connected to programmable LED strips and ultrasonic sensors. Software programs control Pis and Arduinos and their communication in capturing the participant’s movements at various intervals (approximately every metre). These sensors when triggered activates in both the LED light strip and the camera to capture an image of the participant. These instantaneous stereoscopic images of the moving participant are achieved by custom made stereoscopic mirrored caps placed in front of cameras. The lighting condition needs to be very specific in order for this capture to work (i.e. for the lens to have sufficient light that would enable a sharp image captured through a quick shutter release). At the same time the lighting further disorients the participant’s comprehension of a spatial coherency. These cameras are placed behind one-way mirrors and within blacked out (via felt) volumes to maintain the lighting ratio necessary for a one-way mirror to work, i.e. dark on one side and very bright on the other. Hidden from the view of the participant, these cameras rely on a sudden flashing of light to capture a sharp and stereoscopic image of the participant, which then is processed and split by the software. The split pair of images is then sent to the two LCD screens via a wifi router connection. Four LCD screens are placed on a rotating base. Once a stereoscopic pair is projected on one screen, the image remains for a number of seconds, then the base rotates to show the next screen with the next pair, and so on, until all images are projected. Some of the pairs are not photographic stills but a pair of very short videos. During this rotation, the actual environment of this machinic setup is also visible. Mirrors placed between screens will re-project the view of the participant while looking. Finally, some of these projected images are
Manipulated through the software by being warped. Currently the possibility of integrating and transforming some of these images into a point cloud format is being explored.

**MEDIA AND BODY**

In the *diplorasis* it becomes pertinent to ask how does the sensing body relate to its dissonant projected image? In *Understanding Media* (1964), McLuhan unravels how media continuously alter man’s sensory fields. Along with the altered sensory field is the altered sensory body. For McLuhan, each medium entails a particular sensory involvement with the body. Media affect the proportionate investment of each sense – thus each medium assumes a different sensory investment. The medium of the television (referring to the cathode ray tube television screen) for example is described as ‘a mosaic of light and dark spots which a movie shot never is’. Therefore the ‘TV image requires each instant that we “close” the spaces in the mesh by a convulsive sensuous participation that is profoundly kinetic and tactile, because tactility is the interplay of the senses, rather than the isolated contact of skin and object’. Furthermore, the intertwining of different media produces new assemblages that lead to novel media, as McLuhan states: ‘... the meeting of two media is a moment of truth and revelation from which new form is born’. New media and the emergence of new form continue to incorporate remnants of old media, through habits and technological conservation. McLuhan points out that ‘although the medium is the message, the controls go beyond programming. The restraints are always directed to the “content,” which is always another medium’. In one of his references to Euclidean geometry McLuhan presciently indicates how the introduction of informational loops offers a possible means for thinking beyond Euclidean notions of space. The distinction he makes is between the ‘automatic’ that ‘involves feedback’ as opposed to the ‘one-way flow or mechanical system’. As the ‘feedback or dialogue between the mechanism and its environment brings a further weaving of individual machines’, the lineality assumed by Euclidean space is challenged by informational circuitry. The relation between body and world assumes a different sensory investment in a geometrical system – i.e. Euclidean space – then it does when compared to informational systems (although these are not necessarily distinct). If informational processes are increasingly re-scripting our sensory co-ordinates why is the design of space still so reliant on geometrical determinations? Does the distance assumed by Evans in the translation from drawing to building still hold in the digital era? In order to further explore these questions the articulation of smooth and striated spaces by Deleuze and Guattari offer a possible method from which to re-consider informational media and their relation to the body.

Deleuze and Guattari in *A Thousand Plateaus* refer to the notions of smooth and striated space. The smooth and the striated involve different types of multiplicities. Striated space is identified with metrical space (from the Greek word metro: translated as to count or unit). Metrical space measures and codifies. An example of this is the ‘magnitude of a vertical line between two points’ that ‘can be compared to the magnitude of a horizontal line between two other points: it is clear that the multiplicity in this case is metric’. This type of magnitude ‘allows itself to be striated’ and its determinations are magnitudes’. Smooth space however involves a resistance to striation. These magnitudes ‘cannot divide without changing in nature each time’. This division corresponds to an extensive and intensive magnitude, already articulated by Deleuze in *Bergsonism*. The two types of spaces: the one extensive and quantifiable, and the other intensive, qualitative and temporal are intertwined when related to matter. Smooth and striated thus ‘give rise to far more difficult complications, alternations and superpositions’ and ‘nothing completely coincides, and everything intermingles, or crosses over’. Deleuze and Guattari explore the smooth/striated through the visual
field (this is in the section on ‘The Aesthetic Model: Nomad Art’). They suggest that the striated ‘relates to a more distant vision, and a more optical space’.16

By utilizing a particular medium -the digitized stereoscope already referred to in the diplorasis- we might be able to consider how these notions of smooth/striated, and to ask how the digitized stereoscope conflates –through embodied visual representation- both smooth and striated space?

In order to address this question it is necessary to return to the analog stereoscope. The Wheatstone stereoscope17 depends on a precise striation of the image. In order for the stereoscopic image to emerge, the calculated angle differentials of each stereogram must correlate to the discrepancy of the binocular visual cones. Through the mirrored projected the simulated image re-creates an illusionistic depth, by playing with the angle differential of each eye. As the monocular eyes separately receive the two images, the very monocular functioning is accentuated. A calibration of the dual monocular cones and their overlap induces an-other visual image. The image is initially striated. It is split and re-stitched in a particular way, taking into consideration the geometrical overlapping angles of the eyes in the construction of the image. This geometrical manoeuvring creates an illusionistic ‘depth’. The striation of the setup gives way to an indeterminate state where the perceived planes hover around a voluminous mobile illusionistic depth. Striation produces a smooth space where the image is without top, bottom, left or right. This smooth field is nonetheless contingent to the striation of eyes and the technical ensemble. If you close one eye the smooth space disappears. The stereoscopic image induces an intermingling between the tactile and optical as they conflate to trigger a haptic environment.

Through this visual instrument the relations between referent and represented image are discontinuous. This discontinuity however, is different from the one assumed by projective drawing representational forms (i.e. perspective). Within the stereoscope the discontinuity between the referent and represented image is part of a process that actively involves the operation of the body. In perspectival representation the discontinuity is of another kind, it assumes an a priori discontinuity of body and represented object. In linear perspective the distance between body and object is determined through an abstract geometrical construct inscribed on the picture plane. The perspectival picture plane is a static screen that reduces either side –body and world/object- to an invariable form. The discontinuity assumed by the stereoscope between referent and represented image aligns it with digital image processing. The possibilities offered by the digitization of the stereoscope offer a way from which to think of striated/smooth space. Digital media and stereoscopy increasingly converge on the surface of the screen. The digital screen in this case communicates with both its referent and its viewer through informational loops. All digitized processes involve input-output commands, i.e. a discontinuous process. What this means is that in order for the screen to be perceived by humans the machine-readable code requires digital-to-analog conversion. This is because the ‘computer stores meta-pictorial information in a fragmented array of discrete numbers, which cannot communicate directly with the depicted or the observing world’.18 The digitized stereoscope thus involves two types of discontinuities: the perceptual discontinuity of referent and represented image and the input-output discontinuity that converts digital-to-analog informational. This second level of discontinuity makes it possible for the stereoscopic image to become attached and extended to a whole range of external ‘inputs’ – from other bodies, objects and the environment. Crucially the interaction of the two intervals possibly re-produce zones where smooth notions of space further intermingle with as well as disrupt striated spaces.
COLLAPSE OF DISTANCE

Thus the digitized stereoscope can be constantly manipulated due to the digital screen. As Lev Manovich posits, the immersive V.R. headset has superseded the dynamic field of the cinema. In a passage from The Language of New Media he writes that ‘virtual space, previously confined to a painting or a movie screen, now completely encompasses the real space’. He will go as far as stating that the screen has ‘vanished’. The suggestion of being completely immersed in the virtual domain however also poses the risk of considering the body as a non-changing entity; this effectively would reduce the body to a Cartesian unit. It is important to distinguish between ‘the decentered self’ that is ‘repositioned as the locus of techno institutional forces pushing and pulling to achieve maximal efficiencies’, and the creative applications of the body in new media. In the former the striated forms of space are extended to the virtual domain. Through the latter it is possible to further explore the slippery interval between geometrical reasoning and perception, smooth and striated space, virtual and actual. The digitized stereoscope encountered in head mounted VR headsets does not necessarily suggest an escape from the visceral body; instead the emerging stereoscopic medium can expand our understanding of this very interval.

The distance posed by Evans between the ‘object of thought’ and the building through the media of architectural representation, implies a static body in space. Orthogonal and perspectival drawing media are developed from a calculated distance. The emphasis placed within an instrumental digital architecture aims to optimize this control. This pushes the thinking of space towards more and more striated forms, as more tools are developed for measuring and controlling our environments. Digital media are thus to a certain degree developed to behave like older media forms. They are made to be faster, crisper, more efficient versions of projective drawing methods. The ontology of the digital is thus reduced, and its field of possibilities limited. What is proposed here is how emerging digital media enable new ways by which to think of the interval between smooth and striated.

The development of the stereoscope from its analog to its digitized version as seen in the diplorasis includes both geometrical striations as well as a range of circuits; circuits involving both the sensory field and external objects. As such the digitized stereoscope is not isolated from geometrical logic, yet it moves beyond its determinations by setting up particular dis-continuities. The smooth/striated space of the digitized stereoscope reveals an-other conception of space. The alternative for considering geometrical extensity is thus not the anthropocentric perceptual framework but instead a sensing body that is plugged into informational media loops with other bodies and machines. Much like the cinema did over a century ago, this enables us to glimpse at a paradoxical image of time, after the event. Yet this emerging image is not the cinematic image, as it increasingly moves with-in the body. As the distance in the translation from drawing to building collapses, the drawing itself is perhaps liberated from architecture’s instrumentality. What is thus changing is the role of drawing in relation to building; its forms of representation and consequently the way architecture will be designed. New media processes could enable architecture to move beyond its geometrical determinations.
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1 Here Evans is comparing the architect’s mode of representation to painters and sculptors that work directly with the object. Robin Evans, ‘Translations from Building to Drawing,’ in Translations from Building to Drawing and Other Essays (London: Architectural Association Publications, 1997), 156. Leon Battista Alberti’s treatise on linear perspectival representation in Della pittura (1435) is the seminal work that investigates this distance.

2 Evans, ‘Translations from Building to Drawing,’ 156. Evans is referring to Philibert De l’Orme.

3 In linear perspective the body is either reduced to the eye of the observer (i.e. reduced to the geometrical coordinates of the eye) or to the image of the observed (i.e. represented in the image that is reduced to the geometrical coordinates of its ‘envelope’ figure). For an overview of linear perspective see: Leon Battista Alberti, On Painting, translated by Cecil Grayson (London: Penguin Books, 2004).


5 McLuhan, Understanding Media, 314.

6 McLuhan, Understanding Media, 55.

7 McLuhan, Understanding Media, 305.

8 McLuhan, Understanding Media, 354.

9 McLuhan, Understanding Media, 354.


11 Deleuze and Guattari, A Thousand Plateaus, 561.

12 Deleuze and Guattari, A Thousand Plateaus, 561.

13 Deleuze and Guattari, A Thousand Plateaus, 562.

14 It is important here to note that the formation of this temporal multiplicity is linked to Deleuze’s reading of Henri Bergson and the mathematician Riemann. Gilles Deleuze, Bergsonism, translated by Hugh Tomlinson and Barbara Habberjam (New York: Zone Books, 1991), 39-40.

15 Deleuze and Guattari, A Thousand Plateaus, 560.

16 Deleuze and Guattari, A Thousand Plateaus, 573.


18 D.N Rodowick, The Virtual Life of Film (Cambridge: Harvard University Press, 2007), 114.


20 Manovich, The Language of New Media, 97.

21 Manovich, The Language of New Media, 97.

22 The critique of VR stereoscopy can be broadly summarized via the following statement: ‘indeed technologies like VR can be seen as the logical outcome of a process that began with the Cartesian grid and has continued to be ever further refined, abstracted, and imposed upon the perception of the world.’ Frances, Dyson, “Space,” “Being,” and Other Fictions in the Domain of the Virtual,” in The Virtual Dimension: Architecture, Representation and Crash Culture. Ed. Jon Beckmann (New York: Princeton Architecture Press, 1988).

23 Dyson, “‘Space,” “Being,” and Other Fictions in the Domain of the Virtual,’ 39.
Various artists have explored VR stereoscopic formats in their practice. This includes works for example Jeffrey Shaw’s *Epidemics* and Char Davies’s *Osmose*.

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THE PAINTING AND THE PAINTED - ICONOGRAPHY AND ALLEGORY OF ARCHITECTURE IN FILMS

Author Name:
AREEBA IMRAN, ZAIN ADIL (Co-author)

Author Affiliation:
BEACONHOUSE NATIONAL UNIVERSITY, PAKISTAN (LAHORE)

INTRODUCTION

Human beings since the beginning of time, on account of their primitive nature, have been forming attachments, associations and coalitions among different things to make sense of them better. Over the course of time, these connections have become more sophisticated and complex, but the instinctual need to develop these attachments has remained the same.

More often than not, Iconography and symbolism have been catalysts to this dire exigency for man. Iconography has long been a part of multiple disciplines and social ideas. It has been an element that has paved its way into cultures, religions, art, and architectures not just as a silent viewer, but as a dynamic activist, leaving an impact on the social and urban fabric of a society as well. In some cases, it has also found itself performing as a reacting agent to different social or religious movements.

Religion, for example, since its origin has been associated with Symbolism and Iconography, especially in the Hindu and Abrahamic faiths. According to orthodox Christian tradition, a cross is typically used as an icon to symbolize the instrument for the crucifixion of Jesus. In the Hindu religion, many idols are used to iconize different Gods representing different qualities. For instance, the Hindu God Krishna, a ‘supreme God’ is symbolized as a representation of love, compassion, and tenderness. While the God, Hanuman is iconized for strength, heroic initiative and assertive excellence. The iconography of these ‘Gods’ as a depiction of these qualities is deep-rooted in the religious beliefs of millions of people.1

This phenomenon of iconography extends itself into art, especially after the 12th century Renaissance period. By the 15th century, the Iconography in art and paintings had become highly sophisticated and sometimes deliberately ambiguous. This is particularly seen in Raphael’s work, an example being The Vision of a Knight2 (1504-1505) in which, according to some historians, the sleeping knight is a representation of the Roman general Scipio Africanus3 and the two women standing over him, his choices among which he must decide. The woman with a book and sword in her hand representing Virtue and the one with loosened robes holding a flower, representing Pleasure.4

Following the similar pattern, iconography in architecture has been a common practice, subsequent of the ‘image-culture’ of societies that we live in. A particular architecture can become iconic for some reason, and as a result, manufacturing of its Xerox copies can be seen all over the world. An example can be seen of the American White House and its multiple duplicates built around the world, and not necessarily to represent and iconize the sentiment it was initially built for.

“In every capital of the world, President Truman intends to ensure that the American embassy will be built as an exact copy of the White house. When an American citizen visits his embassy, he will feel himself transported to the house of the President.” (Rheinischer Merkur - 1948)5

This image culture or iconography of Architecture can ferment ascribed to different reasons and
through multiple mediums. This paper aims to study how the iconography of architecture in, particularly the medium of film, can play a part in the social behaviors of people all over the globe, towards that particular architecture and towards the society itself. It further evaluates how film as a medium has the capacity to project multiple perspectives of one particular space, by comparing films and the presence of a common architectural space among them, used very differently.

**FILM AND ARCHITECTURE**

The medium of film, in particular, has been a comparatively newer and more contemporary format in the staging of Iconography of Architecture. With this particular medium, Architecture has the room to present and narrate multiple perspectives. A very pervasive example being of the *Eiffel Tower* in Paris, a wrought iron lattice structure, originally built to represent industrial prowess as a celebration of the centennial of the French revolution, and proposed as a center piece for the *1889 Exposition Universelle*. However, owing to its portrayal as so, in many films since its construction, Eiffel tower instead of what it was originally built for, has been iconized as a romantic symbol across the globe. It is now the most visited monument and the most popular tourist attraction in the world owing to its symbolization with love and romance. The medium of film has been an ambassador in presenting this narrative of the architecture to be vocalized to the masses.

For that very reason, the same architecture that is the Eiffel tower, because of its permanent and favored status as an ‘iconic building’ has found itself duplicated at least at 50 sites around the globe. Notable replications and derivations of the Eiffel tower can be found in Lahore (Pakistan), Las Vegas (United States of America), Tianducheng (China), Gómez Palacio (Mexico), Hyderabad (India) and Filiatra (Greece) etc.

Pop culture, more specifically films sometimes tend to take another direction of this Iconography by making a structure or building more iconic than it already is with its divergent projections on the screen. Filmmakers tend to use the importance and the popularity, sometimes even the uniqueness of the architecture to their advantage, by using that building or space either as a backdrop or an active protagonist or silent actor around which their story revolves.

Space remains in singularity, but many portrayals of the architecture via this medium allow multiple narratives and perspectives through which it can be seen. The actual physicality of the space remains static, but it becomes easier to build different renderings around the same common space or architecture. Not to take away from pure storytelling and subjective portrayal of narratives, but with the continuing innovation and development of technology, it has become easier to tell and narrate stories that would otherwise physically not be possible in actuality owing to the laws of physics.

This evaluation can be investigated further with case studies of two famous buildings that have both been projected in numerous films, sometimes more than once in a single film, but each time with a new narrative.

**Building 1: Solomon R. Guggenheim Museum (1959)**

**Film 1: Men in Black (1997)**

*Men in Black* is a 1997 science-fiction, spy film directed by Barry Sonnenfeld. The film revolves around a secret organization called MIB that supervises extraterrestrial life forms, which live on planet Earth, and keep their identities a secret from the ordinary humans. The film casts a futuristic and
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expeditious narrative, which resonates with the character of the city of New York itself.
In the scene (Timeline 0:11:06 – 0:12:40) where Agent J (Played by Will Smith) is chasing a low-life suspect across the streets of New York, he runs towards the Guggenheim museum after the suspect, who tries to seek diversion from the agent. The museum is depicted as if to continually register the fact that the film is shot in the New York Metropolitan, the character of which in subtext also compliments the mood and temper of the film. The façade, roof and main gallery hall of the buildings are used in the scene.
The Guggenheim is also very masterfully placed in this film to exhibit the contrast between its very huge, rigid form and stable structure versus the supernatural speed and agility of the alien suspect when he masterfully climbs the rounded façade of the building at a supernormal speed. (Fig 1)
The numerous layers of meaning are further peeled off, when a shot from above is shown, portraying the multiple galleries that hint towards the complexity and multitudinous of the characters and also - the city. (Fig 2)

Figure 1: Timestamp 0:11:22

Figure 2: Timestamp 00:11:44

**Film 2: The International (2009)**
*The International* is a 2009 German-American political thriller directed by Tom Tykwer, also falling under the Action/Mystery genre.
In this film, the Solomon R.Guggenheim museum has been allegorized as more of an actor than the backdrop. In most scenes, the ramps and galleries of the museum have been shot.
The involvement of this particular architecture in the film breaks the barriers of ‘social etiquettes’ associated with a specific space. In the Guggenheim scene, an Interpol detective, Louis Salinger (Played by Clive Owen) is following a lead where things go haywire, and an intense shootout scene
with automatic weaponry plays out midday in the Guggenheim museum (Timeline 1:12:45 – 1:19:13) between him and the enemy gunmen.

Guggenheim, typically associated with art, sophistication and demeanor becomes an active participant in the messy, vicious and berserk shootout.

The art galleries become *bulwarks* (Fig 3) and the ramp parapets start to act like *shields*. (Fig 4, 5)

The hierarchy of the galleries is also used to depict the hierarchy of characters between the protagonist and the adversaries; the protagonist having taken refuge on the upper gallery floor whereas the enemy gunmen shoot at him from below. (Fig 6)

Towards the end of this shooting scene, the protagonist Louis Salinger shoots at the ceiling of the Guggenheim, and it falls directly onto the enemy gunmen. The arrangement and framing of the shots give the effect of ‘The sky is falling’ (Figs 7,8) and all hell breaking loose on the enemy.
Mr. Popper’s Penguins is a 2011 fantasy/comedy film directed by Mark Waters. In this particular film, the ‘seriousness’ of the Guggenheim museum is once again challenged, using the ramps as a set for a comedic sequence. In this scene (Timeline 0:42:53 – 0:44:45), during a very place-appropriate, high-class and fancy social gathering, Popper’s (played by Jim Carrey) six penguins disturb the sobriety of the museum by causing disarray and havoc at the event. Some guests, although surprised at their presence, assume them to be a part of some art exhibit. Leading up to the scene, a drum of water spills on the ramps, making them slippery and setting the premise for the comedic sequence. The ramps are then, in fact, treated as ‘slides’ down which the penguins surf throughout the Guggenheim (Figs 9, 10) before finally plunging into the band playing at the ground floor gallery.
**Film 4: When in Rome (2010)**

*When in Rome* is a 2010 American romantic comedy directed by *Mark Steven Johnson*. In this film, interestingly, the Solomon R. Guggenheim museum is allegorized at least four times, each time with a different outlook. Same spaces of the museum are used, but shot at different angles and presented with separate narratives and moods.

The museum’s first appearance is registered almost at the very beginning of the film, indicating and hinting at the importance of the architecture throughout the film. During this scene (Timeline 00:01:12 – 00:04:57), the central, vertical gallery of the Guggenheim museum is shown hosting a semi-casual work event. The mood, loud music and the main exhibit in the vertical gallery are deviant to the typical ‘silent and serious’ image of the Guggenheim museum. The ‘exhibit with inverted cars, (Fig 11) the dancing, dolled-up crowd and the consumption of alcohol exude the perception of ‘glamour’ within the space.

The second appearance (fig, Timeline 00:06:48 – 00:08:50) exhibits Beth Martin (played by *Kristen Bell*) walking across one of the horizontal art galleries of the museum with a colleague (Fig 12). This scene manifests the perception of the museum having a mellow work environment. While passing the gallery, the audience sees Beth entering what seems to be a conference room where she attends a formal meeting with her boss and colleagues. As opposed to the first appearance, the second narrative uses Guggenheim Museum as an office space.

In the later half of the film, the director once again uses the ramp and horizontal gallery of the Solomon R. Guggenheim museum but with an altered disposition. In this narrative, Beth and Nick (played by *Josh Duhamel*) visit the gallery at night on a romantic date (Timeline 00:54:30 – 00:57:09). The mood and setting of the ramp changes such that it emanates silence and mystery. The filmmaker carefully maneuvers the same ramp into appearing as a ‘spiritual retreat’ in this particular scene (Fig 13). To inflict this idea further, the dialogues overlapping with the scene, add a layer of mystique and reverence over the space.

“The roof was made of glass so that God could see the paintings from up in Heaven.” – Beth Martin (*When in Rome, 00:54:45*)

Finally, in Guggenheim’s endmost appearance, Beth is seen running after a coin that rolls down the ramp of the museum (Timeline 1:15:20 – 1:15:53). The camera continually follows the coin rolling down the slope, which is used to create a sense of intrigue and mystery. As we see Beth running after it (Fig 14), the ramp tantalizes the audience into being fixated on the question of what it holds at the end.
Figure 11: Timestamp 00:01:13

Figure 12: Timestamp 00:06:52

Figure 13: Timestamp 00:54:35

Figure 14: Timestamp 1:15:32
Building 2: Colosseum (AD 80)°
Film 1: The Core (2003)
The Core is a 2003 American film of the Science-fiction disaster genre, directed by Jon Amiel. The film revolves around a team of scientists who have to drill to the center of the earth in order to set off some nuclear explosions to restart the rotation of the Earth’s core, previously disturbed by an instability in the Earth’s magnetic field. Some problems on the surface of the Earth arise due to this instability, and some natural disasters hit the planet. During a lightning superstorm and ultraviolet radiation, the earth’s surface starts getting destroyed. In this havoc, the Colosseum is seen being obliterated (Timeline 00:48:50 – 00:49:26) by the lightning.
With this scene, the Colosseum, an iconic building of Rome is shown being destroyed to project the idea of the end of the world (Fig 15, 16). So with the visualization of the destruction of an important city and an iconic building ‘Colosseum’, the perception of destruction at a global spectrum is manifested.

Film 2: Thor: Ragnarok (2017)
Thor: Ragnarok is an American 2017 Sci-fi/Superhero Action film directed by Taika Waititi. In the film, a climatic fight scene between Thor (Played by Chris Hemsworth) and the Hulk (played by Mark Ruffalo) takes place within a derivation of the Coloseum. At the first look, the colosseum is barely recognizable against its typical image of the arena of ancient chariot races and epic sword fights.
This particular projection of the famous arena is set in a far-way part of the universe, on a garbage planet ‘Sakaar’ surrounded by wormholes.
The fight scene (Timeline 00:51:25 – 00:59:40) occurs in what looks like a futuristic, ‘gym-like’
derivation of the Colosseum (Fig 17, 18) with bright lights, holographic projections and dystopian technological innovations (Fig 19). The two adversaries are armed with heavy weapons, and instead of normal humans fighting each other to death for glory, this space is used for a battle scene between a ‘God’ and a superhuman. The futuristic projection of the Colosseum inaugurates a contrast with its actual reality by challenging its semblance from the historic Roman times. The space is transformed entirely into a different outlook, forcing the audience to have to work for a sense of recognition of the place.

Film 3: Jumper (2009)

*Jumper* is an American 2008 Sci-fi/Adventure/Action film directed by Doug Liman. The film revolves around a young David Rice (played by Hayden Christensen) who has the power to teleport to different places.

In this film, the Colosseum is depicted twice as a backdrop for two scenes with entirely different mood
settings, color tones and shooting angles.
In its first outing on the screen, the main arena of Colosseum serves as a romantic backdrop (Timeline 00:37:15 – 00:39:40) for an intimate scene. (Fig 20, 21) The mellow and warm color scheme reflects the emotional vulnerability and intimacy between the two characters.
In the second narrative, the columns in the main arena serve as the setting for a fight scene, with a ‘revived’ image of a battle between the groups. (Timeline 00:40:10 – 00:43:20). Technology and mechanical weaponry are once again a part of this battle instead of old, manual weaponry. The architecture of the amphitheater remains true to its real self (Fig 22), but the supernatural disposition of the characters and the ‘mode of fight’ deviates drastically from what is possible in reality.(Fig 23) The color scheme also changes to a dark green/grey tone to reflect the mood of the situation.

Figure 20: Timestamp 00:37:28

Figure 21: Timestamp 00:37:54

Figure 22: Timestamp 00:40:54
CONCLUSION

With these comparisons among different genres of films, one tends to identify and explore the different moods, feelings, stories, plotlines and narratives that the architectural space tends to project onto the audience. It tells the viewer how to feel, how to see a particular character, whether one is to associate with the character as a hero or a villain, if one is to expect suspense, thrill or humour. All of this, with the medium of film can happen simultaneously with one architectural space, depending on how the film-maker puts it on display.

In such films, including the case studies mentioned above, the filmmakers tend to project these iconic buildings with a narrative that the audience is usually not acquainted with, and manipulate them into forming their own understanding of that particular space. Often, the projected narrative of the space that a filmmaker has extended, gains more popularity than the original and the space becomes iconic for its role in the film rather than the one in real life.

It’s like unravelling a romantic story in a haunted house. The medium of film makes that possible, and it is made to be very believable that the audience finds it easy to associate with that particular projection.

The reasons for doing so can vary from film to film. Sometimes, the architecture is allegorized to give the viewer a frame of reference, much like in the case of The Core. Other times, this practice is used to trick the audience into thinking that the version of the space being depicted on the screen is the actual representation instead of an interpretation.

More often than not, it is easier done with iconic buildings and significantly critical architectural spaces. This play of iconography and allegory of architectural space can allow the filmmaker to cross the line between the realms of reality and imagination, and play with fictional and non-fictional spatial narratives within a film.

In the case studies mentioned above, the comparisons are based off seven films sharing two widely known architectural spaces. It is interesting to note that these particular buildings, Solomon R. Guggenheiem Museum and The Colosseum were already well iconized before these films. Yet, the filmmakers chose to project vastly different narratives onto them than they were known for. The transitions, inspite of the buildings being widely recognized for other purposes, are well-gelled and quite believable. It is interesting to imagine if over the course of time, perhaps these buildings might be known more for their filmic projections than their actual reality, much like the case of the Eiffel tower. It seems like a very real possibility for a number of iconic buildings all around the globe. Some examples of such buildings that have found themselves being presented with multiple narratives in films include, but are not limited to, the Taj Mahal, the Leaning Tower of Pisa, Falling water, the Pyramids of Giza, St. Paul’s Cathedral, Sistine Chapel etc. This opens doors to starting a dialogue about whether a particular architecture, despite whatever function it was originally built to fulfill, should remain true to its origin. What would be the effect of an iconic architectural space being used mutipurposely? Does that possibility only seem feasible within the medium of film or can it be translated into real life as well? And what would be the effects or consequences of the iconography when it transforms into real projects? Would replication and repetition of design multiply exponentially or would they actually decrease because multiple possibilities are actually being explored on the original and it doesn’t remain associated or iconized for one particular thing?
Once the debate is started, it could lead to very interesting possibilities, open doors to more questions along the way and give way to their answers, all catalyzed initially through the medium of film.

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INTRODUCTION
In traditional Greek mythology, according to Hesiod’s *Theogony*, the father of all Gods ‘Zeus’ slept with ‘Mnemosyne’, the Goddess of Memory for nine consecutive nights and conceived nine daughters. Those nine daughters are considered ‘Muses’ in Greek mythology and are apprehended to be sources of all inspiration and knowledge.

For nine nights Zeus did lay  
With Mnemosyne in secrecy  
From this union nine they say  
Beautiful, lovely the Muses be  
— Phyllis Doyle Burns

The nine muse daughters of Zeus and Mnemosyne are Calliope (Epic poetry), Clio (History), Erato (Love poetry), Euterpe (Music/Lyrics poetry), Melpomene (Tragedy), Polyhymnia (Hymns), Terpsichore (Dance), Thalia (Comedy), and Urania (Astronomy).

Every other muse other than the nine has been a derivation and an extension of the true Goddess muses. Every man on Earth, at least at one point in his life has found himself standing face to face with his muse. Should he choose to embrace it with open arms, more often than not, the muse takes his hand, carries him out of the boxed, dark corners of his mind and leads him into a world filled with possibilities, once deemed strenuous and impractical?

Every great artist since the beginning of time has, consciously or unconsciously, sought and strived for the union of himself and his muse in a binding and happy marriage.

The concept of inspiration and stimulation has been present since the origin of time itself, but it was formally penned-bound in the form of a religious mythology by Hesiod in 700BC. Since before then, the muses have collaborated with many a great artist and formed marvelous and unprecedented pieces of art.

However, it was during the Renaissance period, where art and knowledge were truly ‘reborn’ and the individuality and identities of the muses were formally solidified. The Renaissance period brought about a resurgence and evolution in both the classical and the modern arts. The idea of muses itself bore representation both literally in paintings and sculptures and also, figuratively in poetry, sculpture, art, and architectures etc.

In Italian Renaissance painter, Andrea Mantegna’s *Parnassus*, the nine muses are seen dancing around Mount Parnassus as a symbol of universal harmony.

Leonardo da Vinci, in some of his unrivaled paintings, has painted his literal real-life muses. The *Mona Lisa* is said to have been a portrait of Lisa del Giocondo, the wife of a silk merchant. Whereas in another famous painting of his, *The Last Supper*, Da Vinci uses figurative muses of History and Religion to represent the final meal Jesus shared with his Apostles before his crucifixion.
Even today, every piece of art, writing, sculpture or architecture, etc., is inspired by a muse in some form of the other. The muses are not so similarly formalized in today’s world, but the core concept of ‘unconventional inspiration’ behind them remains the same.

Architecture, a sophisticated art form since its origin, has tried to follow suit and has emerged on the backing of many a great inspirations derived from both functionality and ideologies. The relationship between architectural space and the muse it is birthed from, much like painting, sculpture and writing, helps it achieve physicality. It bridges the gap between representation and presentation.

MUSES AND ARCHITECTURE

Architecture, too, follows the same pattern and its inspirations root from a spectrum of ideas from hand-made, re-orientable paper models to the intangible strongholds of society itself. Muses can be found in anything, when given attention to. The visualization and imagination of spaces in architecture can stem from many things, most primarily the natural senses at man’s disposal. Intangible things, like a fleeting moment in time or a particular smell or maybe even a forgotten memory of a loved one can draw a man to visualize and design a particular architecture that reflects the muse it was driven from.

Juhani Pallasmaa in his book An Architecture of the Seven Senses talks about the importance of all seven senses in the shaping of architectural space. When it comes to architecture, the five senses are not enough. The sixth and seventh senses being movement and bodily presence, along with the five are crucial to a wholesome experience of architecture. In the modern world, it has become a common practice to just focus on the visual aesthetics of an architectural building without taking into account the experience and the emotional connect that the space has to offer. Without these senses, our buildings would just be visual pieces of art fit to take photos in front of, instead of imparting a wholesome experience in totality. The tactile quality, the materials, the scent, acoustics, light and shadows, the spirituality and sense of space are all things that have to be taken into account when talking about or designing an excellent example of architectural space. Pallasmaa further talks about the romanticism of such spaces with the human body. An architectural space that follows the paradigms of balance between the senses, instigates and facilitates a sense of belonging and integration with the body of the person inhabiting the space. For Pallasmaa, the inspiration to visualize and experience space lies in the muses of the senses.

In The Poetics of Space, Gaston Bachelard, explores the intimate relationship between the inhabitant and the inhabited space. He talks about both the experiences of the inside and the outside and the contrasts between the two regarding the sensuality of the space. The interior, more specifically, a ‘home’ is a manifestation of the soul where the inhabitant goes to feel whole again. He draws a romantic and very intimate relationship between the ‘house’ and the inhabitant on the foundation of the poetic and literary images that are found in poetry. Gaston uses the poetic images in poetry as his muse and looking-glass through which he explains the intimacy between the two.

He utilizes the ‘poetic image’ as footing and structure of his notion because of it being the possession of the ‘innocent consciousness’ of the mind, heart, and soul, that antecedes conscious thought. It does not require or ask for a deliberate contemplation or conviction. It is the pure voice of the human condition that forms a direct relationship with the reality without having to be intercepted by cautious, intentional introspect.

The capacity of being able to envision space with the help of a muse, more specifically ‘the written word’ can empower the imagination of a person exponentially.

An architect, when reading a piece of literature or poetry can possibly be enlightened with an almost
seraphic experience and understanding of the ‘poetic and literary image’. On the backing of this newfound knowledge and understanding, he can design a space that holds all the emotional, physical, tangible and intangible qualities that are necessary to make the inhabitant ‘one with the space’ as Gaston talks about in his book.

The imagination and perceptions can even be reversed, such that one wholesome space can be written about with such conviction in multiple perspectives that the reader might never realize that it is, in fact, the same space that’s being talked about multiple times.

Such is the case in Italo Calvino’s *Invisible cities* in which an explorer, Marco Polo converses with Mongol ruler Kublai Khan about Khan’s falling empire, through written stories. Polo writes tales about fifty-five cities, going into great detail about characters, architecture, location, sights and landscapes, all fifty-five cities supposedly a part of Kublai Khan’s empire. In his stories, the cities become living, breathing organisms that actively become a part of the stories, sometimes as main characters.

As Polo paints vivid pictures of those cities, it is, in fact, Khan’s imagination and perception that allows him to visualize those cities as they were, in fact, a part of his empire. The imagined space might not have been the exact representation of what Polo describes, but Khan perceives the written word according to his imagination.

As Khan reads on, he realizes that Polo’s writings are all in fact, about one single city - his hometown, Venice. However, the stories are so beautifully poetic and surreal, that it allows Khan to wander freely into his imagination, being transported to a new space each time he reads a different representation.

To elaborate the study further, an experiment was conducted using the medium of both literature and film to visualize and imagine architectural space in moving pictures. Using the city of Lahore as the protagonist, the short film visualizes already existing architectural spaces within the city based on the verses of a poem. The poetry, not necessarily wholly penned about architecture acts as the muse in imagining and visualizing space. The shots in the film against the particular verses are the architectural rendition and translation of the verses, according to my creative visualization.

The sentiments of the verses express themselves in individual frames, adding layers of architecture, natural and unnatural sounds, the narration of the poem and planned visual and audio compositions. Every person who imagines space, imagines it with a different perspective. The film explores the visualization of space, sometimes literally against the verses, other times the visual representation becomes metaphorical.

**The Poetic Conventions of Space (Film by Areeba Imran)**

https://www.youtube.com/watch?v=2I_V9pTML-Q

**Poem (By Vidushie Shriya)**

*Wrapped around like a vast blanket*
*Under, over, ever changing, ever moving*
*Shape shifting, ever present, always fluid, never set,*
*Arrogance dives for a sliver, jealously guards that bit*
*Like a potter at the wheel, dictating, defining,*
*Cruelly setting limits.*
*A rush of power, surging through*
*Man made weapons fashion what charcoal drew*
*The prison comes up, the hostage is hid*
*Strong vertical fortress, horizontal bars and a lid*
The triumphant laugh gives way to a gasp
The mother surrounds the prison, the child in her clasp
You may confine me to any degree
But I define you, bound yet free

Drawing examples from the short film, some frames have been divided into simpler components, against their particular verses and the layers behind the shots have been decomposed. The exercise aids in making an almost utopian idea of imagining space more perceivable.

Verse 1
Wrapped around like a vast blanket

![Figure 1: Timestamp 00:00:24](image)

To concretize the idea of a ‘wrapped blanket’, in terms of architecture, the verse translates into a ceiling that encompasses and embodies the entire space within, imitating the idea of a blanket cover. The site in the particular frame is Jallo Botanical Gardens in Lahore. The visuals are overlapped with light rainforest sounds considering the presence of artificial wind against the plants in the indoor gardens and also the two waterfalls at both the entrance and exit of the gardens. The particular visual is chosen against the verse because the curved roof of the site is made to retain the heat inside the indoor gardens imitating how a blanket cover is used to retain body heat.

Verse 7
A rush of power, surging through

![Image of lightning]
‘Power’ is represented metaphorically both in isolation and in architectural settings. The following frames are architectural representations of the verse in which the ‘rush of power’ is directly translated to mean forces and elements existing in nature. In the first frame (Fig ii), the surge of lightning represents the rush of power in isolation, and the following two frames are architectural spaces in which water plays the role of the element in ‘power’. First in the form of rain (Fig iii), the second in the form of a waterfall (Fig iv). In both cases, the element is the same yet it behaves differently. In both, it holds a position of power surging through the space.
The last frame takes the element of air in the form of wind, stating its overwhelming presence within the space (Fig v). The wind in the particular frame does not let the space become static, and so it acts as a force of power, being invisible yet generating movement within the architectural space. All four frames are coupled with the natural sounds of the elements in the particular settings and some additional supporting sounds like the chirping of birds, or the rustling of leaves.

**Verse 12**

*The mother surrounds the prison, the child in her clasp*

![Figure 1: Timestamp 00:04:27](image1.png)

The ‘mother’ in the verse directly translates to ‘Light’ visually in the frame. The mother surrounding the prison is the Natural light surrounding the architectural corridor, occupying the space as if creeping down one wall, onto the floor and then creeping up the other wall. The shot is sped up to cover 8 hours, the travelling of sunlight within the space from 8 am to 4 pm. The child in her clasp bears meaning to the hold of light inclusive of the shadows over the space. The site in the frame is the corridor of Ali Mardan Khan’s tomb to resemble the essence of a prison, metaphorically. The lights and shadows casted by the roof of the corridor give it the resemblance of the bars of a prison cell.

**Verses 13 & 14**

*You may confine me to any degree*

*But I define you, bound yet free*

![Figure 7: 00:04:39](image2.png)
The couplet at the end is translated into one frame that evolves when transitioning from one verse to the other. The couplet is treated as a conversation between the natural forces and man-made architecture. ‘You’ is the architecture and ‘Me’ are the natural forces. So nature is, in fact, telling the architecture that man may have thought that it has controlled and confined it within the architecture, but it is in fact nature that holds all the power in the relationship between the two. The visuals transform from a tranquil reflection of the Wazir Khan Mosque, Lahore in a pool of water to it being wholly disturbed and distorted to give the notion of the hierarchy of nature over the space.

CONCLUSION

Inspiration can hence be drawn from anything, even unconventional methods and muses and not just concerning architecture and space. Many a great artists and scientists drew inspiration from their day to day existence and sometimes even moments in time that forced them to reflect deeply on something they would have otherwise ignored.

The famous story of Newton and the apple that fell on his head that created a domino effect, resulting in the discovery of Gravitational Force is an example of this idea.

Vincent Van Gogh’s obsession with the night sky can be seen in his numerous paintings, namely the three Arles paintings that feature the characteristic star-filled sky, i.e Café Terrace at Night₁², Starry Night Over the Rhône₁³ and The Starry Night₁⁴. Van Gogh, famous for depicting the night sky in vibrant, light colors and bright, profuse brush strokes drew inspiration from the night time. He wrote that

"The night is more alive and more richly colored than the day."₁⁵

It is interesting to observe that ‘Darkness was muse for a Master of light’₁⁶.

The existence and utilization of a muse can hence act as a catalyst to the imaginative faculty of the human brain, especially an architect’s. If one can visualize and associate already existing space with some afflatus, that can lead to the ability to design and image new space as well.

The destination of creation is led by pathways of imagination. The muses can aid in the imagination and visualization of space, much like the case study stated above. If one was to go one step further, the
muses then aid in the birthing of original thought, which in the case of an architect – is design. So the visualization can more often than not act as a pathway to the destination - the creation of new architectural space, based on one’s particular muse.

Frank Gehry and his architecture can be considered an example of the birthing of space through unconventional, inspirational ideas. He chooses to design spaces with the idea of Deconstructivism reflecting in them, which overtime has become known as his architectural style of design. The Guggenheim Museum Bilbao serves as a template for the style of design the postmodern architectural movement is associated with. The seemingly random curves on the exterior of the museum are there to catch the light. The absence of harmony, the fragmentation of the outlook of the museum and the discontinuity of the exterior are deliberate moves in order to reflect the bold and innovative architecture of its time. Although his architecture is widely criticized and is considered controversial among many schools of thought across the globe, but his bizarre inspirations for them are nonetheless highly recognized for being unique and one of a kind.

Many architectural wonders can serve as examples of products of unconventional muses and inspirations, some of which are very widely known and recognized.

Antoni Gaudi’s Casa Milà is one example of such architectural marvels, the idea behind which was to continue the natural and organic forms of the earth and to explore the irregularities of the natural world. The façade is a huge mass of undulating stone behind which the apartment building stands in all its glory. The natural forms of the earth helped in the making of an unnatural form mimicking the natural.

Similarly, during the construction of the Sydney Opera House, years after the construction had started, the sail-like structures of the building had yet to be designed structurally, when one evening, the architect Jørn Utzon had a eureka moment while peeling an orange. In that moment, he realized how similar the thin shell structure of the sails was to the orange peel. It gave him the idea to derive the structure of the sails from a single, constant form, that of a plane of the sphere. In that moment, after years of struggle, trying to figure out how to design the sails of the opera house, a mere orange peel served as the basis and an inspiration upon which one of the most iconic buildings of the world was completed.

Even with the St. Basil’s Cathedral in Moscow, the architect Postnik Yakovlev is said to have mimicked the flame of a bonfire rising towards the sky, with the form of the cathedral. Much like the central importance and focus that a bonfire holds, the cathedral marks the geometric center of the city based on its form.

The form of stone, the curvature of an orange peel, the rising flames of a bonfire are muses from which great works of architecture were derived from in one capacity or another.

If an architect was to broaden the palette of his imagination and creativity, he could possibly create wondrous pieces of architecture even through the most meagre of motivations, if properly directed. Such architectural spaces then become more than just design on paper, or concrete and brick in place. They becomes more than the texture of stone or mud coming together. Architecture then becomes a culmination of all seven senses that accentuates the spiritual experience of the space itself and strengthens its relationship with not just the human body but also the mind, heart, and soul.

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TRAIN AND EARLY CINEMA: MOBILITY AND SPEED IN CITIES

Author:
ECE KONUK

Affiliation:
ISTANBUL BILGI UNIVERSITY, TURKEY [ISTANBUL] Graduate Student.
ALTINBAŞ UNIVERSITY, TURKEY [ISTANBUL] Research Assistant.

INTRODUCTION:
How Trains Transformed The Early 20th Century Cities

With its steam, the black iron flesh, and high speed, trains are commonly seen as a symbol of modernism. After the industrial revolution, the epitome of the early modern cities was the increased mobility: Many innovations -including telephones, telegraphs, omnibuses, trains etc.- generated a constant flux in the city: circulating people, knowledge and commodities continuously. In these new mobile geographies, train played a key role in the everyday city life. The beginning of the 20th century was the heyday of trains: With its high speed, they became the primary vehicle for carrying mass commodities and people. As trains were capable of sustaining themselves, speed was not dependent on other environmental conditions; such as the speed of the wind, the flow of a river, or the horse anymore. This resulted as highly mobile societies, with abruptly increased speeds.

It is critical to underline the direct relationship of trains with the industrial revolution, and therefore, the capitalist relationships: As Marx extensively analyzed the capitalist relationships, he concluded that capital tends to drive beyond the limits of spatial barriers, therefore “annihilation of space by time” becomes a necessity to pursue the economic relationships. With its high mobility, after the industrial revolution, railways became one of the major determining factors in the formation of the capitalist world economy, by extending the trade roots, facilitating the flow of labor from rural to urban areas, and delivering the products to far-off markets.

Perhaps one of the most critical consequences of these mobile geographies was the changes in the perception of time and space, which Schivelbusch refers as “reduced geographies”: geographies shriveled as transport distances were diminished, becoming so compact that almost “a French town could fit into a Paris street”. Therefore at the same time, geographies extended while being reduced.

In his book “The Condition of Postmodernity”, Harvey describes the perception of space and time in our current world, and refers to four main vehicles/stages of abrupt increases in mobility, which reduced the size of our world. Steam locomotives reaching to 65 m.p.h is the second critical stage for increased mobility (See Fig. 1).

Trains changed the nature of the social relationships, as it facilitated the migration phenomena. With the high rates of migration, the social structure of societies were transformed from “gemeinschaft” to “gestellshaft” communities: Many people, incapable of recognizing each other, suddenly found themselves living together in the cities. In these mobile geographies, although the quantity of human encounter has increased, the quality of those encounters were devoted to the circulation of goods and capital.
Taking into account the influences of trains in the capitalist relationships, the perception of space with respect to time and the nature of the human encounters; it can be claimed that trains generated a “new world order”. The scope of this paper is to analyze the cinematic representation of trains and the new mobile world generated by trains in the early 20th century. As the emergence of mobile geographies coincided with the invention of the early cinema, trains - and many conditions triggered by them - were represented through this medium. In fact, it can be claimed that during 1920’s trains were commonly used as “dominant protagonists” in movies; either as a space, an experience, or a generator of a social case. How were the trains represented? What kind of rhetorics did it have? What kinds of symbols and images were associated with trains? In order to answer these questions, a multitude of movies having different natures (actuality/ fictional/ short/ feature-length) will be analyzed to fully comprehend the zeitgeist of early 1900s, and the period’s relationship with trains. As many movies are seen, the recurring motifs will also be clearly seen, which is essential in portraying the subconscious of societies. I would like to discuss five main concepts which I find critical in many city symphonies: ghostrides, the city panoramas, exploration of terra incognitos, unifying and detaching the geographies, the urban uncanny and the increased criminal representations, and whether trains are portrayed as “good or evil”.

The “Kino-Eye” of the Early Cinema

As camera became a tool opening the individual perception to the collective perception, it represented the haptic routes in the city and the urban motifs such as mobility, spectacle, consumerism, rationalization, standardization, and so on. Thus, cinema was named after the Greek word “kinema”, meaning both motion and emotion. As a media, cinema is a psychogeographic tool, strolling in the ordinary life of the cities, recording the emotions, the everyday life, instantaneous moments; basically, the experience in the city.

The Soviet director Vertov refers to this mobile eye (camera) as “Kino-eye”:

_I am kino-eye, I am a mechanical eye, show you the world as only I can see it. Now and forever, I free myself from human immobility, I am in constant motion, I draw near, then away from objects, I crawl under, or climb onto them._
I suggest to add another layer to the “Kino-eye” manifest: As the camera-eye strolls in the modern city, it is very crucial to underline that the city itself became very mobile after the industrial revolution. As camera emerged with all its resources, it is another nature which speaks to the camera: According to Hubbard, film captured the frenetic pace of the city in ways that other media could not. The filmic space is mediated, therefore mise-en-scene generates its own narrative and rhetorics. Shiel claims that cinema has a striking and distinctive ability to capture and express the spatial complexity, diversity, and social dynamism of the city through mise-en-scene and cinematography. There is an intricate relationship between the physical space and its representations: Cinema is a medium in which space is represented through its striking characteristics and dimensions, revealing the unseen aspects and “subconcious of spaces”. With this perspective, camera eye provides an omniscient, total or even a God’s eye perspective. Keiller claims that researching the filmic space offers an implicit critique of the actual space, therefore constitutes an architectural criticism.

The Panorama Of The Ghost Ride

During the early years of cinema, trains were commonly filmed as “ghostrides”: capturing the perception of the traveler or the railroad machinist from a moving train. Since trains were the fastest vehicle of 1895, shooting from a moving train helped filmmakers to show off film’s power of registration, as well as its ability to capture movement and speed. The flow of these picturesque landscapes has an ephemeral nature, reflecting the constantly changing mobile space as “streaks”. Schvielbusch notes that due to the nature of these panoramic travel views, the perception of space has changed, as “evanescent reality” became the “new reality”.

The film “Passage d’un Tunnel en Chemin de Fer” (Lumiére Brothers, 1898) reflects the ephemeral nature of the mobile cities, as it records the sensation/experience of a traveler through the train. With scenes such as the train going into a dark tunnel, traveling in dark for a while, then seeing the light coming through the other end of the tunnel, the experience of train’s mobility is represented. As early film documented the ephemeral nature of the railroad travel, it also reflected the infrastructural spaces emerged in order to implement the train travelling. The new geographies of mobility introduced the cities with many new spaces such as train stations, railways, bridges, car routes, and so on, created a new public sphere and a new spatio-visuality, and incarnated the new geography of modernity.

As a ghostride, the opening scene of the movie “Berlin: Die Sinfonie der Großstadt” (Walter Ruttman, 1927) deserves a special attention. The movie opens with a train journey early in the morning. The editing technique is quite remarkable: Through many transitions to the rails, then to the city, then to the landscape, then back to the smoke coming out from the chimney; the audience experiences the very
speedy motion of the train. The ghastly does not simply record the actualities of the cities and their ephemeral mobile nature, but also reflects the everyday life dynamics generated by the mobile geographies. At the very beginning, through a distance, the city looks sound asleep. The arrival of the train suddenly initiates the fast-paced life of the city, the daily routines begin, and the city wakes up. The trains welcome the new incomers to the city, as the gates open and people pour down. According to Mennel, the movie portrays the city traffic instead of the architecture of the city; as the dynamic possibilities of the traffic bring dynamic possibilities of editing. Thus, this editing techniques reflect dynamism of the mobile geographies, bringing forward the images of constant flux, the crowd, the fast pace and the newly emerged modern routines of the everyday life.

Figure 3: Scenes from the movie “Berlin: Die Sinfonie der Großstadt” (Berlin: Symphony of a Great City) Walter Ruttman, 1927.

Exploration of the Terra Incognita
During the early 20th century, trains became the primary access to the previously unattainable spaces. Mobility fed the humanity’s desire of exploring terra incognitos, which was not a dream anymore as the dense web of railways wrapped the land. As the trains themselves became the primary access to many undiscovered spaces, their cinematic representations of trains helped to discover the unknown lands visually through panoramas. Schvibelbusch sees these “Panoramic travels” as an expedition to undiscovered land, underlining that visually, trains making distant space easily accessible by showing distant landscapes, cities and exotic scenes. In the phantasmatic masterpiece of Méliés, Le Voyage à Travers l’Impossible (1904) a team of voyagers travel to sun with a train. As one of the earliest fictional movies, it has unique poetics describing the desires of discovering a previously unattainable space, while fearing from its unknown characteristics and dynamics. The excitement of people waving at the travelers at the train station, the fury of the sun unwillingly swallowing the train, and the passengers putting their maximum effort in dealing with the difficulties of the travel, reflects the desire of exploration of the humanity and their will to overcome these challenges. Although their final destination is full of dangers, the passengers still enjoy the process of traveling to this remote geography.
A later train related exploration movie is “When the Devil Drives” (Paul Scardon, 1922), an “unintentional exploration” as a train goes out of control, perhaps driven by a “devil”, roaming freely in a variety of spaces, such as the underwater or mountains. Unwillingly, and with a fear mixed with enthusiasm, the passenger’s explore spaces they haven’t witnessed before in high speeds.

**Uniting or Drawing Apart**

Many commentators draw attention on the fact that trains used to unite the societies and geographies. However, it is quite crucial to underline the paradox of uniting: Trains doesn’t simply unite, it also separates. It generates semi-nomadic societies: People move relentlessly, sometimes travel from their homes to their work, or to the city center to access to the urban facilities, or sometimes leave their homelands to migrate from rural areas to cities. The nomadization is not limited to the people only: Also, raw materials and commodities leave their homeland, traveling to unknown geographies. In this sense, trains generate fragmented geographies.

> Modern environments and experiences cut across all boundaries of geography (...): in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, a unity of disunity; it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish.\(^9\)

The 1 minute movie “Leaving Jerusalem by Railway” (1897) reminds the audience that mobility is not simply traveling between destined points. The scene is a farewell scene, as people greet the passengers to their journey, and accompany them for a while as the train begins to accelerate, they keep getting smaller and smaller until they disappear completely.
Invention of the Criminal Images

It is unknown whether the mobility in the cities generated higher crime rates. However, it can be claimed the high mobility in the cities generated a fear upon crimes, and being a victim of it. Many scholars relate this with the generation of urban uncanny; the fear upon the city, not being a property of a space, thus being a mental state of fearing. According to John Short, the cinematic city is often a site of crime, vice, and anonymity. Living in a gesellschaft society instead of a gemeinschaft society would create a perfect setting for the urban uncanny: Fearing from people who are forced to move continuously, therefore having less time to interact and know the other people of the society, would create distrust which would generate the urban uncanny. As this is combined with a very sudden change in the everyday life, such as changes in the production and consumption practices and a relentless flux in the city that societies are forced to adapt, the fear is inevitable.

The concept of crime takes place in many train-related movies, such as Fatale Méprise ("The Railroad Pickpocket", Georges Méliès, 1899, status: lost); Hold Up Of The Rocky Mountain Express (AM&B, 1906); The Great Train Robbery (Edwin S. Porter, 1903); A Railway Tragedy (Gaumont Company, 1904), and so on. In these movies, trains appear to the space which the criminal cases take place in. However, in my opinion this recurring motif is not directly related with the train: Instead, it is directly related with the new social circumstances that train generated in the modern daily lives.

"The Great Train Robbery" opens up with thieves sneaking inside the train, and as the robbery continues, the travelers quickly pour down the train with a great shock. In the movie "A Railway Tragedy", a man steals a woman’s purse as she dozes off, however he ends up getting beaten by other passengers. These movies underline the importance to be alert all the time during the train travels.

As my personal opinion about these criminal scenes, they don’t have the aim to constantly remind societies about the upcoming criminal risks in the city or in the train, however, it is somehow represented as an appealing image: The speedy action scenes become a spectacle, as the viewers hold their breath with the curiosity upon the film’s epilogue.

![Figure 6: Two incidents of theft in the train, scenes from movies: On Right: The Great Train Robbery, Edwin S. Porter, 1903. On Left: A Railway Tragedy, Gaumont Company, 1904.](image)

The Good or The Evil?

Everywhere the railroad went, its arrival caused debates about its potential for both evil and good. Similarly, the image of trains had a dual imagery: it represented both the pleasures and dangers of mobile geographies. On one hand, reaching beyond spatial limits and bringing the remote/exotic lands, on the other hand, being a sinister monster as it critically changes the ways societies lived.
Perhaps a good example to discuss the dual nature of mobility is the movie “The Crowd” (1928) by King Vidor. In this movie, the train is not a central protagonist in the narrative. However, many themes associated with trains and mobile geographies; such as the crowd, the constant flux in the city, the fear upon the increasing crowd and speed, are reflected as trains frequently appear in the mise-en-scenes. The movie opens with a scene of a hypermobile crowd, then zooms into the main character, John, who feels desperate and lost in this crowd. As his shift ends, the sinister nature of the high speed leaves itself into spectacle: John entertains himself in a vehicle in Coney Island with high speed with the accompany of an attractive lady. The on-rushing train did not simply produce the negative experience of fear but the particularly modern entertainment form of thrill. In fact, high speed was a pleasure invented by modernity. A similar mode of enthusiasm, can be observed in the movie, “Leap Frog Railway, Coney Island” (AM&B, 1905), while two squat rail cars crawl over one another, while the passengers enthusiastically wave at each other. Therefore, the fear and the extreme crowd that hypermobility brings to cities, is also experienced as a form of enthusiasm.

**Societies Watching Themselves on Screens**

The movie “Uncle Josh at the Moving Picture Show” (Edwin Porter, 1902) reflects a man, watching the cinema screen with a mixed sensation of pleasure and fear. Similarly, as the societies of the early 20th century watched themselves dealing with the conditions modernity brought, they should have felt a similar thrill and the anxiousness at the same time. During the early years of cinema, trains were the main protagonists of the movies. The city symphonies did not simply represent the city, but also invent the way the cities are perceived, by bringing the invisible features of the city to public consciousness. Within the limits of this paper, I explained five aspects of the representation of train in the cinema, however, these cases may be increased. City symphonies are commonly associated with these themes, reflecting and representing the new world order generated by the trains after the industrial revolution. On one hand, the new world order that trains generated, such as being forced to move relentlessly, or having mass migrations can be watched; on the other hand, high mobility can also be represented as a form of enthusiasm. As trains, either as a protagonist or an image, were reflected on the cinema screen; humanity watched the dangers and seductions of the cities, embodied in the ephemeral nature of the mobile spaces. The kino-eye roamed endlessly in the city, revealing the subconscious of the spaces and societies, but also invented the ways they perceive themselves.
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Moving Image – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design

Altınbaş University; AMPS; Architecture_MPS; PARADE
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This study aims to examine the relationship between architecture and film. As architecture has been subject to various forms of interpretation over the past centuries it has found its most recent expression in the world of film. For this exposition film is being analyzed in a case study that explores the relationship between film and architecture. Film holds a significant role in communicating ideas and constructing them in film space. This study will focus on the language that enables both film and architecture in building a space physically and conceptually according to the narrative of film. As communication and design plays a vital role in daily life of an architect, it is essential for architects to be aware of the language of film to design and communicate more efficiently. In particularly to assist architects to understand the ways of narrative based designs.

“The architecture of our time is turning into the retinal art of the eye. Architecture at large has become an art of the printed image fixed by the hurried eye of the camera. The gaze itself tends to flatten into a picture and lose its plasticity; instead of experiencing our being in the world, we behold it from outside as spectators of images projected on the surface of the retina” - Juhani Pallasmaa

Furthermore, a process of study is conducted by analyzing the symbiotic relationship between architectural space and film space. Architectural space is referred to as the existing built environment and film space here is the depiction of the existing built environment viewed through the lens of a film narrative. As Sergey Eisenstein quotes “Films undoubted ancestor is architecture”. We have observed that architecture has been directly related to the performing arts since the classical Greek period. The 5th century BC Theater of Dionysus situated in Athens is considered to be the world’s first theater. Home to the Greek tragedy plays. The element of Skene in the theaters was initially a building used by actors for changing masks and costumes but later on became the backdrop for the stage. Similarly, architecture in this study is being considered as a backdrop. This realization leads to question whether architecture’s role limits itself as a backdrop or contributes more to the medium of film? What is the role of architectural space in a film?

To explore the tangible and intangible qualities of architecture in the medium of film, Gattaca (1997) by Andrew Nicole is under observation. This film is a science fiction thriller that addresses the issues relating the upcoming future of human existence in the age of technological and scientific advancement. In a world where humans are genetically mutated to perfection the movie is picturized mainly in The Classroom Laboratory and Administration building (CLA) by Anthony Predock and The Marin County Civic Center (1962-1969) by Frank Lloyd Wright. Classroom Laboratory and Administration building was built for California State Polytechnic University, Pamona in 1992. This building was considered to be ahead of its time due to its futuristic impression and energy efficiency. The iconic nature and the location of this building brought it into Hollywood’s lime light as it is also picturized in other science fiction movie such as Impostor (2001).
The Marin County Civic Center was built in 1962 just after Frank Lloyd Wright’s death. It is the only government based project that Frank Lloyd Wright had been a part of. It is a civic building that is not only inspired but also incorporates ideas from the futuristic Broadacre City scheme of the 1930s proposed by Frank Lloyd Wright. Moreover, this building is also pictured in science fiction movie like Star Wars to create cities like Naboo. Both the buildings being filmed in the same genre a number of times highlights the fact that they hold tangible and intangible qualities that supports the science fiction narrative of these films.

The Classroom Laboratory and Administration building is a brutalist style concrete building with steel and glass windows. This building is depicted as the residence of Jerome played by Jude Law. The interior has wooden floors and stainless steel minimalist furniture. Machine crafted materials and their products represent the role of machine in the future. On the other hand, Marin County Civic Center is a public building in reality and in the film, it is the Gattaca Corporation facility. This building is also made of materials like concrete and steel. The interior floor is made of custom-colored tiles, terrazzo is used in corridors and stairs. The use of escalators, minimalist furniture in building and pre-cast barrel-arch roof creates a futuristic environment. The façade holds the decorative cement stucco arches on metal lath. These industrially manufactured materials do not age as other natural materials do due to which both the buildings in terms of their tactile quality have this futuristic aura. The director and writer Andrew Niccole comments regarding the selection of the building:

"There's a classic case of sort of necessity being the mother of invention" he comments. "At first, we were confined to Los Angeles, and we couldn't find a building within the thirty miles limit they like to give you that would embody the philosophy of Gattaca. ………. We chose it because also it was from a period when people were optimistic about the future. That doesn't really exist anymore. Also, the curves of the building really helped, so when we designed the sets, we could reflect all those curves: it's a world where there should be no corners for dust to hide. It's such a precise, manicured world, where you imagine any hair follicle can give you away."

This indicates that architecture is not just a backdrop or part of the foreground but it has more to contribute in physical and conceptual means in a film. It has to compliment the narrative in philosophical means as well, as mentioned above by the director. The role of architecture and its surrounding environment in these terms is also very important along with the environment created in the film. For example, The California Polytechnic University building is located in wilderness with verdant landscape and desert to the east. This natural environmental construct symbolizes and resembles the characteristics of Jerome. This shows that the film maker is very well aware of his narrative based spatial design.

A film maker’s primary tool to construct space is montage within a film. It is a technique of editing film and stitching images together. As Sergey Eisenstein says “the spirit of cinema is not in the images but in relation between them”. Now this relation allows film makers to deconstruct reality and create a new one in film space as for architects this is not an option. The static linear qualities of architectural space transform in film space in terms of nonlinearity because of the montage. Elements like time, distance and context can be reinterpreted in the medium of film. This allows architects to study and imagine space from a new perspective that encompasses multiple possibilities from reality that are reconstructed deliberately in film space. Vsevolod Pudovkin quotes “editing is not merely a method of junction of separate scenes or pieces but a method that controls the psychological guidance of the spectator”. The power of visuals to psychologically engage the viewers made us conduct an experiment.
The methodology is empirical in nature to develop a comprehensive understanding regarding the psychological impact of the film and the physical construct of film space. The observations made are based on the visuals of the film and an architectural layout was generated in terms of plans and section. These plans were then compared with the existing built spaces to deduce the elements that build the language of film and architecture. Initially after multiple screening few observations were made:

1. The speed at which information is projected on the retina of the human eye makes it hard to document the layouts as human brain fails to process the information.
2. Vsevolod Pudovkin’s psychological guidance that controls the spectator keeps the viewer engaged due to which it is even harder to analyze while watching the film at a normal speed.

To overcome these two main challenges the focus of study was shifted to the main arch of the film narrative. The main film narrative revolves around two characters Jerome played by Jude Law and Vincent played by Ethan Hawke. Apartment building and the Gattaca space facility are the two areas in film space that incorporate the main film narrative. Both of these filmed areas within the film are analyzed frame by frame to overcome the challenges mentioned earlier.

Gattaca space facility is The Marin County Civic Center designed in 1957, this fact generates a curiosity that how can architecture produced in 1957 be relevant for a futuristic film produced in 1997. Such is the nature of Frank Lloyd Wright’s design which is advance, unconventional that even 40 years after completion it still projects this ambition that it belongs to another time and place which highlights the non-linearity of architecture in film space. Frank Lloyd Wright’s concept of future Broadacres City during the design process of Marin County Civic Center makes it futuristic. The protruding tower towards the sky symbolizes the space shuttles in regards of the film narrative (figure1).

![Fig 1. Time: 00:03:57](image-url)
More architectural elements such as the central Atrium, courtyard, and corridor all are planned together. Corridor and atriums act as a unifying space where human interaction with nature and the space above is observed which defies the existing human culture in film. This space is seen to emotionally strengthen Vincent in achieving his goal and keeps motivating him from time to time in the narrative (figure 2&3). This observation highlights how architecture not only acts as a backdrop but it holds the role of a supporting actor as well. In the film escalator connects the ground floor to the top floor which depicts the genetic discrimination as it is only used by genetically perfect humans working on high positions in Gattaca space station (figure4).
Here the Escalator acts not only as a connecting element but as a barrier which separates the two genetic types of humans. It is also observed that normal humans do not use the escalator instead they use another stair case which further highlights the discrimination factor in the film narrative. The upper level consists of a computer room, gymnasium, laboratory and other offices of the genetically perfect humans. However, the size of these offices, laboratory and gymnasium is the same in terms of the dimensions.
When architectural layout of the plan was made, and superimposed on the original plan the space does not exist in the actual design of Marin County Civic Center (figure 5). This proves that an alternate set was designed by the film makers in a similar fashion to the existing built structure. The curved roofs of the computer room, gymnasium and entrance lobby are inspired by the existing external arches of the Marin County Civic Center. This similar morphological construct of the set and the actual building psychologically manipulate the mind of the viewer to believe it’s one and the same (figure 6, 7 & 8). But in reality, it is a set which is transformed into these different film spaces. The atmosphere of this architectural imagery is transformed into different film spaces by changing light quality and camera angles. As a result, film space allows viewers to experience a wide range of inhabitation possibilities of a single architectural space with the help of montage (figure7&8).
Moving Image – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design

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Fig 6.

Fig 7. Time: 00:46:43

Figure 8: Time: 00:04:43
The Gattaca space exploration center and Jerome’s apartment building are picturized in film next to one another but in reality, Marin County Civic Center is in San Francisco and the CLA Building is in Los Angeles. Such film spaces are developed with the help of montage which helps create new relation of existing architecture with one another breaking the boundary of time and place creating a non-linear environment (figure 9) (figure 10).
The apartment building is also a set made in a similar fashion as the set of the Gattaca space facility. This apartment has fair face concrete walls and horizontal windows resembling the exterior of The California Polytechnic University that helps to create a connection for the viewers which make them believe that it is part of the actual building which is not true (figure 11 & 12).

Development of plans and section are made by carefully observing the correlation of actor proportion with the build environment. Furniture dimensions further help in calculating the scale of the space. Talking about minimalist modern design and future furniture Mies van rohe’s Barcelona chair, Barcelona couch and the MR chaise longue are also show cased (figure 13 14 &15). Decades old furniture is being used to depict future in the film. Miesian furniture is further complimented by fair face concrete, glass and wooden floor finish. The tactile qualities of each material and the sterile look of the apartment reinforce the idea of futuristic environment. After this observation, we can state that architecture plays a vital role in terms of mise en scene in the film narrative.
Fig 13. Time: 00:35:56

Fig 14. Time: 01:23:11

Fig 15. Time: 01:22:35
The apartment seems to have two entrances but only one has been disclosed to the audience (Figure 16). The disclosed entrance is located above the living area which is connected by a double helix spiral staircase. As we don’t know how Jerome ended outside the apartment on a wheelchair during the investigation, it is assumed that a secret entrance exist connects the living area with the outdoors (figure 17).

But the apartment looks more like a personal lab than a living space as it is confined and artificial with windows above the eye level of Jerome who is confined to a wheelchair most of the time (Figure 18, 19 & 20). These Architectonics are a representation of Jerome’s characteristics altogether.
The stair case has been used as symbol of great significance in the entire film and the sky light further celebrates its role (figure19). Stairs physical resemblances to the structure of DNA and in particular movie frames depict the genetic superiority of Jerome character (figure21). In other instances, it shows Vincent’s physical superiority with the help of Jerome’s DNA over Jerome (figure22). This observation depicts the role of architecture not only as a physical entity but as symbol of the relation of both the characters.
Later on, when Anton visits to interrogate Jerome, his struggle of climbing the stairs and overcome his disability also illustrates an abstract genetic struggle of Vincent as well. The hollow steel stairs compliment Jerome’s character in terms of its material that it would not have been possible for him to climb the stairs if they were made out of concrete or if they were not hollow(figure23).
The small window barely has any connection with the outer world which describes Jerome’s character. He is shown as an introvert. The entire space disconnect with the outer world also shows secrecy and to further exaggerate it the small mid shorts and close-ups are used (figure24). This is followed throughout the movie giving a claustrophobic feeling. The openness in the confined space and fluidity shows a house of tomorrow as there are no physical boundaries between washroom and living area (figure25).
Ethan Hawke’s height is 5 feet 8 inches which was considered to scale the entire film space (figure 26). Furniture dimensions further help in calculating the scale of the space as mentioned earlier. To further verify the developed plans and section a physical model was created, and some of the scenes were replicated from the same camera positions (figure 27, 28, 29 & 30).
Moving Image – Static Spaces: Architectures, Art, Media, Film, Digital Art and Design

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Fig 29.

Fig 30.
This attempt polarized the relation of architecture with film as a comprehensive understanding of tangible, intangible and tactile qualities emerged. Tangibles or the architectonics are the doors, windows, walls, floor, stairs etc. The intangibles are light gravity etc. The filmed visuals projected a complex detached construction from the realities of matter. The white model reduces the complexity and brings out the true pure space which helps us understand the intangible quality in a more efficient manner. The simple white finish of the interior architectural spaces and filmed spaces both generated a claustrophobic feeling. By this we can state that it is the role of the built architectural space that generates this intangible essence of claustrophobia and when filmed this particular essence gets amplified. This process sensualizes the architects subconscious of intangibles and of pure raw inhabitable space. The morphological structure of architecture remains constant in both filmed and architectural space but the role and meaning changes drastically in film according to its narrative. The sky lights and open internal courtyards give hope and a breather for the characters and the viewers. The didactic quality of space unfolds and the flexibility of space incorporates different functions. Overall in the movie we realize how important each element of architecture was in order to convey the subtext and help guide the main narrative of film. Not only that architecture is not just a silent backdrop but it equally acts and conveys the message. At times, it’s just amplifying the characteristic of the characters. It wouldn’t be wrong to say that architecture plays major supporting role in film and acts more than a performer. The role of montage adds a layer via medium of film to the architectural space, releasing it from the constraints of the reality. Frank Lloyd Wright’s visionary futuristic design and the narrative of film suggest the conceptual understanding of both architect and film maker. The amalgamation of these mentioned characteristics develops a language that eventually becomes the language of film. This language generates the silent dialogue between film and architecture. This dialogue consists of role of architecture and the qualities it brings to the medium of film. As a result of this study and understanding of narrative based design in regards of communication a final experiment was conducted to express the entire narrative of film through one image (Figure31). This single image was constructed on the basis of the earlier mentioned architectonics and intangibles in light of the film narrative. The silent dialogue is simple to understand but is embedded under the layers of tangibles, intangibles and tactile qualities. Architecture in its final manifestation is a physical entity but both the formation and reaction it produces are intangible.
Fig 31.
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NEW WAYS OF DESIGN PRESENTATION: INTERACTIVE PROJECTION MAPPING AS A PRESENTATION TOOL IN ARCHITECTURAL DESIGN PROCESS

Author:
HASAN TASTAN & TOGAN TONG

Affiliation:
YILDIZ TECHNICAL UNIVERSITY, TURKEY [ISTANBUL]

INTRODUCTION
In parallel to the developments in computer technology, it has become inevitable to use new representation mediums to increase production and efficiency in the field of architecture and design. During the historical process of architecture, a variety of 3D techniques have continually been developed, such as perspective drawings, models, and today’s multimedia representations. In this developmental process, Virtual Reality and Augmented Reality representation mediums have come into sight and become used in architecture. The forms of representative production in these medium types offer experiences beyond the ability of users to observe photo-realistic images or computer-aided animations via computer monitors.

While the Virtual Reality presents the 3D and immersive medium to the user through the head-mounted display, the virtual world is integrated with the physical space in Augmented Reality types in which equipment head-attached and hand-held are used. Among all these types, Spatial Augmented Reality type, in which the projectors are used, is entirely different from others regarding the spectators' way of using the medium. In the Spatial Augmented Reality medium, no equipment connected to the body of the user is used, and the user with the naked eye can monitor the integration of the virtual object with the physical space. Moreover, Spatial Augmented Reality medium which is used in many fields give the impression that powerful of 3D sensation that can be seen with the naked eye. Because of these features that Spatial Augmented Reality environment has; it is used in a lot of fields such as installations and theatrical shows.

In this study, the representation mediums in architecture are examined and then the use of Projection Mapping as a representation medium are compared in terms of interaction with other multimedia representation types. In the other part of our research, the applicability of the Projection Mapping technique with virtual and real types of representation by using the gestural interaction and giving the sensation of volumetric 3D effect is investigated different from other research in the architectural field.

In our research, the virtual types of 2D representation such as site plan, and 3D digital representations such as design analysis and the design alternatives in urban field, and the real 3D type of representation such as model is used together. Thus, the use of an integrated representation medium which can be used in the field of architecture and architectural education is shown.

REPRESENTATIONS IN ARCHITECTURE
As Goodman pointed out that; "The most naive view of representation might perhaps be put somewhat like this: "A represents B if and only if A appreciably resembles B", or "A represents B to the extent that A resembles B". Vestiges of this view, with assorted refinements, persist in most writing on
representation. Some of the faults are obvious enough. An object resembles itself to the maximum degree but rarely represents itself; resemblance, unlike representation, is reflexive. Since the qualities of the represented in its essence are transformed, when representor represents something. For this reason, the state of representation includes a qualification beyond resemblance.

It is important to classify representations to understand the representations used in architecture and to distinguish between these representations as follows:

- Iconic representations: Perspectives, models
- Analytical representations: Various graphics, contour lines, painting
- Symbolic representations: Languages used in cultural differences and made up of words.

Nowadays, in addition to these three representations in architecture, “Digital Representations” are considerably being used as well as the most important feature of these digital representations as are the power to practically present the whole of iconic, analytical and symbolic representations together.

Fig 1. Digital representations can include the entirety of other types
As it is in many design areas, architecture also as a production area needs various representation mediums to present the designed space or outputs as a production area started from the early design phase to end of the construction process.

It is also important to classify these representations according to mediums to understand the differences between these and to handle them holistically. Smeltzer and his team\(^3\) and Aydin\(^4\) classified these mediums of representation in different ways in architecture. These classifications, including today's multimedia mediums, can be generalized as follows:

- **Traditional Architectural Representations:**
  - Free and scale hand-drawn drawings,
  - Perspective,
  - Models.

- **Multimedia Architectural Representations:**
  - Architectural Representation in Cinema,
  - Architectural Representation in Virtual Reality Medium,
  - Architectural Representation in Augmented Reality Medium.

**TRADITIONAL ARCHITECTURAL REPRESENTATIONS**

The traditional types of representations are used today, unlike in the past times, as free-hand drawings, perspectives and models. Scaled hand-drawings had continued to exist as a strong representation in architecture till the prevalence process of digital representation.\(^5\) Another traditional type, perspective, unlike the past maintains its existence as a freehand drawing today.\(^6\) The architectural model is one of the representations used in architecture to express a design as 3D and to transmit these 3D relationships to the spectator.\(^7\) In this type of representation, the scale is chosen by its unique state of design. Due to the vocational education of the architect; this means of scale representation shows what the actual building will be, and effectively expresses the context of the building with its surroundings.\(^8\)

Although all of these traditional representations have changed in the historical process, especially free-hand drawings and model is today used in various ways due to their practicality and their ability to integrate with other digital representation mediums.
ARCHITECTURAL REPRESENTATIONS IN MULTIMEDIA

The production of architectural representation in multimedia arouses as the heritage of traditional representations which is old-traditional cultural forms and languages, depending on the historical process of architecture. The necessity of naming multimedia instead of the digital representation is because it is the transmission of ‘cinema’ multimedia features to digital.

Architectural Representation in Cinema Medium

The relation of the cinema to architectural representation is based on the necessity of using space or space representation to create a moving image in cinema environment. Space which is the main component of the architecture is used in 3 forms as real, decor and virtually created spaces in the cinema. In the use of space as real and decor, it is necessary to create a recording with the camera and then to edit the images by conventional or computer-aided techniques.

![Diagram: The production process of real space or decor](image3)

The producing representation of the virtual space in the cinema can only be realized by computer-aided methods.

![Diagram: The production process of virtual space](image4)

Architectural Representation in Virtual Reality Medium

Virtual Reality (VR) refers to the medium in which a user can experience a 3D world that does not exist in reality through various tools and within the opportunity to travel here. In the process of using VR as a medium of representation in architecture, virtual space is created through software that as computer-aided produced representations, after which the user can navigate in a virtual world with the head-mounted display and experience 3D effect.

![Image: Experiencing VR through head-mounted display](image5)

Architectural Representation in Augmented Reality Medium

Contrary to the VR, production of representation in Augmented Reality medium, it includes how a virtual world intertwines with the real world. In the use of AR systems, a variety of digital tools and equipment are a requirement for visual representation in real space. AR systems have become widespread in architecture after various digital tools such as mobile phone, tablet; which are frequently used in daily life.
Bimber and Raskar deal with these Augmented Reality systems under three titles as the head attached, hand-held and spatial.\(^\text{12}\)

According to Dalsgaard and Halskov; 3D projection is best defined as Augmented Reality (AR), since it consists of digital information that is projected onto physico-spatial structures.\(^\text{13}\) Among all these AR types, Spatial Augmented Reality (SAR) can integrate with physical and spatial objects; the representation gives the opportunity to integrate with another type of representation or even with the represented object with the naked eye.\(^\text{14}\)

The relation between interaction design and architectural representation medium

In the design activity, the interaction with digital devices is constantly being renewed, which also enhances the interaction with the stakeholders. Thus, the speed of production in complex projects increases and the collaboration of stakeholders become stronger. In order to understand the interaction of the architect with the digital tools, it is necessary to understand in which points the architecture intersects with the interaction design.
When the historical process of the interaction design is examined, it is observed that the interaction types have very strong relationship with architectural space. Tangible, freehand and gesture movements control interaction systems, and these systems need spaces or a space element. In the researches about the digital tools used in architecture, the relations between the architects and the design tools and the way of interaction come into prominence. For this reason, the intersection of these two fields is the issue for which digital tools the architect uses and how the architect interacts these tools.

According to Wiberg and others; From the earliest 2D graphical user interfaces to today’s 3D representations, emerging into mobile, tangible, ubiquitous computing, and so on, our awareness of space and its role in the interaction process is becoming more distinct. Interaction with space or real objects using this GUI in various digital tools accelerates design-related production processes and provides more useful presentation tools in architectural practice and education.

It is important to examine the tools used to better understand the physical relations between architecture and interaction design, based on today’s interaction types. Karray and others deal with today’s human-machine interaction in two main themes as single mode and multimodal, regarding their technical usage types.

According to the classification in Fig. 9, the interaction types of VR and AR are examined in Table 1. VR is a multi-modal representation medium with a variety of visual-based and sensor-based interactions from interaction types. The AR types of hand-held and head-attached devices used show features similar to the multi-mode. However, the interaction types of PM is based on the preference of the practitioner.
Among these types, VR moves away from the user from the real world while having a volumetric 3D effect on the user in the virtual world. The head-attached AR has similar properties to VR, while the use of hand-held AR is similar to producing representation via monitor (Table 2). Although PM allows for a poor interaction with the spectator, it differs from all other mediums because of its ability to integrate the virtual object in physical space (nature) in a way that seen by the naked eye.

Table 2. General comparison of multimedia representation mediums

<table>
<thead>
<tr>
<th>Representation Medium</th>
<th>Virtual Reality</th>
<th>Augmented Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imaging Device:</td>
<td>Head-mounted Display</td>
<td>Projector - Projection Mapping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hand-held</td>
</tr>
<tr>
<td>Types of Interaction</td>
<td></td>
<td>Body Movement Tracking</td>
</tr>
<tr>
<td>1. Human-Made Noise/Sign Detections (Gasp, Sigh, Laugh, Cry, etc.) (Optional)</td>
<td>Human-Made Noise/Sign Detections (Gasp, Sigh, Laugh, Cry, etc.) (Optional)</td>
<td>Audio-based Interaction (Optional)</td>
</tr>
<tr>
<td></td>
<td>2. Motion Tracking Sensors and Digitizers (Optional)</td>
<td>2. Motion Tracking Sensors and Digitizers (Optional)</td>
</tr>
<tr>
<td></td>
<td>3. Haptic Sensors (Optional)</td>
<td>3. Haptic Sensors (Optional)</td>
</tr>
<tr>
<td>Level of Interaction in Today's Usage:</td>
<td>VERY HIGH</td>
<td>LOW</td>
</tr>
</tbody>
</table>

ARCHITECTURAL REPRESENTATION IN PROJECTION MAPPING

With the decline in projectors' costs and the development of these devices in the 1990s, projectors became a frequently used presentation tool in everyday life. In parallel with these developments, projectors were used in the tangible interaction studies of Ishii and his team17 at the MIT Media Lab, and the CAVE18 study at the University of Illinois at Chicago. In the 2000s, Raskar and his team also pioneered the technical development of the PM technique.19 This technique has found the place in architecture, and is also very open to development; because PM technique can optionally be used
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together with any type of interaction and different presentation possibilities in the real space and has the power to transform any simple surface into a 3D and complex virtual environment. Thus, various studies related to the use of PM have been carried out in the field of architecture. For the example studies in our researches, various scientific sources were examined and the ones applied among them were selected. In a study conducted by Chen and his team, a wall projection of 1:1 scale was performed. In this reflection, the 2D environment was created in which the students could interact with the surface in order to understand the real surface material and material dimensions. When compared this study to today's use examples of PM, it is strong regarding using interaction, but weak by the lack of motion picture and various 3D volumetric effects.

![Fig 10. Chen and his team' PM project](image1)

In the other study of Narahara and his team, PM was applied with reflection on the architectural model. With this projection, a circulation situation of the space and different facade alternatives were showed. However, circulation analysis related to urban field and context is presented in a very limited area in this project, and no 3D image processing or objects are used to reduce computational rendering cost and time.

![Fig 11. Narahara and Kobayashi' CrowdMapper project](image2)

In the work of the CAVI Research Group at Aarhus University, the PM was used for the urban design project which is designed by an architectural firm. This study is important because it involves a strong urban context and influential 3D effect. However, various perspective distortions are observed in this study for the case of 3D perception because the spectator's angle is not clearly defined. The angle of the spectator and the projector is the same point and the cause the fuzzy or blurry images on the presentations. Faults made at different stages of the implementation process of the PM technique can weaken or eliminate the illusion of spectator perception. In addition to these issues, any interaction type is not is not used in this study.
In all of these studies, 2D image representations were performed in 1:1 and CrowdMapper projects; on the other hand, the 3D volumetric effect was incorrectly used in the Loop City project. The only project that uses an interaction type within all these studies is the 1:1 project. Also, PM is used together with a model which is a conventional representation type in the Loop Project and CrowdMapper projects (Table 3).
### Table 3. The comparison of PM projects

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>The Type of Interaction</th>
<th>2D or 3D Images</th>
<th>The Type of Shadow</th>
<th>The usage with other architectural representations</th>
<th>Images</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1 project</td>
<td>Tangible</td>
<td>2D Images</td>
<td>Not applied</td>
<td>Not applied</td>
<td>Picture</td>
<td>Basic use of PM</td>
</tr>
<tr>
<td>CrowdMapper project</td>
<td>Not applied</td>
<td>2D Images</td>
<td>Not applied</td>
<td>Model</td>
<td>Picture</td>
<td>Basic use of PM</td>
</tr>
<tr>
<td>Loop City project</td>
<td>Not applied</td>
<td>3D Volume Effect</td>
<td>Attached shadow</td>
<td>Model</td>
<td>Motion</td>
<td>Incorrect use of 3D Volumetric Effect</td>
</tr>
</tbody>
</table>

**ARCHITECTURAL PRESENTATION OF 3D INTERACTIVE PROJECTION MAPPING**

The Interactive Projection Mapping (IPM) project was conducted by the authors after the master course on this technique. In other studies, the 3D volumetric effect was not used with any type of interaction, or the interaction was used with 2D images. In this study, the potential of integrating different types of representations in PM is examined, including 3D volumetric effect and shadow, gestural interaction, movement and time (Figure 13).

![Interactive Projection Mapping Diagram](diagram)

*Fig 13. The using of IPM in architecture*

This study is composed of two separate animations which can be switched by Leap Motion. The content of the first animation is composed of various analyses, including the function and height of near buildings, transportation and daylight simulation, and are supported by the site plans. The second is composed of two design alternatives, including building form and facades. By switching between these two videos through Leap Motion, the user can experience both design alternatives and analyses at the same time.
Also, the user perceives the virtual experience in the real world with the correct 3D volume effects in this study, because the direction of shadow and perspective effects are arranged according to the angle of the user. For the correct 3D volumetric effect at the PM, the angle of the projector and the spectators should be clearly determined at the beginning of the study and the entire process should proceed according to these angles (Figure 14).

**Fig 14. The contents of the animations**
In this study, free-hand gestural interaction is used in contrast to tangible interaction in other projects. This gestural interaction was achieved with the Leap Motion. In this way, two videos can be experienced concerning each other.
The usage of the various design analysis, alternatives and the 3D perception together in this study has created an example of how to use PM technique in the face of a design problem in architecture.

The most important potentials of this implementation can be listed as:

- The sensation of 3D volumetric effect on the spectator,
- The integration of the iconic, analytical and symbolic representation types frequently used in traditional types with the concepts of time and movement,
- As the content produced by providing the interaction between the system and spectator is transformed into a kind of representation which is experienced in the real environment.

The limitation of this study is that experiencing this medium within the restricted area. When the angle of the spectator is changed at the end of the implementation process, various perspective distortions are observed. Therefore, the use of PM with 3D volumetric effect in architecture generates a limited collaborative working environment.

CONCLUSION
This study emphasises the opportunities of improvement and usage of PM technique, including the use of the interaction between spectator and medium, and the creation of 3D volumetric effect beyond the usage of the 2D images which is frequently used in architecture as PM. This study also revealed the potentials for presenting design building in the large urban area and for using the PM technique as the dynamic medium.

In addition to being a medium that can be used within the field of professional architectural practices and presentation, PM also has strong potential for use in architectural education with the benefits provided by the use of time, motion, interaction, and descriptive geometry knowledge.
Interactive usage of this technique in architecture gives an opportunity to the students and professionals for integrating design problems and designed product in the single representation medium. As the results of this study on this representation medium, while considering the potentials for the future researches can be listed as:

- Using this technique in combination with 1:1 and multi-scale object,
- Creating a medium where direct eye contact can be established without using a head-mounted display,
- Integration with other traditional representations such as a scaled model,
- Differing from today’s usage in this field, working on volumetric effect rather than usage of 2D images,
- Enhancing the interaction with representation which means enhancing the interaction with represented space.

REFERENCES

2 Representations among these classifications can be used separately or in a complex way. But within architecture, the symbolic and analytical representations are most often used among them, depending on the mode of production of architecture.
5 Although sketches continue to exist today as representation substantially used in architecture, scale hand drawings are not used much because the scale drawings can be produced in a more practical and powerful way via computer-aided.
6 Perspective, is basically the expression of a 3D object in a 2D medium. Today, producing scaled perspective by hand have lost the prevalence of using in architecture due to advances in technology.
7 Models are often used in the field of architecture today because of its strong 3D effect.
9 In his work, Manovich studied and demonstrated the strong ties between cinema and new media.
See Lev Manovich, The Language of New Media (Cambridge: MIT Press, 2001), 9:
• the parallels between cinema history and the history of new media;
• the identity of digital cinema
• the relations between the language of multimedia and nineteenth century pro-cinematic cultural forms;
• the functions of screen, mobile camera, and montage in new media as compared to cinema;
• the historical ties between new media and avant-garde film.
11 In this process, the virtual image is produced using software that computer aided representations can be produced. This virtual image is then integrated into the real world through the use of various digital tools and methods.
12 Bimber, and Raskar, Merging Real and Virtual Worlds, 72.

14 While the Spatial Augmented Reality system as an architectural representation tool can be used with a model that is a traditional representation. In addition to that, when a building facade is represented, it is used in combination with the representation, represented by a reflection on the facade. Spatial Augmented Reality is also commonly named as Projection Mapping in a lot of scientific research.


17 Underkoffler and Ishii's I / O Bulb (Input / Output Bulb) project is one of the first examples for tangible interaction types used in Projection Mapping technique.


BIBLIOGRAPHY


HIGH-RISE: THE FANTASTIC MENACE: WHY THE HIGH-RISE FORM IS CONSIDERED BOTH FANTASTICAL AND MENACING IN SCIENCE FICTION FILM AND LITERATURE

Author: KATHERINE ALLAN
Affiliation: UNIVERSITY OF STRATHCLYDE

INTRODUCTION
The high-rise is an architectural typology that evolved due to pressures on space, the introduction of steel as a construction material and the invention of the elevator in the early 20th Century. The tall building form is prolific in modern cities – seen first in the growth of New York City and its skyscrapers and theoretical high-density cities such as Lebbeus Woods’ Underground Berlin (Figure 1). Awe was instilled due to their height, dominance and ability to change the urban condition. Ballard’s dystopian novel, High-Rise (1977) and its 2015 film adaptation is set in 1970s London, when the modernist block was appearing across the globe as the new form of urbanism inspired by CIAM. Using the building form to express the social, political, economic and psychological concerns of the decade, High-Rise explores the prospect of the high-rise not only as an omnipresent and oppressive backdrop for destruction but also as a metaphor for the demise of the both the internal and external bodies of its inhabitants.

ARCHITECTURE AND FILM
Science fiction films such as I, Robot (Figure 2) (2004), Metropolis (Figure 3) (1927), and Blade Runner (1982) depict high-rises as a response to an assumption of population explosion and new modes of urban living. Cities are often portrayed with uncontrollable advancements in robotics and extreme industrialisation, thus architecture as a character in sci-fi is often represented as bleak. Movie
sets’ ability to affect the viewers’ responses as well as the atmosphere and narrative of film has been exploited by filmmakers from the early still and silent films to the motion picture blockbusters today. The dominance in form, the hierarchical placement of people and the manipulation of perspective and the image in filmmaking can create an atmosphere of intimidation, a vision at odds with reality. As our cities move into the future, film will depict either the decay of the past or an inescapably dystopian future in which the machine surpasses human endeavour.\footnote{Modern architecture not only serves the cinematographic set, but imprints its stamp on the staging, it breaks out of its frame; architecture 'plays'.\footnote{Modern architecture not only serves the cinematographic set, but imprints its stamp on the staging, it breaks out of its frame; architecture 'plays'.}}

“Modern architecture not only serves the cinematographic set, but imprints its stamp on the staging, it breaks out of its frame; architecture ‘plays’.\footnote{Modern architecture not only serves the cinematographic set, but imprints its stamp on the staging, it breaks out of its frame; architecture ‘plays’.}}

Architecture is more than a space in film; it is assigned a character to enhance the storyline and the composition of the image. Architecture allows the director to create a more “…experientially effective representation of architectural setting…” with the use of live set, fabricated set and computer graphics\footnote{Modern architecture not only serves the cinematographic set, but imprints its stamp on the staging, it breaks out of its frame; architecture ‘plays’.} to distort the image shown to audiences. The use of a city as a live set can provide an understanding of the social and cultural issues of the period while computer graphics add marvel to a real-world
setting. Architecture in film is provocative due to its ability to develop a new architecture unbound by issues of gravity and practicality, creating a new space “akin to that imaginary space ‘within the walls of the brain’.” In *Inception* (2010), the screenwriters explore this concept of architecture within the mind by creating a physical ‘limbo’ in the main character’s mind – a desolate landscape of towering buildings (figure 4) aimed at inflicting emotional pain on the character, in turn provoking an emotional response in the viewer. Juhani Pallasmaa discusses film’s ability to “construct spaces in the mind”, drawing on real memories and fears to create a disorientating mix of actuality and existential projections. Architecture allows us to experience the fabricated image in film due to our own previous experiences of space, time and movement; as Fritz Lang states: “The violence is in your mind.” Walter Benjamin notes that these types of unconscious are linked and that film allows individual, internal perceptions to be jointly received and phobias experienced collectively.

*It is through the camera that we first discover the optical unconscious, just as we discover the instinctual unconscious through psychoanalysis.*

![Figure 4. Film Still from 'Inception', dir. Christopher Nolan, 2010](image)

**THE CITY AND THE HIGH-RISE IN FILM**

George Simmel and Antony Vidler interpret the modern city as a money-making machine housing modernist ‘monument after monument’ and people with personalities of toughness and reserve, only living their lives to further their careers and the money-economy. Fritz Lang, director of *Metropolis*, saw New York as both a “fascinating icon of modernity” and the key to producing a futuristic film. Lang used panoptical control to explore contemporary fears and attitudes towards cities and ‘rampant Capitalism’ in the 1920s, turning fantastical to menacing.

*But film has indeed – on numerous occasions – faithfully translated the boldest dreams (and the worst nightmares) of architecture.*

Science fiction movies take inspiration from our global cities and their high-rises, grounding the action in a place similar to that which we have experienced to enhance believability and, when presenting prophetic dystopia, create more menace. The high-rise block of modern cities, the omnipresence created by depth, perspective manipulation and movement in film is intended to generate human alienation. The set designers of *Blade Runner*, envisioned a future city of great history, darkness, oppression, industry and density, taking inspiration from New York, Tokyo, Hong Kong and from architects from various periods to create a ‘nightmarish’ urban condition.
High-rises are the apparatus architects use to solve or make possible the city. Filmmakers use this apparatus to present the most believable version of the ‘future city’ to enable a deeper level of understanding and connection to the action. The set designers of I, Robot, for example, took direct inspiration from the works of architects Santiago Calatrava and Zaha Hadid; great focus was placed on transparency of public places and the bold form of the ‘USSR’ building (Figure 5) was to appear like a blade in the cityscape. The film used Chicago as a live set and added 30 buildings to the backdrop; the ‘USSR’ building’s constant presence in almost every scene serves as a striking reminder of the presence of law in the city. A similar approach was taken in Blade Runner, as the ‘Tyrell Corporation’ headquarters building was one monument in the landscape, its size and dominance a physical manifestation of the power of the governing organisation (Figure 6).

The failure of the ‘NS-6’ robots in I, Robot shows a similar narrative, as the human race must place its hopes on one man to overcome the power of the machine and allow humans to regain control.
I, Robot is futuristic in style, the same principal of the rampant machine technology and bamboozlement caused by extreme density and verticality add intensity to the film’s narrative. The mimicry in design of both the robots and the ‘USSR’ building aim to exacerbate the oppressive nature of the machine and the ‘government’; people are constantly reminded of their control and are helpless in the face of advancing technology.\textsuperscript{29}

**THE BALLARDIAN HIGH-RISE**

The People

High-Rise’s inhabitants epitomise Simmel’s ‘modern man’ with a ‘blasé attitude’; Ballard suggests that the high-rise enables, requires and creates this personality. Dr. Robert Laing (Figure 7) is the protagonist in the narrative; he attends parties on the floors directly above and below him, only leaves to work at a medical school and uses the shopping and leisure facilities in the high-rise frequently. The number of residents is regularly referenced in the novel; high-rises afford high-density, generating high profits and complex social interactions and class-related anxieties. Richard Wilder is of a lower social class to Laing, resides on level 2 and is an opinionated television documentary producer interested in exhibiting high-rise living, looking at the “psychology of … two thousand people boxed up into the sky”.\textsuperscript{35} Ballard’s narrative uses Wilder as the ‘sane’ figure of the building; he is the only one who sees the buildings as prison-like blocks, noting: “A psychotic would have a ball here…”\textsuperscript{36} Simmel’s ‘modern man’ can be considered as ‘a psychotic’; Ballard suggests that to function in a fast-
paced, technological city, man alters his identity to achieve materialistic success but is subject to potential mental deterioration.

A new social type was being created by the apartment building, a cool, unemotional personality impervious to the psychological pressures of high-rise life, with minimal needs for privacy, who thrived like an advanced species of machine... \(^{37}\)

The Building

Vidler ‘unhomely’ makes reference to the modernist architecture and its attempts to eradicate all signs of history: history that allows one to consider a place as ‘home’ due to their own experiences, perceptions and ‘mental maps’. \(^{38}\) Taking away a person’s ‘mental map’ leads to an alienation of individuals in this new and sterile environment, filled by high-rises, an idea Ballard may have unknowingly been interpreting. The brutalist style of Wheatley’s filmic high-rise is due to the inspiration Ballard took from Hulme Crescent in Manchester and its closed-off and inhuman design, enabling the film to have an element of reality.

The building is initially portrayed as fantastical – it inspires awe at the dominance of its brutalist design, described as a ‘cliff face’ or ‘critical mass’. \(^{39}\) The architect, Royal, visualised the development as a hand; a large ‘lake’ that separates the five blocks acts as the palm, and the buildings emulate fingers. This admission from Royal gives an ominous sense of entrapment by these monumental manifestations of the modern city from the beginning. Vidler’s analysis of presence and absence is pertinent when considering Ballard’s use of the architecture in High-Rise; the blocks are described as “built, not for man, but for man’s absence”. \(^{40}\) This suggests that, in order to provide successful urban living, this building is purely functional. If man is to reside in this building for longer than intended and use it for more than base practical needs it will not function as intended. Residents will be
engulfed by the sterile and ‘dark’ space of the city imagined by Vidler to represent identity, politics and economy and to hide societal fears and phobias.41 The residents of the high-rise begin their new way of living excitedly, knowing that this innovative building provides them with everything they could possibly require.

...the restoration of light in due course revealed its crop of illicit liaisons flourishing in the benevolent conditions of total darkness like a voracious plant species.42

The Breakdown
Life in the high-rise starts to deteriorate as the building malfunctions and the residents engage in violent behaviour. However, even as the 10th floor concourse becomes a “no-man’s-land between two warring factions” and sporadic outbreaks of violence continue, so too the routines of daily life continue.43 The issues spurred on by power failures and elevator breakdowns are seemingly due to class divides. The high-rise is not only enclosing the darkest behaviours of its inhabitants but its design failures begin to echo their downsfalls.

...the high-rise was a model of all that technology had done to make possible the expression of a truly ‘free’ psychopathology.44

The death of a 40th floor resident at the climax of the residents’ downward spiral (Figure 10) goes almost entirely unnoticed – the residents appear indifferent. Laing simply notices the glimmer of the “brilliant lights of the apartment building” in the glasses of the deceased man, showing it in a fantastical light even at the height of destruction. The residents return to their active social lives; Wilder is the only resident who thinks it strange that death is going unnoticed and decides to journey to the ‘summit’, Royal’s penthouse, to rebel against the goings on. Wilder knows that in this inescapable prison, “the real duel would be resolved among the deserted corridors and abandoned apartments of the building inside their head”, a battle he appears to be winning.45 Vidler’s concept that film architecture is a space akin to that within the ‘walls of the brain’ is useful in understanding Wheatley’s interpretation of Ballard’s narrative: Wheatley uses dark images with exaggerated lines of sight (Figure 11) in order to convey both the menace of the building and of the personalities of the residents inside.
After the breakdown and during a period of rest, Laing ventures out to work for the last time and notes the neighbouring towers seem menacing:

...but this building seemed remote and threatening. Looking up at the endless tiers of balconies, he felt uneasily like a visitor to a malevolent zoo...⁴⁶

He is shown in the vast concrete expanse between the towers (Figure 12), the blocks encircling and provoking him to the point of hurriedly returning to his high-rise, decaying apartment and mind-set, never to leave again.⁴⁷ The sight of an outside world with differing social constructs and personalities frightens Laing to the point of retreat. He welcomes the enclosed, destructive and now familiar lifestyle the high-rise offers. Laing embraces modern life, ultimately becoming a ‘psychotic’, immersing himself into the instinctual and primitive activities. As the events in the high-rise have gone from petty social rivalry to outbreaks of violence conducted by ‘clans’ of residents and now to an individual fight for survival, the residents have begun to accept the chaos. They have embraced a clandestine lifestyle, accepted their debilitating mental states as natural, and revelled in the psychological pressures of high-rise life.

Even the tone of voice of his neighbours as they described these outbreaks of hostility was calm and matter-of-fact, like that of civilians in a war-torn city...⁴⁸
The End
Royal’s social experiment is reaching its climax, revolts and deterioration of the building’s services leading to gradual acceptance by the residents. They are now shut off from the world, have stopped attending their jobs, parties and using the amenities that now lie in ruin and have embraced a life of solitude in the modern city. The result of placing a great number of people in such a space not only leads to the breakdown of social constructs but to the destruction of the building itself. Laing considered Wilder as the only sane resident of the high-rise as he reacted to the chaos: however, as he has not accepted the fate of high-rise living his time comes to an end too. After he reaches the summit of the tower, the only man in the building fighting against anarchy, he achieves his goal of murdering the architect but dies in the process.
As the sun sets on (the now fantastical) high-rise, Laing moves into the Penthouse of the deceased Royal; he wears his worn work suit, covered in paint, sweat and blood, and serves a meal of Alsatian. Laing has become so much the reveller in dark space that he no longer has an understanding of the outside world; his mind has become accustomed to the psychological extremes of high-rise living to the point of delirium:

‘One rule in life,’ he murmured to himself. ‘If you can smell garlic, everything is alright.’

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THE FANTASTIC MENACE
The emotive terms ‘fantastical’ and ‘menacing’ form a complex relationship with regards to the depiction of the high-rise in science fiction. The term ‘fantastical’ is realised in science fiction due to inspiration taken from realised architecture – the high-rise form dazzled at the start of the 20th Century from the spectacles of Coney Island and beyond. Modernism was seen later in the 20th Century, as an answer to the problems of the era; CIAM applied logic and statistics to solve planning issues in European cities. With this initial excitement came fears of failure, with modernist Le Corbusier’s future city designs ironically including plans against failure. ‘Menace’ is evidenced in science fiction as buildings portray a chaotic future city, one where science and technology is failing, oppressive corporations are housed in omnipresent high-rises and humans are relinquishing all control.
J. G. Ballard interpreted the dislike of the Modernist (Brutalist) style in 1970s London and fears of rapidly advancing technology and created a 40-storey building to act as a metaphor for the destruction of a group of high-rise residents. Simmel’s ‘modern man’ must resist being “leveled down and worn out by a social technological mechanism”, High-Rise’s residents are either institutionalised or devastated by the pressures of modern high-rise living. The Ballardian high-rise block appears as
fantastical, shown at the very start as a wonder of modern construction holding the promise of successful and efficient urban living, slowly descending into a chaotic and menacing symbol of social imbalance. As the residents accept this imbalance, the block becomes a fantastical, almost surreal, presence again, the inhabitants harmonious in the mutual acknowledgment of their fate.

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