MOVING IMAGE AND THE SPACE AROUND THE FRAME: TIME-BASED INSTALLATIONS AND FORMS OF EXPERIENCE

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Abstract

This practice-based research examines the relationship between the historical framework of Expanded Cinema and contemporary time-based installations by observing the revival of analogue media and the formal implications in re-exhibiting Expanded Cinema works in the contemporary museum. Moreover, it investigates contemporary artistic practices where the use of analogue media and the sculptural manipulation of the projection process contribute to a reinvention of the grammar of the cinematic apparatus. The inquiry observes the self-referential aspect of the elements belonging to film and their displacement from the cinema into the more experimental exhibition setting of the gallery. It specifically analyses the light beam–as a projective and sculptural element–and the deconstruction of the fixed cinematic experience in relation to the screen and the perspectival representation of space.

The theoretical and practical approach, through the parallel production of a body of works and the analysis of case studies, contributes to the multi-disciplinary development of my practice as well as to the observation of the perception mechanisms triggered by different levels of immersive experience in the exhibition space.

This research aims to re-define the objects and the reception of contemporary moving image installations, through the analysis of the space around the screen and the observation of works where the movie theatre architecture is transformed inside the gallery and the museum context. This framework of observation aims to further the understanding of moving image today in relation to history, artists' choice of media and contemporary exhibition trends.

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Declaration

I declare that the research contained in this thesis, unless otherwise formally indicated without the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed

Dated 07/07/2018

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I would also like to thank my family and my boyfriend, who helped me during this journey by giving me emotional support.

Preface

As an artist and practitioner, the possibility of undertaking a practice-based PhD was a remarkable opportunity to critically reflect upon my work and its theoretical implications.

My artistic background comprises painting, sculpture and photography, which I studied at the Academy of Fine Art in Florence. I had decided to work with moving image and film since attending a Masters in Fine Art at Central Saint Martins in 2011, where I had the opportunity to work with the DIY methods of processing, developing, and printing 16mm black and white film. I first approached moving image through video and performance. I felt I wanted to go deeper into the practice of film-making, and the immediacy of the digital medium was not contributing to the tactile and meditative approach to moving image I was looking for.

I remember the first moment I used a 16mm film camera in Victoria Park in London and the first time I used a 16mm film printer at Central Saint Martin College. I recall the noise of the printer in the darkroom, the excitement I felt when checking if everything was right, while the light rhythmically flashing was recreating the atmosphere of a dream. Handling black and white film and understanding the magic of the developing process, using the Lomo tank and drying the filmstrip under the hand drier of the college's toilet characterised my approach to the use of film: experimental, process based and playful, similar to the approach of a child playing for the first time with clay.

The use of digital media limited the potential for unexpected aesthetic outcomes in my practice that I found instead when using film. This also happens when I prepare the glaze for my ceramic pieces: I mix all the chemicals, following the recipe, but the final glaze appears slightly different every time.

I like to make things from scratch, guided by instinct, and I approach film as a medium that allows me to experiment with other media and practices. This thesis reflects on the idea of experimenting with different materials, languages and media and observes the progression of my practice and its unexpected development during this journey.

Introduction

The installation of moving image works develops a system of relationships between the space around the frame, the historical background of Expanded Cinema and the sculptural use of the medium of film in relation to the exhibition context.

This practice-based research investigates the space where moving image is installed and observes its interaction with disciplines such as sculpture, design, and architecture with the aim of answering the following question: what novel forms of moving image installation emerge from film–sculptural hybrids that specifically address the condition of their exhibition?

The thesis is divided into three parts; each chapter contains a theoretical and practical investigation which follow the progression of my practice. My analysis focuses on the observation of the off-screen space and the media used by the artist (with particular reference to the medium of film). I observe and discuss the material of moving image[1] by looking at other artists' practice and their influences on my work, which was initially dedicated to the exclusive use of moving image and focused on what is inside the frame, but later evolved to embrace languages such as sculpture and design that I use to interact with the off-screen space.

The parallel practical and theoretical research method focuses on the idea of expanding beyond the frame, specifically referring to the practices introduced by the Expanded Cinema movement, which defines connections and exchanges that are particularly relevant today between moving image and languages such as performance, sculpture and architecture.

The questions explored in Chapter 1 focus on identifying the continuities and discontinuities between the historical background of Expanded Cinema and Structural Film and recent developments in the exhibition of moving image and their influence on my work. My observations focus on contemporary artists' use of analogue media as a sculptural material and as an installation display format. These aspects are observed through the case study of the exhibition *Film in Space* (15 December 2012–24 February 2013) at Camden Art Centre, London, and the work of Rosa Barba and Tacita Dean, whose approach relates to the use of 16mm film and

[1] By 'material of moving image' I mean the elements that contribute to the experience of the projection (the film projector, the film looper, the filmstrip, the projection itself, the light beam, the screen, the audience, the spotlight, and the movie theatre's architecture).

analogue equipment[2] in my practice. In works such as *Enlighten* (2011), *RGB* (2014) and *Reversed Light* (2013–2014), for example, the relationship between the projection process and the manipulation of the projector and the filmstrip were factors which contributed to the integration of sculpture in my work, and to the reinterpretation of the role of the analogue medium in the installation space.

In Chapter 2 I examine light as a material of the projection process and a sculptural object. I specifically observe the off-screen space by looking at the relationship between the projection source, the light beam, and the projection surface in the work of Anthony McCall, and I investigate how the mechanism of light visualisation and the manipulation of the projection source contribute to the expanding of the frame of the visual field for the viewer in the work of James Turrell. How does light interfere between the representational frame (within which images are contained) and our frame of vision to produce an unbounded visual experience? How can the act of perceiving constitute the work exhibited?

In the case study of Olafur Eliasson, I examine how his work contributed to the rethinking of the projection source as a sculptural and optical object that is detached from its conventional filmic functions.

The observation of the relationship between light and space and between light and objects led my practice to the making of sculptures through the experimentation with different materials, such as steel and ceramic, and to a better understanding of the perception mechanisms activated in the off-screen space in relation to the moving image projected and to the objects exhibited.

The analysis conducted in Chapter 3 observes artistic productions where the screening space actively engages with the moving image work exhibited. It specifically examines the relationship between the container (the architectural context) and the content (the moving image and related apparatus).

The method of analysis is based on the observation of existing theoretical approaches that contribute to the definition of the migration of cinema to the museum and the analysis of works in which the use of analogue and digital media activates crossed forms of reception between the cinema, the gallery and the museum. The work of artists such as Tobias Putrih, the installations by Apichatpong

[2] This refers especially to the use of 16mm and 8mm film projectors for processing 16mm black and white film using a 16mm film printer and a Lomo developing tank, the use of a rostrum camera for animation and titling, the use of slide projectors of different kinds, and the observation of the mechanism of light projection through the photographic and filmic emulsion.

Weerasethakul, *Primitive* (2009–2016), at the Tanks, Tate Modern, and Joao Maria Gusmao and Pedro Pavia's *Papagaio* (2014) at Hangar Bicocca are examined to see how the movie theatre architecture is remodelled and displaced into the museum and the gallery, and how the medium and its installation activate different forms of experience in relation to the space of reception. The observation arising from this examination contributes to the analysis of the differences between the auditorium, the movie theatre, and the pavilion by looking also at the history of the movie theatre and paying particular attention to John Eberson's Atmospheric Theatre.

The findings of this chapter informed the conceptual development of the space designed for the Viva Exhibition project *Between the Glimpse and the Gaze*. The exhibition focuses on the production of film–sculptural hybrids installed inside a space that was originally inspired by the movie theatre auditorium and revisited into a space of mobility in the gallery, where what is on the screen interacts with the objects exhibited and their background.

The Viva Exhibition finalised all the principles examined during the various stages of the research and aimed to create a multidisciplinary space in which the eye travels between the 'blur' and the 'focus', the glimpse and the gaze, the foveal vision and the peripheral vision, and in which moving image, sculpture, design, light emission and the study of the space of reception between the gallery and the cinematic experience are merged.

Summary of key terms

The following key terms are defined in the context of my practice and the relevant theoretical references.

Celluloid: I use this term in relation to the analogue medium of film (specifically referring to the filmstrip) to define its use and its aesthetical, mechanical, and organic qualities that differ from the use of digital media in film-making, moving image art, and the cinema industry. Although this material is not used any more[3] I use this term in a figurative way to refer to the origins of cinema and the first genuine use of the medium from which moving pictures were generated.

Cinematic: The term *cinematic* is used throughout the thesis to define the qualities of time-based installations and the system of relationships activated through their staging in terms of scale, structures, apparatuses and media specificity, and to describe the experience of film and the process of making film which relates to artists' moving images and their installation. The terms *cinematic* and *cinematic components* refer to the moving image, its objects and the environments which constitute the experience of the projection. *Cinematic* elements can be inside or outside the frame, part of the production/post-production processes finalised in the exhibition, or design elements that contribute to the experience of the projection in the installation space. I refer also to the state of film-specificity defined by Rosalind Krauss as the "aggregate condition" that includes "the compound idea of the apparatus"[4], where all the elements that compound film contribute to its specificity and to the experience that we define as cinematic.

Display context: This term is used to refer to the architectural space in which the work is exhibited (a cinema, a gallery, or a museum). This space can include sculptural, architectural and functional elements (modular repetition of forms, screens, columns, seats, walls, etc.).

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[3] Celluloid was made of cellulose nitrate and camphor; it is no longer used because of its highly flammable properties and was replaced by cellulose acetate film or safety-based film in the 1950s. In the 1980s, polyester film began to be used.

[4] See Krauss, Rosalind (2009) *A Voyage on the North Sea: Art in The Age of Post-Medium Condition*, Thames and Hudson, cit. p. 25.

Film autonomy: This term refers to the materials that structure the analogue projection process and all the elements involved in the process of making and projecting film when these materials (projectors, the filmstrip, and the process related to the printing and processing of the filmstrip) become auto-referential as sculptural installation elements in the exhibition space.

Film anatomy: I refer to the components of analogue film in terms of the parts related to the film projector and the filmstrips.

Film–sculptural hybrids: I refer to multimedia installation works and sculptural pieces that are film and sculptural based in terms of their shape and their use in the space, and in which there are elements belonging to both the practices of film and sculpture.

Hybridity and hybrid context: These terms are used to refer to the crossing between different reception modes and architectural features of the cinema, the gallery and the museum. They also refer to the use of mixed media when working with moving image and to the interaction of digital and analogue media in sculpture, design and architecture practices.

Light emission and light projection: These terms refer to two different possibilities of the light consistency that depend on the equipment used and the source of the projected light. *Light emission* is the light emitted from an artificial source such as a lamp, a light tube, a torch, or a spotlight, which diffuse the light into a flux. *Light projection* means that the light comes from the video, film or slide projector when it is channelled by the projector gate as a result of light or a moving picture being shaped by a frame and directed onto a surface or a screen.

Migration of cinema: I use this term to refer to artists' time-based installations in which cinematic elements, technology, and codes which conventionally belong to cinema are displaced and transposed by artists into the gallery space and the museum.

Projective quality of light: I use this term to describe the characteristics of the light produced by a lamp or a projector. The projective qualities of light per se depend on the kind of equipment employed in the process of projecting (film/video/slide projector or a lamp projector such as a spotlight) and how it is used to expand or modify the experience of the space into which an image or light is projected.

Space around the frame: This refers to the space surrounding the screen or the projection frame. It encompasses the architectural and installation settings and artists' interventions, which allow for and are part of the installation of moving image, and contributes to the experience inside the frame as well as to the way the work is displayed and experienced by the viewer.

Sculpture, sculptural quality, and sculptural autonomy: The term *sculpture* refers to the installation possibilities related to moving image (in terms of occupying a three-dimensional space and having a mass), especially where moving images' objects and environments become materials to work with in a three-dimensional way.

The *sculptural quality* of moving mage refers to the installation possibilities of its objects and equipment, and the architectural space in which it is displayed. The *sculptural quality* also refers to the projection beam when it gains a three-dimensionality which occupies the visual space as an installation piece. In this case, the light acquires a sculptural autonomy because it is self-referential and autonomous in the space. The same autonomy can be attributed to moving image elements, such as the projector machine and the display context.

Contribution to knowledge

This practice-based research contributes to the contextualization of artists' moving image in relation to its historical background and contemporary exhibition trends. It provides a critical framework for the revival of analogue media and the formal implications of re-exhibiting Expanded Cinema works in the contemporary museum. It investigates contemporary artistic practices in which the use of analogue media and the sculptural manipulation of the projection process contribute to the reinvention of the grammar of the cinematic apparatus.

This project aims to define the ongoing shifts in staging moving image by analysing the off-screen space through a critical reflection on the cinema's and the gallery's architectures and reception modes, where the interaction between different experiences contributes to the development of an architectural form in transition for artists' moving image display. The observed space is seen as a hybrid display context in which the displacement of the cinematic objects, as well as the sculptural manipulation of the projection process contributes to producing novel forms of moving image exhibitions in the more experimental setting of the gallery.

The theoretical and practical approach—which is developed through the parallel production of a body of works and the analysis of case studies—contributes to the critical understanding of the relationship between moving image, the space around the frame, and the viewer in the installation space. It aims to investigate the limit of the frame and examine how light can interfere between the frame and the architecture influencing, and transforming the viewing conditions.

The project aims to inspire artists and curators to adopt original approaches to the exhibition of moving image, especially when considering works that investigate the multidisciplinary relationship between moving image and architecture, sculpture, design and mixed media. This framework of observation aims to lead to a better understanding of issues involved in showing artists' film installations today in relation to the media specificity and the display context, and also furthers the understanding of moving image in relation to history, artists' choice of media and contemporary exhibition trends.

Methodology

The thesis is structured in three chapters that analyse the relationship between the theoretical references and the practical body of work produced during the programme. The research methodology brings together the practical and theoretical approaches through the discussion of existing references that are relevant to the three main areas of the research and the reflection on my practice.

The scope of the research methodology is to relate my creative practice to the written thesis in order to make an original contribution to knowledge as well as to frame the practice-based research production.

Data are produced, organised, and collected according to the following:

Primary research

Produce a body of practical work that explores the relationship between the following:

- Moving image and space
- Moving image and light in terms of its sculptural qualities
- Survey exhibitions
- Analyse the space and venues provided for the projected image in contemporary art and the different contexts (museum, gallery and cinema)
- Analyse relevant artists in the research field
- Attend screenings and exhibitions related to expanding the means for the production and reception of moving image in relation to light sculpture.

Secondary research

Examine existing data relevant to the research in the following:

- Books, exhibition catalogues, exhibition reviews, publications, online libraries, online journals

Case studies:

Artists

- Artists working with the analogue media in the contemporary gallery space
- Artists working with light as a sculptural means and the relationship of light with different forms of immersive experience
- Observation of exhibition spaces, screening spaces, and collaborations between artists, architects, and designers in different contexts.

Exhibitions

Analysis of the architectural space and its relationship with the work exhibited, including considering the following:

- Spectatorship and reception modes
- History, design and technology used
- Film's materiality and its relationship with sculpture.

Methodological approaches

Contextual review

This approach analyses the contemporary and historical framework in moving image production and its relation to the exhibition context. It examines existent works and different critical and curatorial approaches related to moving image installation exhibited site-specifically.

Practical approach

The practical approach is based on the production of a body of works through the integration of different media and materials such as film, video, light sources, slides, steel and ceramic.

The aim of the practical production is to investigate the limit of the frame and examine how light can interfere between the frame and the architecture influencing and transforming the viewing conditions. In addition, the body of works investigates the self-referential aspect of light in its encounter with sculpture and the projection means. The practical production is developed through the realisation of objects that analyse the relationship between light and the mass of a sculptural body to give objectivity to the phenomenon of light, and observes the following:

- The use of light as a material
- The use of digital and analogue equipment
- The expansion of the frame borders and the integration of the moving image and sculptural objects with the architecture around it
- The making of sculptural bodies which interact with light its emission and the reflections produced in the surrounding space

Theoretical and critical approach and research methods

The thesis comprises three chapters which investigate the relationship between my practice and the case studies. The aim of using this method is to improve my critical voice through the analysis and discussion of the theoretical references, existent critical approaches, and exhibition reviews. The references are analysed and compared to produce new meaning through a critical process of investigation which comprises the following research methods:

Type	Methods	Techniques
Library research	Analysis of the following: • Historical background • Existent bibliography • Existent essays and exhibition reviews • Exhibition catalogues • Existent theses in the research field	• Making notes • Collecting data • Selecting references • Analysing data and understanding which material is not useful and why • Creating links and connections for producing new meaning • Connecting existing theories with new observations by considering contemporary critical theory of the

		research field
Field research	• Survey exhibitions • Observe moving image shown in galleries, museums and project spaces • Attend conferences, talks and lectures • Attend screenings and events in different venues designed for the projection of moving image • Analyse museums' and galleries' activities in relation to moving image production • Analyse case studies	• Establishing connections between the data collected and the unknown by reviewing contemporary exhibition • Comparing development of moving image display in terms of the contextual background history and recent solutions • Comparing the work of existing artists and that of deceased artists that is being revisited and displayed in contemporary contexts using different technology
Practical research	• Observe contemporary productions where the impact of new technology and the revival of the analogue medium are considered • Consider multidisciplinary works in which the integration of moving image with architecture and sculpture is considered • Take part in exhibitions and screenings using the work produced	• Using 16mm and Super 8 film, photography and slides alongside digital media • Considering optical perception of colour and light and its relationship with space, either in the realisation of small-scale objects or in installations • Using iridescent material, ceramic glaze and lustre to create different light effects in relation to the encounter of an artificial source of light with steel and/or ceramic
Online sources	• Articles and interviews • Video film exhibition reviews • Museums' online resources • Archival resources • Online journals.	• Integrating these sources to explore moving image display outside London and outside the UK and stay informed with the exhibition situation worldwide.

Chapter 1

History and continuity between Expanded Cinema, Structural Film, and contemporary art: The analogue medium and the development of a new language in contemporary time-based installations

1.1 Introduction

The use of the projected image in contemporary art is influenced by technological evolution and artistic modus operandi. The observation of its relationship with the installation space leads to new ways of considering time-based works.

Expanded Cinema introduced different ways of working with moving image in the relationship between media and architecture. This development led to the expansion of the means of production within the interaction of the work exhibited along with the apparatus and performative elements. These new configurations opened up a path for recent developments in showcasing moving image installations where cinematic elements are displaced into the gallery and the museum, raising some new questions about the changing role of the medium from production to exhibition.

The discussion in this chapter aims to define influences and formal exchanges between the historical time frame of Expanded Cinema and recent moving image productions, looking specifically at the historical context and how artists use analogue or digital media in contemporary time-based installations.

These observations reflect on the use of film in my practice, which is described by considering a selection of works that reflect on the contemporary revival of analogue media when used as a source of sculptural material and as an exhibition format.

My findings in this chapter define a critical framework of the contemporary authority of film and its experimental use outside the projection booth and inside the gallery and the museum space.

1.2 Literature review

Experimentations with the materiality of film apparatus and the immersive aspect of Expanded Cinema

Between 1960 and 1970[5] the experimental film panorama within the field of Structural Film and Expanded Cinema was defined, and a novel relationship between the work and its presentational form[6] was introduced through a multidisciplinary approach that can also be observed in contemporary time-based mixed media installations.

This section traces a focused historical overview of Expanded Cinema and Structural Film and relates it to the discussion developed in the chapter regarding the contemporary revival of analogue media and the interventions in the space around the screen in contemporary time-based installations.

Film as a self-referential art form

The characterisation of film as a self-referential art form in Structural Film and the expansion of the frame outside the screen in Expanded Cinema delineated the departure point of the revolution of moving image art in relation to its display context. The structuralist approach shifted the focus of the work to the medium itself by analysing the optical, perceptual and chemical processes of film as a material. Structural Film questioned time, content, illusionism and representation, as well as film's sculptural qualities in the exhibition context. There was no narrative, just an outline of the elements that were deemed to belong to the cinematic: the study of light and its relation to the projection, the projector, the frame, the filmstrip, the breaking of the frame, film loops and superimposition, and the recording procedure as the study of time and duration.

The content of films such as *Axiomatic Granularity* (1973) by Paul Sharits, for example,

[5] For an account of the historical time frame of the development of experimental filmmaking before the 1960s see *Film as Film, Formal Experiment in Film 1910-1975*, which illustrates the time frame relating to experimental filmmaking from 1910 to 1940 in Part I and from 1940 to 1974 in Part II. Also accessible online at: https://monoskop.org/images/3/36/Film_as_Film_Formal_Experiment_in_Film_1910-1975.pdf [Accessed on: 15/09/2016] published as an exhibition catalogue for the show *Film as Film*, Hayward Gallery, South Bank, London, 3 May-17 June 1979.

[6] In some cases, the presentational form of the work was the work itself; see, for example, Lis Rhodes and Ian Kerr's *Bwlhaictke* (1976).

is the materiality of the film's grain. Taka Iimura's *To See the Frame and Not to See the Frame* (1972) (fig. 1.1, p. 144) shows the words "To See the Frame" alternating with a clear leader as white light and then the title "Not To See The Frame", followed by the same length of darkness (black leader) on the screen. In Tony Conrad's *The Flicker* (1960) (fig. 1.2, p. 144), light and dark frames alternate to recreate and amplify the flickering effect and to stimulate an impression of colours and forms in a stroboscopic effect that has no narrative or reproducible imaginary. David Dye's *Unsigning for Eight Projectors* (1972) (figs 1.3 and 1.4, p. 145) consists of eight Super 8 film projectors set out in a circular formation that point inwards to rhythmically project onto a sheet of A4 paper at the centre of the circle. Each projector has a twenty-second film loop with five-second gaps showing, in sequence, one letter of the artist's name. They are not synchronised so the viewer is not able to catch the writing because of the superimposition of the projections. The audience is required to assemble the name from the individual letters, and hence Dye is asking the spectator to make an effort to actively read that is antithetical to the conventional experience of film.

The audience becomes aware of the mechanism making the work on display. Drummond's definition "self-reflexive reductionism of the medium"[7] describes the principle that introduced a new language as a formal characterisation of the film medium that activated a reflexive viewing experience.

Events such as *The International Festival of Independent Avant-garde Film* at the National Film Theatre and ICA (3–13 September 1973)[8] established the concept of a flexible audience inside a space where artists could experiment. The exhibition *Film as Film*[9] (1979) grouped works showing film as an autonomous and self-referential art form whose "further purpose is to broaden the traditional space of film consumption".[10] The show attempted to channel different tendencies that had been in opposition to

[7] Philip Drummond questioned the self-reflexivity of the materiality as a matrix for a formalist dilemma which concerns its own dialectic and the relationship between content and form typical of the analysis of structural filmmaking. See Philip Drummond, *Film as Film,* exhibition catalogue, Arts Council of Great Britain 1979, p.15.

[8] The event was organised by David Curtis and Simon Field and consisted of a series of screenings and talks at the National Film Theatre dedicated in part to the structural filmmaking emerging from the London Film-Makers' Co-operative. The event also comprised Expanded Cinema events at the ICA with works by American pioneers such as Stan Vanderbeek and Ken Jacobs.

[9] *Film as Film*, Hayward Gallery, 3 May–17 June 1979, exhibition catalogue, Art Council of Great Britain, London.

[10] Ibid. Introduction p. 5.

mainstream cinema since 1920.[11]

Theo van Doesburg, in his essay *Film as Pure Form* (1929), had already described film as an autonomous and creative form that involves the relationship between light, movement, space, time and shadow.[12] His analysis is one antecedent of the expansion of the possibilities of film into the space through the challenge of Expanded Cinema. This relationship is the matrix of the practical and theoretical developments of the projected image in contemporary art.

The expansion of the apparatus into the space: *Intermedia theatre*

The cinematic was sought beyond and outside the film machine within the expansion of the apparatus towards the space. The moving image apparatus was used to break the frame borders through the projection as a performative event that was embracing the architectural context.

Gene Youngblood describes different tendencies which had defined the variety of media used in the Expanded Cinema experiments between 1960 and 1970; these experiments had introduced the notion of intermedia theatre[13] as a space for experimenting with audiovisual equipment to create an immersive environment.

Youngblood almost nullifies the distinction between *cinematic* and *theatrical* saying that: "what is genuinely 'theatrical' as opposed to what is purely 'cinematic' are no longer of concern"[14] because intermedia theatres embraced both *theatrical* and *cinematic* elements, and the features belonging to each language were playing together to create a synesthetic experience.

These aspects contributed to the constitution of groups of artists and engineers that collaborated together to produce multimedia performances with mixed media equipment in specific architectural contexts. Groups such as USCO Intermedia Group explored multi-channel audio-visual techniques for the design of technical facilities, and ONCE Group focused on activities related to performance and the

[11] Avant-Garde Cinema also attempted to establish independent production that was distinct from mainstream and commercial cinema, with artists such as Fernand Léger and Dudley Murphy, Man Ray and Marcel Duchamp, among others, working mostly on one-off film.

[12] Doesburg, Theo van *(*1929) *Film as Pure Form* translated by Standish D. Lawer.

[13] Youngblood, Gene (1970) *Expanded Cinema* New York, Dutton, Part Six *Intermedia.* In *Intermedia Theatre and Multi-projection Environments.*

[14] Ibid. p. 365.

exploration of the theatrical space.[15] Artists such as Aldo Tambellini and Otto Piene established the *Black Gate Theater* (1967) in New York, as an open space used for creative experimentation where live spectacles and multi-media installations were experienced as performative events.[16]

The dome and the spherical architectural shape were particularly used for alternating multi-projections of images with music and lights: Jordan Belson's films were projected along with electronic music by the composer Henry Jacobs during the Vortex concerts, that were held at the San Francisco Planetarium.[17]

The intermedia spherical dome *Movie Drome* (fig. 1.5, p.146), designed by Stan Vanderbeek between 1963 and 1965, was a precursor of the introduction of the multimedia screening space where the viewer could experience a 360° circle of sound, lights and projections. This space concretised the working studio and the "magic theatre",[18] and its multidisciplinary aspect is an antecedent of contemporary multi-projection environments and multimedia installations. The immersive experience inside the dome was recreated through the exchange and the combination of cinema's and theatre's reception modes and the use of diverse equipment for moving image and sound reception. Multiple points of attention, different-sized projections and juxtapositions of images surrounded the public, activating an expansion of the space. Vanderbeek employed slide projectors, film projectors, and computer-animated images but had no preference for any particular medium.

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[15] USCO was founded by Michael Callahan and Gerard Stern in 1960. See the section *The Artist as Ecologist* in *Expanded Cinema* (1970) by Gene Youngblood, pp. 347-348. The ONCE Group is described in the section *ONCE Group: Unmarked Interchange* in Gene Youngblood's *Expanded Cinema* p. 374. ONCE Group's activities.

[16] During the first opening programme were shown works such as *Blackout* by Aldo Tambellini, which comprised hand-painted film projected along with four carousel projectors, and *The proliferation of the sun* by Otto Piene, showing a series of hand-painted slides projected around the room while the audience was sitting on the floor. See on Aldo Tambellin's website http://www.aldotambellini.com/rebel2.html [Accessed on: 12/12/15].

[17] Vortex concerts were conducted by Henry Jacobs and Jordan Belson at the Morrison Planetarium in San Francisco's Golden Gate Park from 1957 to 1960. The group started with electronic audio productions and included visual effects regulated through the Lumia operation system, which was also used by USCO.

[18] Vanderbeek, Stan (1966) statement describing the Movie Drome in http://www.stanvanderbeek.com/_PDF/moviedrome_final.pdf [Accessed on: 12/12/15].

Expanded Cinema: Differences and correlations

A. L. Rees in *Expanded Cinema and Narratives: A Troubled History*[19] describes the overall vision of the decade between 1960 and 1970 categorized by the following three main aspects: the merging of different art forms such as film with multimedia and live-action events, the exploration of electronic technologies towards the "cyber space" as prefigured by Marshall McLuhan, and the rise of new forms of audience participation to break down the barrier between artists and viewers. "Each of these challenged existing notions of cinema as a commercialised regime of passive consumption and entertainment."[20]

Rees further differentiates between the practice of Expanded Cinema in Britain and Europe and works made in the US saying that "common to nearly all US works [...] was the exploration of new forms of subjectivity in art, and a reinvigorated expressionism that challenged the formal boundaries of art media"[21] while in the UK and in Europe emerged a more structuralist approach to film and its apparatus with the London Film-Makers' Co-operative and structural–materialist film around the early 1970s.

The *Festival of Expanded Cinema* at the ICA in 1976 differentiated the structuralist research happening in Britain from the psychedelic turn of US Expanded Cinema, and emphasised the physical form of cinema and its apparatus. The festival included the work of Jeff Keen, Nicky Hamlyn, Lis Rhodes, Annabel Nicolson, Chris Welsby, Marylin Halford, Ian Kerr, Rob Gawthrop, Carolee Schneemann, Malcolm Le Grice, William Raban and Derek Jarman.

Filmaktion's events established a form of British Expanded Cinema born from the London Film-Maker's Co-operative, though originally influenced by American artists moving from New York to Europe between 1965 and 1969, such as Steven Dwoskin and Peter Gidal, as well as the discovery of figures like Kurt Kren, Wilhelm and Birgit Hein and Peter Kubelka in Europe.

Moreover, the performative aspect of Filmaktion—and the event *Filmaktion* at the Walker Art Gallery in Liverpool (22–27 June 1973)[22] —defined a space in which the

[19] See the full essay in the introductory section of *Expanded Cinema, Art Performance Film* (2011) edited by Ball, Steven; Curtis, David; Rees, A.L.; White, Duncan, Tate Publishing, pp. 12-20.
[20] Ibid. p. 13.
[21] Ibid. p. 14.
[22] The event comprised multiscreen works by Malcolm Le Grice and David Crosswaite, daily installations by Gill Eatherley and Annabel Nicolson, among others, and evening screenings of single-screen works by other members of the co-op, such as John Du Cane and Peter Gidal.

approach to film was immersive and improvisational, requiring a more flexible context than a conventional cinema space and introducing the British form of Expanded Cinema. Filmaktion's works, such as Annabel Nicolson's *Reel Time* (1973) (figs 1.6-1.9, p. 147) and Malcolm Le Grice's *Horror film* (1972) (fig. 1.10, p. 147), for example, demanded particular arrangements of equipment and the presence of the artist in the space. Annabel Nicolson's *Reel Time*, first performed at the London Film-Maker's Co-op in 1973, investigated the material properties of the analogue medium and its limits through film as a performative event. Nicolson sewed a strip of celluloid with a sewing machine; the punctured film depicted the artist at the sewing machine, filmed at another time. The damaged strip passes from the sewing machine to the film projector on an endless circular loop till its complete exhaustion. During the performance, light coming from another projector casted Nicolson's shadow onto the adjacent wall. In some versions of the same work, members of the audience were involved in passing the film from the sewing machine to the projector. The interplay between 'real time' and 'reel time' is created by several elements: the testing of the fragility of the film material, the disparity with the same action shot at another time, the correspondence of the action with the projected image, and the casting of light over the same action. These factors also outline the materiality of the medium and its relationship with production, reproduction, and reception properties.

16mm and 8mm film formats and the circulation of experimental films in different contexts

Experimenting with film apparatus was facilitated by the availability of portable film cameras and projectors, supplied by semi-professional and amateur film markets. These technological developments contributed to the increase in the number of people using 16mm and Super 8 film formats, and to their popularity.[23] Moreover, both Super 8 and 16mm film formats were widely used in colleges, schools, cine-clubs and art groups. Canyon Cinema, for example, held experimental screenings in traditional theatrical spaces and also partnered with the California College of Art

[23] SMPE (later SMPTE), the Society of Motion Pictures Engineers, founded in the USA in 1916, reported that the annual sales of small-gauge portable equipment tripled during the 1950s. It was estimated that in just one year, 1959, there were 4,195,000 portable projectors in use. This equates to one projector for every 42.2 people. Text quoted from *Suitcase Cinema* by Haidee Wasson, Cinema Journal 51, no. 2, Winter 2012.

and Crafts and the San Francisco Art Institute during the 1960s and 1970s. Canyon also used private homes as experimental micro screening venues for gatherings of artists and film-makers. Tess Takahashi argues that institutions such as Canyon, New York's Film-Maker's Co-op, and Vogel's distribution arm of Cinema 16 "worked to facilitate distribution of experimental films to cine-clubs, university classrooms, and private individuals. Experimental filmmakers and video artists also regularly loaned and traded their work through the mail. Such exchanges of prints and tapes were accompanied by letters about life, questions about the films themselves, and the gossip of the day." [24] She describes the home-screening venue as a site for experimentation, mentioning also a passage from an interview with Scott McDonald in which Robert Breer recounted that during a party at Amos [Vogel]'s apartment he showed *Blazes* (1961) on a "screen propped up on a pillow in his bedroom".[25]

These events and practices contributed to the transformation of the screening space into a place for experimentation and confrontation among artists looking for alternative spaces away from the traditional cinema space.

Current (film) and upcoming (video)

Differences between film and video introduced a demarcation between what was considered current (film) and upcoming (video) as means of production. One side involved the investigation of analogue, the current and most popular means of moving image production, and the other was engaged in the exploration of TV, computers and closed-circuit environments—upcoming technologies that were antecedents of the video language.

A. L. Rees describes video "as an 'emerging' art form" which had to battle "for funding and recognition in a crowded field dominated by filmmakers."[26]

Between 1960 and 1970, both technological approaches were employed in experimentation with multimedia and multi-channels and in challenging traditional viewing conditions. The demarcation between artists working with film and those working with video, still relevant today, evolved at this time.

Stephen Partridge in *A Kick in the Eye: Video and Expanded Cinema in Britain*, affirms

[24] Takahashi, Tess (2012) *Experimental Screens in the 1960s and 1970s: The Site Community*, Cinema Journal 51, no. 2, Winter.
[25] MacDonald, Scott, *Conversation with Robert Breer, 12/19/00*, in MacDonald and Vogel, Cinema 16, p. 387.
[26] Ibidp.16.

that the use of video during the 1960s and 1970s was particularly related to the low quality of television at that time and that artists using video were attracted by "the performative use of instant playback and closed-circuit television system (as installation)", where properties such as "the immediacy; transmissions; the 'live'; the closed circuit; recorded-replay with time delay; feedback oddities; synthesizer manipulations and synchronicity with sound" [27] were emphasised.

In Europe and the United States, several artists used closed-circuit, prerecorded video images and multiple monitors along with film to explore the potentiality and the spatial characteristics of the medium.

In *De La* (1971) (fig. 1.11, p. 148), Michael Snow exhibited the camera mount built by the Montreal engineer Pierre Abeloos to record *La Région Central* (1971) (fig. 1.12, p. 148) connected to a closed-circuit television system. A mechanical robotic arm held the camera that recorded, in programmed patterns of movement, the space around it. The resulting image was broadcast on four monitors placed around the space. Similar principles operate in Steina Vasulka's *Allvision* (1976) (fig. 1.13, p. 149), in which two cameras facing a mirrored sphere were mounted on a rotating turntable crossbar and connected with two monitors broadcasting the reflection of the mirrored sphere.

The closed-circuit video installation reinterpreted the space of the gallery while the equipment acquired a sculptural presence and a degree of autonomy in the exhibition space. The exhibition of the media used for the production of the moving image contributed to the transformation of its display.

Summary

Expanded Cinema transformed the relationship between a moving image's frame and space through multi-screen works and performances, while structural–materialist film activated a transformation between image and apparatus with single-channel works. Both approaches established possibilities of working with moving image to activate the space in which the audience became aware of the mechanisms that activate the work, as well as of the sculptural qualities of the moving image apparatus in relation to their surroundings. These relationships triggered the transformation of

[27] Partridge, Stephen (2011) *Video Post-Expanded* in *A Kick in the Eye: Video and Expanded Cinema in Britain* in *Expanded Cinema Art performance and Film* edited by David Curtis, A.L. Rees, Duncan White and Steven Ball, Tate Publishing London.

the display context by incorporating the space in which the cinematic is explored beyond and through the film apparatus. A system of elements that is related to the outline of the self-referential aspect of the medium, its use and its relationship with the installation space. These correlations are currently relevant in the analysis of the staging of contemporary moving image and its relationship with its exhibition context and the multidisciplinary aspect of media involved in their installation.

1.3 Continuity of history in the contemporary display and the use of film in contemporary art

The advent of digital technology and the simultaneous revival of interest in the materiality of film have created a new pluralistic aesthetic field, the parameters of which are in a process of continual evolution. What is the role of technology in relation to (i) artists' work, (ii) its display, and (iii) its reception? How do artists decide and operate between historical and contemporary approaches to the interaction of moving image with space?

A. L. Rees introduces some of these questions in *A History of Experimental Film and Video*, asking whether there is a conflict or a consequential development between history and contemporary art. He looks at experimental film and the "gallery video" phenomenon, when galleries and museums were increasingly embracing projected images showcasing time-based installation. Rees wants to call attention to the notion of the frame, the problem of the screen space and the apparatus, "the point of which is on how new practices emerge as creative variants on perceived traditions, often antithetically to them".[28]

The blossoming of critical art practices between 1960 and 1970 remains the pivotal moment when the integration of moving image with architectural space was first explored. The influences of these practices can be observed by analysing continuities between early works related to Expanded Cinema and contemporary time-based installations. By looking at the way artists use the medium in historical and contemporary approaches, we can classify stylistic trends into the following three working modes:

- The intention of working with the latest new media (from the use of video, electronic signals, tape, and TV and broadcasting, used by Nam June Paik, Steina and Woody Vasulka, Dan Graham, and David Hall, for example, to the use of the digital computer-based systems and interface development, used by Gary Hill, Bill Viola, and Doug Aitken, among others)
- The fetishistic and nostalgic fascination with analogue media as the only way of producing work that contrasts with current technology (for example the

[28] Rees, A.L. (2011) *A History of Experimental Film and video,* pp. vi-ix Introduction, In the second edition of *A History of Experimental Film and Video, From the Canonical Avant-garde to Contemporary British Practice,* 2nd Edition by BFI and Palgrave Macmillan.

hitherto almost exclusive use of 16mm film in the work of Tacita Dean)

- The aesthetic exchange between what is often called the "obsolete" and its revival as a reaction to the impact of digital media and the changing relationship between old and new technology (from the expansion of film and its apparatus and the investigation of the screening space by artists such as William Raban, Chris Welsby and Paul Sharits to the contemporary use of the analogue medium and its subsequent transformation with the use of film loops and sculptural intervention in the work of Rosa Barba, Gibson and Recoder, Guy Sherwin and Nicky Hamlyn).

The revival of the analogue medium

The plasticity of the film medium and its mechanical nature makes it an appealing means of production in contemporary art. Film technology is gaining new interest, and it has often been observed that this revival is a return of obsolescent technology that contrasts with the phenomenon of large format video-projection installation that has been predominant in galleries for the last twenty years. According to Chrissie Iles, "the emergence of digital technology has, paradoxically, led to an increased activity in film"[29]: the rise in the use of electronic media such as TV and video during the 1970s and the impact of digital technologies since the 1990s are two dynamics that correspond to technological developments associated with revivifying work on film.

The increased interest in the 'slow' contemplative and objective approach to analogue media has emerged against the alarmingly regular updates of digital media, which has provoked a resurgence and fetishisation of the analogue in photography, music and publishing. This phenomenon can be observed in different ways in the use of social media in contemporary culture (digital alteration of images to reproduce the analogue imperfection or the noise of the analogue media) and the imitation, reuse or revival of analogue objects (vinyl, audio cassettes, film projectors, cameras) and their definition as 'vintage' and 'retro' in the design world.

Lisa Chandler and Debra Livingston discuss the use of photographic filters through applications such as Instagram, Instaplus, Picfx, and Camera+, which "enable the users to simulate the visual language of analogue photography and aestheticize faults

[29] Iles, Chrissie in *The Projected image in Contemporary Art,* October no. 104 Spring 2003 p. 73.

and imperfection".[30] According to the authors, the use of a series of filters which can emulate or replicate the look of specific analogue cameras "such as the Polaroid [...] paper texture [...] framing formats" and the effects produced by analogue photography such as "fading, yellowing, sepia tones, black and white or 'vintage' filters, crack, dust specks [...] light leaks, film scratches, overdeveloped or burnt film, [...] – applied individually or in combination – generate a simulacrum of analogue 'authenticity'".[31] A similar approach is taken to the moving image when applications such as *iSupr8 Vintage Super 8 Camera*, *Vintage 8mm Video, VHS Camera* (among many others) are used to imitate the analogue film look and to "add dirt, dust and grain to your movies to create a masterpiece".[32]

In the cinema industry we can observe the introduction of digital cameras which aim to mimic the quality of 35mm film.[33] Despite the continuous updating of digital cinema cameras, several directors promote the use of 35mm film and analogue equipment, such as Christopher Nolan, Quentin Tarantino, Martin Scorsese and Steve McQueen, among others, while Kodak, after emerging from bankruptcy, is focusing on new products that merge analogue and digital features,[34] promoting an "Analogue Renaissance"[35] and pursuing the possibility of developing a new generation of cameras able to "merge analogue magic with digital convenience".[36]

According to Elena Caoduro, "the current interest in analogue technology, obsolete devices and photo filter apps is not a mere attempt to mourn superseded technologies (and more broadly, the past) but is rather an attempt to reclaim

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[30] Chandler, Lisa; Livingston, Debra (2012) *Reframing the Authentic: Photography, Mobile Technologies and the Visual Language of Digital Imperfections*, Conference paper, Available Online: http://www.inter-disciplinary.net/at-the-interface/wp-content/uploads/2012/05/chandlervlpaper.pdf [Accessed on: 27/10/16] cit. p. 3.

[31] Ibid. p. 4.

[32] App's description available online on Google Play, available on: https://play.google.com/store/apps/details?id=com.meamobile.iSupr8&hl=en [Accessed on: 27/10/16].

[33] Digital cinema cameras such as Arri Alexa, Red One Epic and SonyCine Alta F35, as well as digital cinema projectors, were introduced from 2010 and have been continuously improved. One of the main features of these cameras is the *Super 35mm sensor* that corresponds to the aperture of the full frame 35mm film.

[34] The company is working on the launch of the Kodak Ektra (a smartphone inspired by the Ektra camera designed in the 1940s) and a new Super 8 camera, which merges some digital elements with the possibility of shooting in Super 8 film. Moreover, Kodak acquired I-Dailies' film lab, based in West London, in July 2016; see this link for more information: http://www.kodak.com/us/en/corp/press_center/kodak_affirms_its_continued_commitment_to_the_motion_picture_film_industry/default.htm [Accessed on: 15/11/2016].

[35] Online on Kodak's website: http://www.kodak.com/US/en/Consumer/Products/Super8/Super8-camera/default.htm [Accessed on: 1/10/2016].

[36] Ibid. Online section *Creative Platform*.

physicality".[37] The fascination with the objectivity of media seeks the 'old' device (meaning devices that have experienced a gradual decrease in their commercial production and use), which is seen as a machine with sculptural and physical qualities that are different from the currently pervasive digital technology that is part of our daily routine.

Frequent digital technology updates also mean that the user needs to upgrade his or her equipment every few years, while with analogue machines the same film camera body can be used for decades. To some extent nowadays it is more convenient to buy a 16mm projector or a Super 8 camera than a digital one. According to Pip Chodorov, 16mm film projectors are cheap and work everywhere; there is no "format wars, no compressing or codes, no backing up or transcoding, no upgrade". He continues, "[W]e don't work with images but with organic, physical material that comes from the earth: salt, silver, minerals. We are not so much concerned with what it looks like, rather with what it is."[38]

Artist-run film laboratories

The mechanical–chemical qualities and the process of image-making of the analogue medium appeal to contemporary artists, and the flourishing phenomenon of the artist-run film laboratories[39] is part of what is defining the state of the exchange between the medium of film and contemporary art. Artist-run labs facilitate artistic and creative experimentations outside the mainstream cinema industry and have an approach that is similar to that of the historical background of the London Film-Makers' Co-operative in New York.[40] Nowadays, artist-run film laboratories such as No.w.here in London and Negativland in New York are some of the active

[37] Caoduro, Elena (2012) *Photo Filter Apps: Understanding Analogue Nostalgia in the New Media Ecology*, MeCCSA, Media Communication and & Cultural Studies Association Vol. 7 no. 2, cit. p. 7.
[38] Chodorov, Pip (2014) p. 36.
[39] MIRE, the Re-engineering Moving Image Association, organised the Independent Film Labs Meeting that took place in Nantes on 04/07/2016. MIRE (Nantes, FR), WORM, Filmwerkplaats (Rotterdam, NL) and LaborBerlin (Berlin, DE) ran a two-year European Cooperation Project focused on the preservation and circulation of analogue film involving other film labs, art schools, and cultural organisations.
[40] The London Film-Makers' Co-operative in New York in 1966 included a darkroom and a space for processing and printing film at its facilities, while the group based in London acquired its first space for distribution and production in 1969. For an account of the history and developments of artist-run film laboratories, see Pip Chodorov in *The Artist-Run Film Laboratories*, in Millennium Film Journal no. 60, Fall 2014.

laboratories[41] and places for experimentation in response to the changes in film production and distribution that have occurred. Artists and filmmakers are developing their own rules and strategies regarding the use of analogue film and the DIY aspects that are related to the multitude of possibilities arising from analogue material and its processes. According to Genevieve Yue, the possibility of recovering machines and equipment from commercial labs or universities (that switched to the digital medium)[42] contributed to the development of artist-run labs as a phenomenon that in the early Nineties was limited to few independent labs, mostly in France and today "has grown into an international network of over thirty, many of them formed within the last several years. The decline of film processing created a surplus of cheap, unwanted equipment that, in the right hands, could be repurposed for the smaller-scale operation of an artist-run lab."[43]

However, the acquisition and reuse of obsolete machinery is not the only aspect related to this phenomenon: it also concerns the set of creative possibilities offered by working with the analogue medium in a DIY manner. Genevieve Yue explains: "[I]nstead of the fetishism or the resuscitation of a 'dead' medium (though that element certainly persists, perhaps most commonly in the art world), filmmaking finds new life in the autonomy afforded by the artist-run lab, fulfilling a longstanding avant-garde conception of the medium defined as an artistic one, well before its technological determination."[44]

The reinvention of the film medium

The hands-on approach and the attention needed during both preparation and execution of the work on celluloid produce unexpected forms of art that have nothing to do with the fetishisation of, or nostalgia for, a supposedly obsolete or exhausted medium, but contribute to the making of hybrid forms through the

[41] Online Artist-Run Film Labs directory: http://www.filmlabs.org/index.php/labs/ [Accessed on: 1/10/2016] while the Professional Labs Directory is advertised online on Kodak website: http://motion.kodak.com/motion/Support/Laboratories_Directory/index.htm?blitz=off [Accessed on: 1/10/2016]

[42] See Chodorov, Pip (2014) *The Artist-Run Laboratories*, Millennium Film Journal, Fall, no. 60, 2015, in The Case of Studio Eèn, cit. p. 29. In the mid-1980s, Karel Doing and two other students acquired some Super 8 equipment for their school (which wanted to use digital video equipment); this contributed to the opening of Studio Eèn, which became one of the most active labs in Europe regarding printing Super 8 film.

[43] Yue, Genevieve (2015) *Kitchen Sink Cinema: Artists-Run Film Laboratories*, in *A Recipe for Disaster,* available online at http://www.filmlabs.org/docs/recipes_for_disaster_hill.pdf [Accessed on: 3/08/2016].

[44] Ibid. Yue, Genevieve (2015).

aesthetic and sculptural qualities of the analogue medium and through the crossing of reception modes related to cinema and art venues.

Ji-Hoon Kim's essay titled *The Post Medium Condition and the Explosion of Cinema*[45] gives a relevant insight into different critical approaches by artists that reconsider the use of analogue media when it encounters digital media.

Kim elaborates on the notion of the post-medium condition[46] as defined by Rosalind Krauss and the critical approaches of Mary Ann Doane[47] and D. N. Rodowick[48] regarding the position of cinematic media in the context of the impact of digital. Krauss's view of film's specificity is determined by the "aggregate condition" (Krauss, 2009), which Ji-Hoon Kim defines as a "supporting structure" and which, according to Krauss, is "the compound idea of the apparatus". It therefore includes all the elements composing or supporting the medium of film, "being neither the celluloid strip of the images, nor the camera that filmed them, nor the projector that brings them to life in motion, nor the beam of light that relays them to the screen, nor that screen itself",[49] but all these elements taken together, including the audience.

According to Kim, the elements that compose the structure of the cinematic apparatus and the specificity of the cinematic experience allow "cinema to be renewed through its exchange with its neighbouring media, while maintaining its analogical devotion to the physical world" (Kim 2009, p. 115). In this sense, film—in the demarcation between old and new media in contemporary art—defines its territory through its specificity, and, in accordance with the critical approaches mentioned by Kim, "both Doane and Rodowick reassert the irreducible materiality of the filmic medium as relatively 'old', and more displaced by digitisation conceived as 'new'; and secondly unlike previous arguments for medium-specificity and fixity, they rearticulate the cinematic apparatus as open ended, multilayered and historically conditioned" (Kim 2009, p. 116).

Inside this system of references, Kim argues that film is not enclosed in its specificity

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[45] Kim, Ji-Hoon (2009) *The Post Medium Condition and the Explosion of Cinema,* Screen, Spring, 501 https://www.academia.edu/2366181/The_Postmedium_Condition_and_The_Explosion_of_Cinema?auto=download [Accessed on: 29/09/2016].

[46] Krauss, Rosalind (2009) *A Voyage on the North Sea: Art in the Age of the Post-medium Condition*, Thames and Hudson, London (1999); *...And then turn away?: an Essay on James Coleman*, October, no 821, (1997); *Reinventing the Medium, Critical Enquiry*, Vol. 25, no. 2 (2000); *The Rock: William Kentridge's drawing for projection*, October no. 92.

[47] Doan, Mary Ann (2007) *The Indexical and Concept of Medium Specificity*, Differences: a Journal of Feminist Cultural Studies, Vol. 18, special issue *Indexicality: Trace and Sign.*

[48] Rodowick, D.N. (2007) *The Virtual Life of Film*, Cambridge, MA: Harvard University Press.

[49] Krauss (2009) cit. p. 25.

but is a medium that is able to renew cinema in its encounter with other media; he criticises Krauss's idea that film is becoming obsolete in the context of "the international fashion of installation and intermedia work" that is based on television and digital video and which explores diverse forms of space and temporalities.[50] To understand and define the point that Kim makes in his discussion of Krauss, it is important to note that the "formulation of the medium as a 'supportive structure for expressive possibilities or conventions' does not necessarily contradict diverse practices of installation which exploit and transform cinematic elements through other technical means, particularly video and digital media. The last decade has seen the rise of cinematic installations based on the interplay of previously distinct artistic expressions – film and video art – and standing somewhere between the gallery space and the film theatre." (Kim 2009, pp. 117-118).

However, by examining Krauss's consideration of obsolescence and the notion of "the reinvention of the medium",[51] Kim provides an insight into the definition of the state of analogue media in contemporary art and of its recent revival. He does this by reviewing Krauss's discussion of Walter Benjamin's notion of the outmoded,[52] where Krauss argues that the reinvention and potentiality of the medium can be acquired only when it loses its autonomy and lack of popularity: the commercial non-availability and popularity of a medium contribute to its reinvention and revival "in the relationship between obsolescence and the redemptive possibilities enfolded within the outmoded itself".[53]

[50] Kim, Ji-Hoon (2009) *The Post Medium Condition and the Explosion of Cinema*, quoting and discussing Rosalind Krauss (2009) ibid. p. 31.

[51] See Rosalind Krauss's essay *Reinventing the Medium, Critical Enquiry*, Vol. 25, no. 2 (1999), also accessible online at: http://moodle.tau.ac.il/2011/pluginfile.php/256964/mod_resource/content/0/kraussPotography.pdf [Accessed on: 20/09/2016].

[52] For an account of Walter Benjamin's "outmoded" see Benjamin's *Surrealism: The Last Snapshot of the European Intelligentsia*, in *Walter Benjamin: Selected Writings, Volume 2, 1927-1934*, edited by Michael Jennings, Howard Eiland, and Gary Smith, Cambridge: Belknap, 1999.

[53] Krauss (1999) ibid. p. 290.

1.3.1 Contemporary examples of the changing relationship with technology in the staging of moving image between analogue and digital media

The film medium is shown in contemporary display settings through the re-exhibition of pieces made since 1970, which are adapted in relation to the display, activating a novel reception of the original work.

Art in Action: Re-exhibiting film in the museum

The opening programme *Art in Action* (18 July–28 October 2012) at Tate Modern Tanks galleries[54] was dedicated to live action and *Filmaktion*, with a section showing works by Gill Eatherley's *Aperture Sweep (1973)* and Malcolm Le Grice's *Horror Film I* (1971), among others.

The programme adopted different display strategies in relation to works that had traditionally been seen in alternative and non-commercial spaces showing them alongside new commissions.

Lis Rhodes's *Light Music* (1975) (figs 1.15 and 1.16, p. 150)—part of the Tate's collection—was installed as a piece running continuously next to the new commissioned installation *Temper Klay* by Sun Hwang Kim.[55] *Retracting Black* (2012) (figs 1.17 and 1.18, p. 151) by Aldo Tambellini was exhibited in a way that was site specific to reconsider the viewer experience in that particular context.

The curatorial team[56] wanted to exhibit a combination of works which outlined the relationship between contemporary art and its evolution since the 1960s as correlated with the present. Moreover, they wanted to define the state of ephemeral works such as time-based installations and live performances, some of which had only been experienced in experimental artist-run spaces, like The Kitchen in New York, LACE in Los Angeles or the London Film-Makers' Co-op in London. The possibility of displaying works of this kind enabled the museum to collect them;

[54] In Chapter 3, section 3.3, paragraph *Moving image installation and Cinema*, I discuss the differences between the first Tanks galleries' opening programme and the event for the opening of the Tate's extension in 17–19 June 2016.

[55] *Temper Klay* by Sung Hwan Kim was part of a Tate Modern commission and was installed in Tank 1 between 18 July and 18 November 2012. The installation comprised multi-projection digital-based works and structural interventions to the exhibition space.

[56] The curatorial team at that time included Stuart Comer, Simon Grant, Kathy Noble, Emily Pringle and Catherine Wood.

the strategy was not only related to rediscovering and finding connection to the present, but also to archiving, collecting, and displaying 'ephemeral work'.

Film in Space: Film installations in the gallery

The exhibition *Film in Space* (2012), curated by Guy Sherwin at Camden Arts Centre in London, showed continuities and developments of experimentations from the 1970s with the versatility of the film medium. The show included a selection of Structural Film and Expanded Cinema works, especially those of artists who took part in Filmaktion, such as Malcolm Le Grice, Gill Eatherley, William Raban and Annabel Nicolson; installations by Steve Farrer and Chris Welsby; new commissions by Lucy Reynolds and Simon Payne; and the work of artists who had started to consider this medium within the advent of digital technology. Many of the pieces exhibited were originally intended as performative cinematic happenings with a finite duration, whereas in *Film in Space,* they were displayed as looped installations and reshaped under the influence of historical and technological evolution in relation to the contemporary gallery space. The treatment of the medium and its relationship with the viewer had changed since the time some of these works were produced; the active and participatory relationship between the viewer and the "film happening" as an experience in Expanded Cinema was revised to become a continuously running sculptural filmic installation. The curatorial decision to modify part of the exhibition during its three-week duration aimed to partially deal with the performative aspect of the original matrix of most of the works within a gallery set-up.

In response to the question "What was the reason for you to choose this body of Artists?" Guy Sherwin declares that "there are a lot of artists willing to work with analogue technology […] there is an interest still in working things physical and tactile and this is one of the main big themes of the show, that film is a tactile material that can be manipulated by hand, scratched painted and put through a projector and transformed by that process into moving shadow".[57]

Works such as *Diagonal* (1973) by William Raban or Le Grice's *Castle I* (1966) and Annabel Nicolson's *Slides* (1971), originally intended to be shown as a live performance happening with a finite duration, were re-sited in a gallery space along

[57] Guy Sherwin's interview Camden Art Centre, London, online at: http://www.camdenartscentre.org/whats-on/view/exh-25 [Accessed on: 14/02/2015].

with site-specific pieces, such as Simon Payne's projection *Window Piece* (2012) and Sherwin's *Painted Screen* (1970/2012), in which a DVD loop lit up areas of a geometrical gouache sketch, both made using video technology rather than film.

From analogue to digital media and vice versa

The confrontation between analogue and digital media has been developing hybrid production forms related to moving image and its relationship with sculpture, space and medium specificity. The technical developments that facilitated the digitisation of film from the 1980s contributed to the debate on the hybridity of the medium, especially when works shot on film were transferred to digital; this often encouraged some filmmakers to explore the new media.

Guy Sherwin declares that he has abandoned analogue for digital in order to produce a new body of works. Despite this, he returned to some of his 16mm film work, with analogue projection and performances such as *Man with Mirror* (1976–2006) (fig. 1.14, p. 149). He states, "With my recent work I am returning to the ideas of the 70s, but now with an emphasis on live performance and multi projections. 16mm projectors are cheap, having been abandoned in favour of digital technologies, and this has increased possibilities for film projection as a live event."[58]

In his exhibition *Guy Sherwin: Light Cycles* at Christine Park Gallery (13–27 February 2016) the use of film was predominant in seven 16mm film installations that investigate the relationship between light, space and different surfaces for the projection.

Anthony McCall's practice instead moved from analogue to digital, he has admitted that he doesn't work with film anymore and that he likes to use "whatever media is the simplest";[59] the condition offered by the digital media led to the expansion and revision of some of the main aspects of his work from the 1970s.

From 2002 McCall started making new works using digital processes,[60] although *Line*

[58] Sherwin, Guy (2007) *Optical Sound Film 1971-2000,* DVD booklet, pp. 122-123, LUX, London.
[59] Interview with Tyler Coburn, *Anthony McCall Breath [the vertical works]* 20 March–21 June 2009, exhibition catalogue Hangar Bicocca, Milan, Italy, p. 85.
[60] Mark Godfrey affirms that Anthony McCall started making new works using digital media in 2002 in *Anthony McCall's Line Describing a Cone,* Tate Papers, no. 8, Autumn, 2007, online at: https://www.tate.org.uk/research/publications/tate-papers/08/anthony-mccall-line-describing-a-cone [Accessed on: 12/10/2018].

Describing a Cone (1973) (figs 1.19 and 1.20, p. 152) is still shown[61] on 16mm. This work was exhibited, along with digital pieces,[62] during the exhibition *Anthony McCall: Element pour a Retrospective (1972–1979/2003)* at the Musée de Rochechouart. McCall noticed the difference between the "handmade" aspect of the works in the 1973 exhibition and the works mathematically generated through digital procedures, saying, "when a 16mm film is projected, there is a noticeable tremor to the projected image whereas the digital works, by comparison, are rock steady", over time he could see that the black emulsion produced "tiny white flecks which now project as a little blizzard of shooting stars [...] film being analogue exhibits its age. Those shooting stars were not part of the original conception, but they now seem part of the work. I actively like them. Digital works do not do that, unless of course, it is 'scripted' in."[63]

Using design software allowed him to design digital animation as cyclical and complex in non-Euclidian forms, in contrast with *Line Describing a Cone* which is a 16mm film in which a cone of light becomes visible in the exhibition space, and it is linear work and non-looping in its form.[64] Moreover, aspects such as the lightweight nature of digital projectors, the desire to project downwards from the ceiling to the floor, the option of pointing up, down or sideways from extreme heights with, nonetheless, the possibility of obtaining a relatively big projection on the floor have led to his exclusive use of digital technology since 2003. In *Breath* (2004) (fig. 1.27, p. 156), for example, the verticality of the projection was better supported by the use of a digital projector rather than a 16mm one. However, the poor black tone of LCD projectors almost convinced McCall to transfer this work to 16mm for the Whitney Biennale 2004, but for the same estimated cost, he could have made six new digital works, and because of the invention of DLP projectors he finally decided to use digital media as the black value created by this machine is almost as rich as on film.

The installation of film in the gallery and the museum defines the relationship of this

[61] There is also a digital version titled *Line Describing a Cone 2.0*, which was made in 2010 and shown as a one-off event alongside the 16mm film version at Tate Modern that same year.

[62] The exhibition *Anthony McCall Elements for a Retrospective (1972–1979/2003),* (4 July–7 October 2007) at Musèe de Rochechouart had *Line Describing a Cone* next to three digital works: *Doubling Black* (2003), (figs 1.21 and 1.22, p. 153), *Turning Under* (2004) (fig. 1.26, p. 155), *You and I, Horizontal III* (2007), (figs 1.23-25, pp. 154-155) that were made and projected using digital media.

[63] Godfrey, Mark; McCall, Anthony, *Anthony McCall's Line Describing a Cone,* Tate Papers Autumn, no. 8, 2007, Tate's Online Research Journal, http://www.tate.org.uk/download/file/fid/7350 [Accessed on: 30/02/2015].

[64] The materialisation of the cone is made by the animation of a circle whose development is inscribed frame by frame on celluloid during a thirty-minute projection.

medium with the mobility of the viewer. Artists working with the installation of film in the contemporary display reconfigure works originally conceived as happening or screening with finite duration into sculptural installations pieces that run continuously. *Line Describing a Cone* was shown as a looping installation for the first time in 2001 during the exhibition *The Projected Image in American Art 1964-1977*, curated by Chrissie Iles at the Whitney Museum, accompanied by the use of a smoke machine, a small fan and a timer. Like most of his works, this piece is considered in relation to the exhibition environment, where the audience's participation is an essential part of the perceptual process. At the time, most venues were dusty places—basements or warehouse complexes—but exhibition spaces had become cleaner and smoking indoors had been prohibited, so some issues relating to the visibility of the light beam arose and contributed to the artist's decision to test new technological solutions.[65]

Summary

Artists working with the installation of moving image are free to use whichever medium satisfies their purposes. However, the adaptation of film works in relation to the changes in exhibition contexts and reception modes contributes to the transformation of the medium of film into an installation and a sculptural material. The paraphernalia and techniques that construct the film apparatus represent a contemporary source of artistic experimentation. The contemporary use of celluloid has introduced forms of exhibition that specifically concern the sculptural quality of film and its installation, which also brings the sensation of a pre-cinematic spectacle re-contextualised in a contemporary setting.

[65] Before arriving at the solution adopted at the Whitney show in 2001, Anthony McCall tested different technical strategies, such as using charcoal and incense, but they could not maintain the necessary constant diffusion of smoke around the space. In 1990 he employed a fog machine and since 2001 he has used a haze, a small fan and a timer, which has enabled a fairly balanced diffusion of the haze. These strategies enabled, for the first time, the installation of *Line describing a Cone* to run continuously.

1.4 Case studies: Tacita Dean and Rosa Barba.

The use of 16mm and the 35mm film formats as a contemporary presence in the gallery space

Artists do not, of course, invent mediums […] but mediums individualise their practice; they intensify the skills associated with them; and, importantly, they acquire histories. For centuries it was only within and against the tradition encoded by a medium that innovation could be measured, just as it was in relation to its reservoir of meanings that new ranges of feeling could be tested.[66]

This section observes the use of film in the work of Tacita Dean and Rosa Barba. The analysis specifically focuses on the presence of film in the gallery and observes the stylistic features used by artists when working with this medium in a sculptural way.

FILM

Tacita Dean is one of the most prominent examples of a gallery artist who uses film as the main medium in her practice. Her work comprises single and multi-channel film works, drawing, photography and sound recordings. *FILM* (2011) (figs 1.28 and 1.29, pp. 157-158) is one of the works in which Dean challenges her film practice by making a giant sculptural filmstrip as a monolithic projection by working for the first time with 35mm film.

Here the production process dominates the final aesthetic result with the sculptural implication of the use of celluloid from production to exhibition.

The work was a site-specific installation commissioned for the *Unilever Series* and installed in Tate Modern's Turbine Hall. It is characterised by the use of techniques pioneered in the early history of cinema "such as glass matte painting".[67] The use of masks placed between the lens and the strip during the shooting is part of the realisation of most of the visual effects and produces several layers of superimpositions as a result of a film collage in motion. The work was realised exclusively through the use of analogue equipment, although the original use of

[66] Krauss, Rosalind *"..And Then Turn Away?" An Essay on James Coleman*, October, Vol. 81 (Summer, 1997) pp. 5-33, MIT Press.

[67] Tacita Dean describes the process of making *FILM* as "the use of two-dimensional illusionistic painting on glass in front of the camera to embellish or create a fictional realm – and the older method of masking" in *Film*, (2011) edited by Nicholas Cullinan, *The Unilever Series*, Tate Publishing p. 29.

masks created images that were not very sharp and the designing of different mask cutouts by the architect Michael Bolling using a 3D printer solved this problem.
The monumental presence of the installation is defined by the screen's scale and its vertical extension. The static sprocket holes, printed vertically on the side of the screen, transform the image into a pictographic filmstrip.
The movement of the images projected and the stillness of the fixed sprocket-hole bars create divergent levels of depth. In the analogue projection process, we see the projector, the light coming from it and the image on the screen, but we are not able to see the holes of the film sprocket while the celluloid is running in the projector. In *FILM* we can experience the image projected and the illusionistic representation or a simulation of the sculptural filmstrip while experiencing the film.
Tacita Dean wants to show "[f]ilm as it can be" by working with it inside the camera and having no post-production other than her editing process and the grading that happens in the lab: "I chose to have the film happen inside the notion of Cinematic space of the Turbine Hall itself: Turbine Hall as a filmstrip, and conflate the imagined with the real in the wonder space that is experimental film."[68]
The filmstrip becomes a giant graphic board for experimenting through the shooting and printing process. So it is not only the aesthetical quality of film that attracts artists to work with it, but also the possibility of investigating and experimenting with the mechanism of printing and processing the analogue image while observing mechanisms of the camera and the projector.

In this work, Tacita Dean conceals the projector and the looping system in the projection booth. This decision might be interpreted as a strategy intended to direct the viewer's attention to the monumentality of the filmstrip and not to the projection process/projector (which is normally exhibited in Dean's film works). However, the 35mm looping system and projector are bigger than the 16mm ones, and the monumentality of this apparatus would capture more attention in the exhibition space than the work exhibited.

Rosa Barba and the film projector

The presence of the film projector in the exhibition space captivates the attention of

[68] Ibid. p. 29.

the viewer and moves it from the projection to the sculptural presence and mechanism of the projection system. This characteristic can be observed in some of the works of Rosa Barba, where the materiality of film is explored by using the equipment as part of the work in display. *Bending to Earth* (2015) (figs 1.30-1.32, pp. 159-160) (seen during my research visit at the 56th Venice Biennale in 2015) comprises a single-channel 35mm film shown using a 35mm projector and a looping table. In this case the combination of the projector, which assumes a monumental presence in the exhibition space together with the giant looping table, emphasises their mechanical function; it also emphasises the sculptural mass of the equipment but overshadows the film and its content.

In *White Museum* (2010–2015) (figs 1.39-1.41, pp. 165-166) she intended to have all the attention directed to the 35mm film which is installed in the exhibition space while pointing outside through a tiny aperture. The use of a 70mm white film creates a projection which frames the landscape. The museum, the projector, the light beam and the landscape together become a work in which the content (film) and functions (the equipment) are correlated through their installation, and where the inside (the museum) actively and mutually engages with the outside (landscape and surroundings).

Barba's work questions the presence of the cinematic apparatus through the exhibition of the film projector, which becomes an autonomous sculptural work within the installation. Most of Barba's early works, such as *Stating the Sublime* (2009) (fig. 1.38, p. 165), see the 16mm projector, the frame of light and the filmstrip as material to work on to reinvent the grammar of the film apparatus's elements. In later work such as *Stage Archive* (2011) (figs 1.33-1.34, pp. 161-162) and *Color Clocks: Verticals Lean Occasionally Consistently Away from Viewpoints* (2012) (figs 1.35-1.37, pp. 163-164), though, the projector is transformed into a kinetic light sculpture by using elements that aesthetically reinterpret the movement of the filmstrip running through the projector but completely subvert its conventional use. These interventions contribute to creating a formal exchange between the features of the film apparatus (going beyond its general function and use) and the characterisation of elements that belong to design and sculpture. Barba's analysis completely transforms the film projector into sculptural kinetic objects through the manipulation of its elements (36mm or 16mm filmstrip, light, spools, rollers, sprockets, steel plates) and

their re-assemblage into sculptural kinetic light machines. This intervention transforms the film projector itself and the 'quasi-obsolete'[69] feeling connected to it.

The presence of the film projector in the gallery assumes an anachronistic aspect for the public, potentially dictating a nostalgia and fetishism for analogue media that is generally seen as being in gradual decline, and at the same time it defines current modes of production and exhibition. The transformation of its features and mechanisms in the encounter with sculpture and other materials (plexiglass, light tubes, mechanical engines) and through the reshaping of its form and functions, defines the novel approach to the materiality of the analogue form.

The use of and the intervention on the filmstrip and projection mechanisms in the design of Rosa Barba's objects renews, on one hand, the image of film material generally associated with the celluloid strip and film projection paraphernalia, while on the other hand it transforms the status of the medium.

Summary

The possibility of working with celluloid outside the projection booth allows artists to examine film and cinematic components going beyond their classical use, transforming the film apparatus and constructing elements of a novel formal language.

The use of 16mm and 35mm formats not only offers different solutions for moving image display related to film-specificity and the re-exhibition of works produced before in history; it also offers a sculptural material to work with.

In the following section I describe how this system of relationships has affected my own work, and I discuss in particular how experimentations with 16mm film and other kinds of analogue equipment activated a different approach to moving image in my practice that unfolded a system of relationships related to the use of sculptural materials.

[69] In this context, the word 'quasi-obsolete' aims to define the aspect of analogue equipment that is still in use today but is in gradual decline and becoming obsolete.

1.4.1 The approach to analogue media in my practice

The selection of works described here reflects on the use of film in my practice considering: (i) the discussion of the autonomy of 16mm and 35mm film format analysed in the case studies of Tacita Dean and Rosa Barba; (ii) the outline of the self-referential qualities of film and its sculptural properties; (iii) the contemporary revival of analogue and its historical incarnation (sections 1.3, 1.3.1), which have been observed throughout the chapter.

When I first used 16mm black and white film (as well as Super 8 film, 35mm slides and various projectors) in my installations, one of my main aims was to investigate and manipulate the materiality of moving image by analysing the projection apparatus. We cannot experience a projected image without the use of the specific equipment needed for its production and presentation. This state defines the dependency of moving image on specific apparatuses and mechanisms. If we think about the elements around moving image and how they finalise themselves in the projection of a film, we have to observe a number of elements, usually placed around the screen (surroundings walls and architectural elements, lights, seats and so on), which have the same importance as what is considered to be the final product (the moving image—the narrative content inside the screen).

Therefore, the approach to moving image in my practice is *cinematic* regarding the observation of the elements which contribute to the experience of moving image outside the frame and its installation: the screen, film projector, filmstrip, curtains, film studio, studio lights, light beam, monitors, projector bulb, trolley, tripod, cinema seats, and interior cinema design elements. The observation of the reconfiguration, displacement and remodelling of these constituents in the work of Rosa Barba and the expansion of the apparatus in Expanded Cinema and Structural Film contributed to moving the focus of my work outside the screen borders and towards the understanding of the construction of a completely hybrid installation space, which was developed through my Viva Exhibition.

The approach to film and its organic, chemical, and mechanical aspects moved my work away from the use of video and the immediacy of the digital dimension.

The organic facet of the film medium and being able to touch it and smell the emulsion of the celluloid while processing and printing it, unfolded the link with the

sculptural aspect of moving image in my practice.

In most of my works the equipment is part of the work on display, as it is for most of Rosa Barba's installations, and my approach to film is close to the experimental one described by artists who discuss the phenomenon of the artist-run film laboratories (Genevieve Yue and Pip Chodorov, see section 1.3).

The use of analogue media unveiled the 'secret' of motion pictures, which stays in the paradox between mobility and immobility; this is revealed in the acts of touching and seeing the frame as a physical still object that has a relationship with the machinery involved in the projection process. Both (the equipment and the filmstrip) acquire autonomy and an indissoluble bond that can express the materiality of something that articulates itself in the complete ephemerality of the projection.

Enlighten

Enlighten (2011) (figs 1.42-1.45, pp. 167-169) is a black and white 16mm film that was shown either as a single-channel work or as part of an installation. The piece was originally exhibited as part of an installation with other digital, slide and artificial light sources (figs 1.46-1.48, pp. 169-171). Other installations followed in which the use of 16mm film, a projector, a looping system and slide projectors in the exhibition space was a stylistic constant[70] that allowed me to reflect on the authority of the 16mm film as an exhibition format and the analogue equipment as self-referential sculptural objects.

Enlighten represents the first use of celluloid in my practice. This work questions the condition of seeing within interventions that highlight the ambiguity between fiction and reality, the space of the production and post-production and the properties of light when they are analysed in relation to the projection and the physical installation space.

The piece was intentionally hand-processed and printed because I wanted to understand the chemical aspect of film, the photographic process and the equipment involved in these processes. Moreover, I manually intervened frame by frame on the filmstrip to explore the idea of the spotlight, which I envisaged as an entity that can interfere with the projection, playing with the difference between what is made while shooting and what is realised in the post-production. I intervened directly on the

[70] See my website for more details about my previous works online at: http://www.giusypirrotta.com/work

celluloid with a marker, using an approach similar to the working method adopted by Tacita Dean for the making of *FILM*, and I saw the frame as a graphic board on which I could experiment with scratches to create the illusion of the movement of a ball of light moving around a field. The first part of the work shows the main character running towards a spotlight in a field (figs 1.42 and 1.43, p. 167); the flashing of the light circle is realised by using a fine point marker that removed the emulsion from the filmstrip. The second part shows a landscape image, which appears to be contained inside a circle during a tracking shot along the field: I obtained this effect designing a mask that I applied in the printer's gate while printing the film (fig. 1.44, p. 168). I later reflected on the use of masks adopted for most of the visual effects created in *FILM*, and the way in which Tacita Dean approached the celluloid as a material—she did not use any post-production techniques, only the process activated by intervening directly on the filmstrip and in the printer's gate.

Dean used mask cut-outs made with a 3D printer because she wanted to obtain a sharp image. In my case I cut the film emulsion with a hole punch and applied the mask to the printer's gate because I wanted to keep the imperfections typical of a handmade intervention on film and its specificity. At the same time I wanted to interact with the filmstrip as a material to reclaim the "physicality of moving image" (Caoduro 2012) and to move away from the immediacy of the digital medium, which prevents unexpected and aesthetic outcomes that I discover hand-processing and printing black and white film.

RGB

In *RGB* (2014) (figs 1.49-1.60, pp. 172-177) I used three slide projections showing a total of 240 looping images and a 16mm colour film photographic to examines the additive synthesis of red, green, and blue and the process in which the human eye translates the combination of these three colours into white light through a site-specific installation.

The RGB additive synthesis is created by the partial superimposition of the three slide projection screens in the place where the red, green, and blue light beams cross, creating a central core where it is possible to experience the white light. The body of work produced for the installation is intended to have a relationship with the gallery's architectural features and to create different levels of depth through the arrangement of the projection and the screens. The slide projections are not

restricted inside the screen borders, creating a further level of light and images, which rhythmically loop and overlap towards the deepest point of the room (figs 1.51-1.52, p. 173). The spilling of the projection outside the screen is thought to expand the limit of the frame, influencing and transforming the perception of the space around it, as observed in the experiments conducted with different-sized projections, slide manipulations and juxtapositions in Expanded Cinema and considering the practices of Vanderbeek and Otto Piene (mentioned in the Literature Review, section 1.2).

The use of abstract slides that reproduced red, green and blue light is alternated by the use of slides that depict figurative elements. Every shot recreates a small view of a framed reality obtained by the shooting of sculptural book compositions which depict gardens and flowers (figs 155-160, pp. 175-177). Looking at these images through a mediated source, in this case film and photography, the viewer establishes an instinctive connection between a real open space and what is revealed to be a still photograph. The sense of disorientation is caused by the first glimpse, which recognises, while looking at the work, the slice of reality that is identified later as fictional.

The illusion of a figurative realistic element framed by a media source made me aware of the possibility of using figurative realistic pattern repetitions along with a projection depicting a similar motif. This aspect determined the design of the space for the Viva Exhibition and is discussed in Chapter 3 (section 3.6.2).

The installation and the production of *RGB* made me aware of the power of light projection in the experimentation area offered by the gallery space and to understand how to create an immersive reception environment in which different layers of images/light overlap, breaking the projection frame as well as transforming the perception of the architectural extension of the gallery space.

After considering these aspects, my research took the direction explored in Chapter 2: the use of light and the relationship with the exhibition space and the viewer's perception of space (aspects examined through the case studies of Anthony McCall and James Turrell).

Summary

The use and exhibition of analogue equipment (film projector, film looper, slide projector) in both works and the confrontation with what is discussed in the chapter

contributed to the observation of the following aspects:

- The authority of the film medium as exhibition format (as observed in section 1.3.1 and in the re-exhibition and adaptation of film installation in galleries and contemporary museums).
- The presence of the film projector draws the attention of the viewer to the mechanism of the projection system, which can overshadow the content of the work. The viewer's attention shifts from the work projected to the machine. How this functions in terms of a work's contents, it depends on where the artist wants to have the attention—on the film or on the projector—and how this attention is mediated through the installation. A concept I noticed through observing the work of Rosa Barba's *Bending to Earth* (2015) (see section 1.4.1) and every time I installed a 16mm projector or slide projector as part of the work exhibited).
- The 'sculptural qualities' of the projector incarnated by the projection process (displaying the film projector incarnates the mechanism of the analogue projection and its physicality, as observed in Expanded Cinema, Filmaktion events, structural–materialist experiments, the work of Rosa Barba, and contemporary film installations) and the objective self-autonomy of analogue equipment which reflects the status of anachronistic and quasi-obsolete objects displaced in another context (the use of 16mm film projector and slide projectors in *Enlighten* and *RGB,* as also observed in the work of Rosa Barba and Guy Sherwin and in the re-exhibition of film installation in the contemporary museum).
- The possibility of transforming and remodelling analogue equipment in the interaction with other materials. My approach and the observation of other artist's approach to the mechanical and organic features of film established the departure points for the possible reinvention of the analogue equipment into sculptural light apparatuses. This concept envisages the following steps of my practice and the making of sculptures that are described in Chapter 2.

In my case, using analogue equipment for making and exhibiting the work have not only broadened the research on colour intensities, analogue stock sensibility and projection mechanisms but have also contributed to the study of a different level of

reception where the viewer enters into a deeper encounter with the machines' functions and their noise in the space. However, the strong visual relationship with the filmic incarnation of the analogue object, (the film projector and its facets, in contrast with the high-tech mass technology in use) has kept the matrix of the work in a strong auto-referential position.

How can the analogue projector and the experience connected to it be transformed?

The sculptural reinvention of the analogue film projector in the work of Rosa Barba's *Stage Archive* (2011) for example, made me aware of the possibility of using other materials (steel, ceramic, and artificial light sources) for the making of sculptural light apparatuses which interact with the moving image exhibited. This concept developed through the body of work finalised in the Viva Exhibition.

The process of observation conducted in this chapter, together with the use and exhibition of analogue equipment in my practice, defined a different awareness of the moving image component in my work, and my interest in the possibility of sculpturally shaping light through the making of objects which refer to the film projector but completely subvert its function.

The following chapter describes some of the aspects of this transition and the evolution of the scope of my practical research.

1.5 Conclusions

The formal qualities and characteristics of both analogue and digital media have seen some artists use purely the medium of film (Tacita Dean), others transform its mechanical and sculptural features (Rosa Barba), and others shift from analogue to digital (or vice-versa) for technical reasons and to achieve certain aesthetic results (Anthony McCall, Guy Sherwin).

What I have examined and observed through the chapter has defined film as a creative medium that is changing in its encounter with other languages and in the way it is exhibited and experienced in the gallery space. Its contemporary rebirth concerns the strategies involved in its display and the possibility of being manipulated by artists through the displacement of cinematic elements from the cinema to the art venue. Therefore, the use and the exhibition of analogue media are contributing to its transformation into a source of sculptural material confirming its authority as an exhibition format inside the gallery and the museum space.

Technical issues affect both analogue and digital media. Artists and institutions have to deal with the upgrade of digital software, which can cause significant changes in the aesthetic of the work exhibited or archived. Anthony McCall came across such technical difficulties, and in an interview with Mark Godfrey,[71] he admits the difficulty of defining a permanent strategy in his work in relation to technology.

On the other hand, there are technical demands related to using 16mm and 35mm film as exhibition formats to continuously show film on projector looping systems, and thus specialist technical support is needed to maintain the equipment.[72]

I started using 16mm and 8mm film during the age of its supposed demise, but I witnessed the transformation of this medium and not its disappearance. I came closer to the mechanical and chemical processes of film processing and I was able to touch the celluloid, see the frame and hand-process my film, which contrasted with the certainty and instantaneity of the digital processes.

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[71] During the interview he specifically refers to the technical difficulties of using digital technology and the regular updates needed, discussing the case of the re-making to improve the original screen resolution of *Doubling Back* 2003 and *Turning Under* 2004. In *Anthony McCall's Line Describing a Cone,* Mark Godfrey and Anthony McCall, Tate Paper, no. 8, full interview online at: http://www.tate.org.uk/research/publications/tate-papers/08/anthony-mccall-line-describing-a-cone [Accessed on: 1/8/2016].

[72] Referring to the case study on Tacita Dean, she needs several prints of the same film, often made from inter-negatives, which results in lower image quality.

The contemporary use of film and analogue equipment reflects an attempt to recover the authenticity of the image by focusing on its physicality, the hands-on approach, the attention needed in both preparation and execution of the work and its sculptural and installational possibilities. In the current technological panorama, this approach produces unexpected forms of art that have nothing to do with the fetishism about or nostalgia for a supposedly obsolete or exhausted medium, but relate to its aesthetic and installational qualities, which can result in hybrid forms of installation work in the encounter and exchange between the reception modes of cinema and the art venue.

Chapter 2

Light as a sculptural element and its relationship with the exhibition space. How can light shape the architectural space to activate a tactile perceptual experience?

2.1 Introduction

This chapter describes installations in which the projected light becomes autonomous and is no longer reliant on the cinematic context. Light is analysed as a means to sculpt the space as well as the object through interventions in which the perception mechanisms of seeing are questioned and exposed. This observation contributes to the definition of a total immersive experience that reconsiders the object–viewer relationship between the mechanism of seeing, the projector beam, the cinematic apparatus and the sculptural object.

I start the discussion by referring to the exhibition *Into the Light: The Projected Image in American Art 1964-1977* curated by Chrissie Iles, to introduce the role of the projected image and its autonomy in the context of time-based installations. *Line Describing a Cone* (1973) and *Long Film for Four Projectors* (1974) by Anthony McCall are then observed as transitional works in which the synthesis of elements of the conventional cinematic experience (projector, film, light beam) are used to amplify the viewer's perception. This aspect is further developed with the description of Turrell's *Ganzfeld* installations, in which the experience of light and its projection becomes tactile and the context of reception is a 360-degree optical and corporeal experience.

This analysis allowed me to better understand the use of light and its projection in my practice in relation to the architectural space, viewer perception and the projection's frame. Moreover, this frame of observation led me to create objects inspired by Olafur Eliasson's perception machines (section 2.4.2), which are conceived as autonomous light apparatuses that interact with the exhibition space. My final body of ceramic sculptures was finalised in the Viva Exhibition and was inspired by the lamp (as design object) and the film projector (as cinematic object) but was detached from conventional filmic functions and use.

2.2 The projected image and the viewer reception

In the traditional cinematic experience, the audience is held in a seated position that correlates with the frontal perspective of the screen.

The gap between the screen and the projector is occupied by seats, and the light remains above the viewer's head: in its 'invisibility', it materialises the projection as perceivable. Roland Barthes describes the cinematic light beam as a "visible and unperceived, dancing cone which pierces the darkness like a laser beam".[73]

The space of reception between the projector and the screen can be activated by shifting the viewer's attention from the screen as a central point of focus to the space outside the frame. Structural Film and Expanded Cinema established a novel relationship between the perceptual integration of the space around moving image and the analysis of cinematic elements. In the structuralist approach, the focus on the apparatus and its materiality, as well as the breaking of the frame and the participatory experience of the audience in Expanded Cinema were elements that contributed to divert attention from the screen as a single point of focus to the space around it. This change was initially intended as a reaction against the passive consumption associated with mainstream narrative cinema's forms and an idealisation of a more reflexive involvement of the viewer in the constructive elements of the cinematic apparatus. Several structuralist artists examined light as a projective element in relation to the mechanism of the projection. In single and multi-screen works, such as Tony Conrad's *The Flicker* (1965), William Raban's *Diagonal* (1973), (fig. 2.1, p. 179) and Paul Sharits' *Shutter Interface* (1975), (figs 2.2-2.4, pp. 179-180), light is analysed as a basic element of film and cinematic reception by investigating the apparatus within the projection phenomenon. Although some of these works are single-channel pieces (*Diagonal* involves three projections) they are expanded works in the sense in which light is treated in relation to the equipment used and the space around it, but still they don't require the viewer to walk around the work while experiencing it.

[73] Barthes, Roland (1975) *Leaving the Movie Theatre*, online at: https://rosswolfe.files.wordpress.com/2015/04/roland-barthes-the-rustle-of-language.pdf p. 347. [Accessed on: 6/8/2016].

Into the Light: The Projected Image in American Art 1964-1977

Since the 1960s, the traditional borders between disciplines such as painting, photography, sculpture and dance have become blurred, leading to the production of audio-visual works in which the attention has shifted from the art object to the production process, emphasising the importance of the medium in art-making.

Into the Light: The Projected Image in American Art 1964-67, curated by Chrissie Iles at the Whitney Museum of American Art (2001–2002), explores the timeline of the critical moment in history when the projected image established a novel language related to installation art and mixed media. The exhibition showed works originally exhibited in alternative spaces with the intention of reconsidering their installation possibilities in an institutional museum context. The curatorial selection aimed to create a link "between the phenomenology of space as defined by Minimalist sculpture with the phenomenology of consciousness as articulated by experimental film".[74]

The exhibition featured some of the first experiments made by working with moving image as projective light to outline its role in the construction of a new language. The earliest works in the exhibition, such as Robert Whitman's *Shower* (1964) (fig. 2.5, p. 181), represent one of the first examples of using the projection surface as a screen and sculptural installation element.[75] The exhibition attempted to differentiate reception modes relating to the combination of moving image language with sculpture. The selection comprised works made in the second half of the 1950s, along with later conceptual interventions such as Bruce Nauman's *Spinning Spheres* (1970) and Dan Graham's *Helix Spiral* (1973) (fig. 2.6, p. 182) which questioned the space, destabilising its properties through the medium. Attention was also given to the use of video cameras and TV as a media for subverting real-time space perception of shooting and broadcasting, with works such as Yoko Ono's *Sky TV* (1966) (fig. 2.8, p. 183), where a TV was connected to a camera positioned on the roof outside the exhibition space, or William Anastasi's *Free Will* (1968) (fig. 2.7, p. 182), where a camera on top of a monitor filmed the corner of the gallery space.

[74] Maxwell, L. Anderson in *Foreword* in *Into the Light: The Projected image in American Art 1964-1977*, Iles, Chrissie (2002) exhibition catalogue, October 18, 2001–January 6, 2002, at Whitney Museum of American Art, New York.
[75] *Shower* is part of a series of four works defined as *film sculptures* by Whitman, made between 1963 and 1964, as for *Window*, *Dressing Table*, and *Sink*, (1964).

Paul Sharits *Shutter Interface* (1975) and Michael Snow's *Two sides to Every Story* (1974) (fig. 2.9-2.10, p.184) were installations with fixed durations (thirty minutes in the case of *Two sides to Every Story)* that questioned the cinema space and reception between the analysis of the cinematic apparatus (for Sharits), and the reception of the film in relation to the screen (for Snow).

According to Chrissie Iles,[76] by 1960 the Minimalist phenomenological approach to space engaged a novel consideration in relation to viewer reception and the work exhibited, asserting that "the pictorial space created by Renaissance and linear perspective, where a fixed vanishing point dictated a singular position for the viewer, had endured for more than four hundred years. Beginning in the mid-nineteenth century the viability of this unmoving station was challenged, and in the 1960s it was dismantled by Minimalism. Minimalist artists engaged the viewer in a phenomenological experience of objects in relation to the architectural dimension of the gallery—not to pictorial space—transforming actual space into a perceptual field."[77]

The role of the spectator changed and it became essential to complete the work exhibited; the notion of the dematerialisation of the artwork was also introduced.

The Minimalistic approach and the rise of the role of the spectator

John Chandler and Lucy R. Lippard discussed the notion of the *dematerialisation of art* in their 1968 essay,[78] departing from the five phases into which Joseph Schillinger divided the historical evolution of art-making: "1. Pre-aesthetic, a biological stage of mimicry; 2. Traditional aesthetic, a magic ritual –religious art; 3. Emotional-aesthetic, artistic expression of emotion, self-expression; 4. Rational aesthetic, characterised by empiricism, experimental art, novel art; 5. Scientific, post-aesthetic [...] characterised by a fusion of the art form and material, and, finally the disintegration of art, the abstraction and liberation of ideas."[79]

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[76] Iles, Chrissie (2001) *Between the Still and Moving Image*, in *Into the Light: The Projected Image in American Art 1964-1977*, New York: The Whitney Museum of American Art, p. 33.
[77] Ibid. p. 34.
[78] Chandler, John; Lippard, Lucy R. (1967) *The Dematerialization of Art*, first published in *Art International* (1968). Available online at: http://laboratoirefig.fr/wp-content/uploads/2016/04/lippard-theDematerializationofArt1.pdf [Accessed on: 10/02/2015].
[79] Ibid. p. 17.

Chandler and Lippard established a link between Schillinger's notion of 'disintegration' with the media revolution that had happening since 1958, and the enlarging of the traditional sculpture and painting languages to include light, sound, electronics, film and performance. The abstractive reduction of expressive terms and the expansion of borders between disciplines led to a dematerialisation of artwork in which the principle of creation was not related to the reproduction of reality.

Lippard and Chandler said that "[d]ematerialized art is post-aesthetic only in its increasingly non-visual emphases"[80]; they considered the shift as an ongoing change as well as the result of an "ultimate zero point [...] with black paintings, white paintings, light beams, transparent film, silent concerts, invisible sculpture".[81]

Susan Best notes the relationship between the notion of subjectivity in Minimalism and the creation of a new reception of the artwork, comparing Rosalind Krauss's and Thierry de Duve's views on the phenomenology of Minimalism, which locate "the theory of the contemporary subject in the work itself and yet at the same time tracing its temporal and spatial unfolding through the spectator's interaction with the work, where the viewer completes and realises the work of art".[82] Susan Best discusses the aesthetic implications of Minimalism, historically described as anti-aesthetic because it does not explicitly imply subjectivity. However, the shift Minimalism introduced, and what I want to stress from Best's point, consists in the important consequence of the change of focus from the production of the work to the reception of it. This approach introduced the increased importance of the active role of the spectator and his or her relationship with the space and the work of art exhibited. The work loses its particular artistic subjectivity through the way in which it is produced that conduces to a process of impersonality. Krauss[83] says that although Minimalism attempts to restore the immediacy of the experience of the object within the emphasis on the simple geometry, the production of the work shifted from artisanal to industrial, and the material and the means involved in the

[80] Chandler, John; Lippard, Lucy R. (1967) *The Dematerialization of Art*, first published in Art International (1968), in *Conceptual Art: a Critical Anthology*, (1999) edited by Alexander Alberro and Blake Stimson the MIT press, Cambridge, Massachusetts, London, England.
[81] Ibid. p. 48.
[82] Best, Susan (2006) *Minimalism Subjectivity, and Aesthetics: Rethinking the Anti-Aesthetic Tradition in Late-Modern Art*, University of New South Wales, Journal of Visual Art Practice Vol. 5, no. 3, Intellect Ltd.
[83] Rosalind Krauss in her essay *The Cultural Logic of the Late Capitalist Museum* (1990, October Vol. 54) examines the adoption of repetitive aggregation of forms employed for example by Donald Judd when he says "one thing after on other"(p.10).

production process also express the condition of seriality of production. However the production process acquires meaning through perceptual factors such as space, scale and experience. As Robert Morris explains, "[T]he better new work takes relationships out of the work and makes them a function of space, light and the viewer's field of vision."[84] (*Untitled) L Beams* (1965–1967) (fig. 2.11, p. 185), for example, are exactly the same shape, but because of their arrangement in the space and their monumental scale we perceive them as different objects.

The breakdown of a single viewpoint within the spatial representation used in Minimalism was conducive to the reconsideration of the exhibition space.

Linear perspective breakdown and the screen

Transferring this idea to projections, the spectator's gaze moves from the screen to the space around it. The vanishing point of classic linear perspective introduced in the Renaissance and the classic pictorial representation of space is reconsidered through the installation of works that imply multiple viewpoints, dismantling the screen as a single point of attention.

The classic perspectival representation of pictorial space can be compared with the traditional cinema's mode of reception, in which the screen is the place where all gazes terminate. This comparison is made in terms of perception of space's depth and focus of attention: I see the screen of the classic cinematic reception as a frame of bi-dimensional representation as well as the main point of focus in the movie theatre. In my view, the cinematic screen reproduces the pictorial space in which the representational image is framed and where the deepest vanishing point of Western perspective (and the Renaissance representation of space) is contained, and is thus the point where all the gazes/lines converge.

My enquiry questions the possibility of using light to modify the perception of the space: can the physical extension of the visual frame be expanded through the use of light and the annulment of any point of focus or vanishing point in the visual field?

[84] Morris, Robert (1995) *Notes on Sculpture*, Part 2, *Continuous Project Altered Daily*, Cambridge, MA, pp. 11–21.

2.3 The properties of the light beam as a self-referential projective element

In his essay *Ideological Effects of the Basic Cinematographic Apparatus*, Jean-Louis Baudry describes the darkened cinema as a space with no circulation, where projection and reflection exchange their qualities with no communication with the outside. He questions the notion of reality in relation to the cinematic apparatus and reception, stating that "in any case this *reality*" comes from behind the spectator's head and if he looked at it directly he would see nothing except the moving beams from an already veiled light source".[85]

Indubitably, there are several implications that activate a perceptual embodiment of the viewer with the film's content within the frame border. Despite that, my analysis focuses on the volumetric and autonomous form of light and the shift of the viewer's attention from the screen to the projector's beam because I want to understand how the projection of light can acquire a sculptural presence in the exhibition space, activating a total space of reception between the cinema and the gallery and expanding the projection frame towards the space.

Paracinema

By considering the definition of paracinema, it is possible to see how the synthesis and subversion of elements of the experience of film conduce to different forms of moving image installation and reception. Jonathan Walley defines paracinema as works "that identify themselves as films but do not take the form of the film medium as we know it". He refers to work by Anthony McCall and Tony Conrad not as a simple reduction of cinema to light and time, but as a system of relationships which "includes the additional parameters of the institutional patterns within which light, time space, projection, movement and spectatorship are organised and invested by filmmakers".[86] Thus, the use of light and its projective means outside the cinema context and through the investigation of the apparatus activates a space of reception

[85] Baudry, Jean-Louis, *The Ideological Effects of the Basic Cinematographic Apparatus* in *Film Quarterly,* Vol. 28, no. 2, Winter, 1974-1975, pp. 39-47.

[86] Walley, Jonathan, *The Paracinema of Anthony McCall and Tony Conrad*, in *Avant-garde Film* (2007) edited by Alexander Graf, Dietrich Scheunemann Ibid, pp. 366-377.

that subverts as well as focuses on cinematic elements.

The definition of paracinema by Bradley Eros [87] includes all forms of experimental filmmaking where "the primary motivation for an artist's paracinema – stays in – the profound desire to investigate the properties of the medium [...] the materials, the apparatus and its operation, the technology and its infrastructure-as fully as possible".[88]

Anthony McCall's *Line Describing a Cone* (1973) (figs 2.12-2.13, p. 186) is an example of paracinema work which fuses the properties of film, sculpture and conceptual art through the use of light, which becomes seemingly tangible in its activation by the viewer's experience. By focusing on Cinema's foundation,[89] McCall develops new practices in which the projective element acquires an autonomous sculptural mass through the reduction of film to its basic components: time and light.

Line Describing a Cone is realised by using an animation-based technique that shows a simple geometric progression, avoiding the illusionism of figurative elements. The relationship with cinematic reception is in the projection of light that becomes an event that develops over time. The projection becomes self-referential in the relationship between its sculptural quality and the spectator's perception. This work opens the filmic experience to three-dimensionality by outlining the presence of the light beam and subverting the frontal perspective of traditional cinema. The space, usually occupied by seats, becomes a space of interaction between the public and the light beam. The annulment of the screen as the main point of attention/focus encourages the audience to walk around the space, breaking the cone's extension.

This work situated Anthony McCall's practice between the presence of movement and the unfolding of the spectacle in the dark, which are intrinsic elements close to cinema, and the three-dimensional and spatialisation qualities that are part of the sculptural language. Regarding this relationship, he declares, "At that time, despite the fact I had obviously backed into three-dimensional and therefore 'sculptural' space, I understood this idea essentially in relation to 'cinema'. But over this past six years, I have become more consciously interested in the way that the cinematic and

[87] Eros, Bradley (2005) *There Will Be Projections in All Dimensions* in Millennium Film Journal, no. 43/44, Summer/Fall, 2005, New York, MFH, pp. 63-100.
[88] Ibid. p. 1.
[89] With *Cinema's foundations* I refer to the relationship between light, celluloid, the camera projector and the screen where the projection acquires a fundamental value which, in McCall's work, becomes auto-referential.

the sculptural can inform one other. I am interested in the question of whether or not I am practising sculpture, and indeed what a sculptural practice means within an era of information and virtuality."[90]

Being inside the film

Duration is an element that contributes to develop and transform the experience of a film into an immersive experience. *Line Describing a Cone* lasts until the shape is completely enclosed while *Long Film for Four Projectors* (1974) (figs 2.14 and 2.15, p. 187) consists of six-hours long piece, which is conceived as both a 'screening' and an installation piece, and comprises four projectors positioned on the floor in each corner of a rectangular room. Each of them projects a film whose image describes a line that gradually sweeps from one corner of the frame to the other, resulting in a long, thin, semi-curved wedge or blade of light in the space. As the four reels complete their run, they are projected again backwards (upside down), and after that, each reel is laterally inverted with the other projector on the other side of the room. This movement corresponds to sixteen variations that run for six hours. The duration of the work is related to the permutation of the lines described by the four beams of light. The viewer is completely immersed in the crossing of the projection beams, experiencing the work in a way that is more spatial than cinematic. In a letter to Carolee Schneemann, Anthony McCall describes the work as "so dense and complex, so simple. It occupies the full space absolutely, and people were staying for one hour, two hours, a group of five stayed four a half hours."[91]

The light wedges cross each other in the centre, creating a rhomboid shape that circumscribes the space; the spectators are inside the film itself as long as they are in the exhibition space. There is not a specific place where the viewer should stand, and there is no emphasis on a particular viewing position or the assumption of any particular point of focus.

The imminent aspect of the experience of the work is not only in the viewer's relationship with the space but in the instability of this relationship, which is determined by spatiotemporal disorientation caused by the position of the light

[90] Coburn, Tyler, interview with Anthony McCall, *Anthony McCall Breath*, exhibition catalogue, Hangar Bicocca, Milan March 20–June 21 2009.
[91] McCall, Anthony, *Letter to Carolee Schneemann*, April 27, 1975, Getty Research Institute.

beams and the viewer's undefined position. The dispersion of a centred point of attention and the absence of a figurative element or object to look at subverts the classic relationship between screen and projector. *Long Film for Four Projectors* activates a total sensory space, situating the viewer inside the film where he or she experiences light as a material and sensorial element.

The presence of four projectors in each corner of the room, however, breaks the viewer's complete sense of disorientation. As I observed through the installation of analogue equipment in my practice and in Rosa Barba's work, the sculptural presence of the film projector in the exhibition space reveals the means of generation of the work, evoking the cinematic elements from which it departs. Anthony McCall's vertical works, like *Breath* (2004) and *Between You and I* (2006) (fig. 2.16, p. 188), reduce the relationship between the viewer and the film projector, employing a digital projector which is installed on the ceiling while projecting on the floor.

Summary

The dynamic activated by the projection of light from a film or video source describes a circumscribed space on a surface; this relationship can be compared to the cone of vision and the irremediable restriction of space implicit within the visual frame.

In McCall's works, the borders of the film's frame disappear and the light beam establishes a relationship between the viewer and the activation of a total context of reception. The analysis of the autonomy of the light beam as a sculptural object and its use in the deconstruction of the classical cinematic reception and the main point of focus inside the screen, pushed my work towards an understating of the relationship between the projection's borders, the off-screen space and the viewer's visual frame, contributing to a better understanding of the role of moving image in my practice and the relationship between its elements and the viewer.

The aim of this section is to define what the relationships are between the frame of vision, the frame of the projection and the surrounding space, and what the perception mechanisms are which allow us to sense the expansion of the frame in relation to what we see. The frame of vision—intended as a frame of a

representational image—can be expanded by using light as a creative medium and using it in its relationship with the architectural space.

Some of these aspects were finalised in the Viva Exhibition, where the moving image framed inside the screen 'travels' along the walls and the surrounding space through a system of relationships between the projection content and the elements of the projection space.

The following section focuses on the relationship between light, space and viewer reception to understand how to expand the projection frame in the installation space and activate an experience that involves the eyes as well as the whole body.

2.4 Case studies

2.4.1 James Turrell

Breaking the frame of vision beyond the retinal experience

The interaction between light and space has been investigated in art since the 1920s, when artists[92] started to experiment with the phenomenological and performative qualities of light. Differences developed when artists worked with light as a mean of production. Peter Weibel, in the exhibition catalogue *Light From Artificial Light as a Medium in 20th and 21st Century Art*, defines two different categories of artists using light as a medium: "[F]ollowing the use of artificial light in Concrete Art, Pop Art, Minimal Art, Arte Povera and Concept Art, today essentially two trends predominate. One group of light artists draws on the picture tradition, and we could call then Neo-Formalist. The other group draws on the world of everyday objects and we could term them Neo-Functionalist."[93] He categorises the works of Angela Bulloch and Cerith Wyn Evans as aesthetics of digital light, and uses other terms, such as electric light of spots (Michel Verjux), electronic LED screens (Jenny Holzer), and computer-controlled ensembles of light (Olafur Eliasson), but he distinguishes the work of James Turrell as a separate category because it uses natural as well as artificial light sources.

Anthony McCall's work employs the direct exchange of light with the cinematic element of the film/video projection through the reconsideration of the conventional cinematic experience. I analysed his practice in the previous section as being transitional between the use of film and the making of a light space without borders, as created in Turrell's installation.

Turrell uses light to activate a perceptual experience that goes beyond the retina and towards a corporeal and physical involvement. I am interested mainly in the perceptual mechanisms involved in the experience of Turrell's installations and I aim to understand how the use of light as a creative medium inflects the perception of

[92] Zdenek Pesanek, a kinetic artist, used neon for the first time in his installations between 1929 and 1930 with the *Spectrophone* in 1925, while Làszlò Moholy-Nagy completed the kinetic machine/sculpture *Light Space- Modulator* in 1930.

[93] Weibel, Peter, *The Development of Light Art*, p. 222, in the Exhibition Catalogue *Light From Artificial Light as a Medium in 20th and 21st Century Art*. Edited by Peter Weible and Gregor Jansen, Hatje Cantz, KM, Museum für Neue Kunst Karlsruhe, 19 November 2005–6 August 2006.

the architectural space.

The construction of Turrell's perceptual chambers expands the viewer's visual frame by activating a space without borders as a projection with no frame; it is a space in which there is neither a projection nor a screen, only the perception of light and a chromatic sensation.

In early works like *Projection Pieces* and *Corner Shallow Projections,* Turrell uses light projection to create the illusion of a suspended, glowing three-dimensional shape. In *Afrum White* (1966) (fig. 2.17, p. 189), we can see a white cube floating in the space while we are actually looking at the projection of a square of light in the corner of a room. The concealment of the projection equipment contributes to the illusion and reduces the perception of the projection itself as an element connected with the cinematic. The experience departs from the cinematic one (because there is a light source projecting onto a surface) but differs in the use of the light as solid matter, which involves the formal sculptural and perceptual implications of looking at a three-dimensional object. What we see continuously shifts between being perceived as a flat image and a three-dimensional *object*, situating the work closer to sculptural ad installation practices than to cinema.

The perception of a flat and three-dimensional image creates a perceptual conflict in our brain; this activity is defined in neuroscience and optics as making dichotomous perceptual decisions[94] and relates to how our brain takes the decision to interpret multiple and bilateral stimuli.

Turrell refers to these interventions not as an optical illusions but as things that really exist, because you can see them: they are "the physical manifestation of light which we have trained our eyes too readily to look through rather than to look at".[95] The ambivalence lies in what we believe we are seeing and the mechanisms activated by our brain that aim to make us understand what we are seeing.

However, *Projections Pieces* and *Corner Shallow Projections* still determine an experience of the work that is circumscribed by a frame.

The point I want to discuss is whether using coloured light to interact with the architectural space can interfere between the viewer's body and his/her frame of

[94] See the discussion of B. T. Backus in *The Mixture of Bernoulli Experts: A theory to quantify reliance on cues in dichotomous perceptual decisions*, in *Journal of Vision,* January 2009, Vol.9, p. 6.
[95] James Turrell interview with Julia Brown in *Occulted Front: James Turrell and Julia Brown*, in Los Angeles Fellows of Contemporary Art (1985) Lapis Press, California.

vision, subverting his/her perception of the spatial extension.

In *Ganzfeld*[96] installations, such as a *Dhatu* (2009) (fig. 2.18, p. 190) and *Breathing Light* (figs 2.19 and 2.20, p. 191), light becomes a pervasive presence and the perception of the space is completely altered. What we actually perceive is a space container in which there is not any particular object or point to focus on. The coving in the room's corners, together with the inclination of the floor descending while walking into the space, amplifies the sense of disorientation and makes us unaware of its real dimensions. The immersive sense of floating is triggered by the feeling of being in a space with no limits, and therefore the experience is not only optical but also corporeal in the sense of perceptual boundlessness. This experience links the embodied and the unbounded through the activation of perceptual mechanisms that create a connection between the expectation of our bodily movement (corporeal) and what we are seeing (optical).

The effect produced by works of this kind is an infinite expanse space of light with no horizon, a monochromatic 360-degree visual field in which we experience the annulment of the perspectival representation of the space and in which an immense visual field appears to have substance through the use of light.

Eye and body, a circular transmission

The effect of being completely immersed in the colour sensation inside *Ganzfeld*-type installations is caused by the state of receptivity, in which the colour/light-changing effect seems really close to the eye. Viewers were "unable to discern whether they were experiencing an eye-based phenomenon, such as a retinally induced colour field, or a vision-based phenomenon, such as a homogeneous field of coloured light at a distance from their eyes. In psychological terms, it became difficult for them to know if the stimuli impinging on their retina were proximal or distal."[97] The total chromatic field created by the *Ganzfeld*-type installations stimulates the entire retina; however, it is not only the stimulation of the photoreceptors that creates the

[96] Ganzfeld - whole field - effect, first described by the psychologist Wolfgang Metzer (1899–1979) in relation to Gestalt psychology, is a perceptual phenomenon activated by staring at coloured light (as an undifferentiated monochrome field of colour) with the eyes covered. After this stimulation, the subject is assumed to experience a period of hallucinations. Turrell studied this phenomenon with Robert Irwin and Ed Wortz while collaborating in the realisation of a Ganzfeld-based chamber for the LACMA Museum in Los Angeles.

[97] Beveridge, Patrick (2000) *Colour Perception and the Art of James Turrell*, in LEONARDO, Vol. 33, no. 4, pp. 305-312.

sensation of colour and the thickness of light but the participation of the entire sensory realm: "My perception is not a sum of visual, tactile and audible givens: I perceive in a total way with my whole being: I grasp a unique structure of the thing, a unique way of being, which speaks to all my senses at once."[98]

According to J. J. Gibson, the process of seeing cannot be translated only through the transmission of signals as retinal images along the optical nerve. He defines the process involved in visual perception as "circular" and not a one-way transmission: "The eye-head-brain-body system registers the invariants in the structure of ambient light. The eye is not a camera that forms and delivers an image, nor is the retina simply a keyboard that can be struck by fingers of light."[99]

Continuous cycles of information between the visual and the corporeal systems enable an awareness of the self. Proprioception and kinaesthesia are related to our sense of balance and our awareness of movement in space. The modification of the architectural space (inclination of the floor in *Dhatu* (2010), for example) and the controlled use of light, which is designed to create a shade of colour that gradually changes its hue, saturation, and luminosity, in *Ganzfeld*-type/walk-in installations destabilise our body awareness, affecting our sense of balance. The contrasting colour effect used in the alternation of different tones between the walls and the bottom of the room initially gives the spectator an apparent sense of direction. But as soon as the viewer starts walking into the space towards what he/she believes to be the deepest part of the room, the field appears blurred and the coved[100] corners of the space contribute to the sense of disorientation, destabilising the proprioceptive expectations of their body awareness.

When I entered the installation space of *Dhatu*, I continuously tried to *touch the colour* around me. This instinctual attempt to touch involved seeking a wall to lean on as a means to confirm spatial depth and comfort the proprioceptive expectations of movement.

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[98] Merleau-Ponty, Maurice (2012) *Phenomenology of Perception*, New York: Routledge, p. 335.
[99] Gibson, James J. (1979), *The Ecology Approach to Visual Perception*, Cornell University, Houghton Mifflin Company, Boston, in *The Orthodox Theory of the Retinal Image*, p. 61.
[100] In architecture the noun *cove* is related to "[a] concave arch or arched moulding, especially one formed at the junction of a wall with a ceiling". The following is the Oxford Dictionaries online definition: https://en.oxforddictionaries.com/definition/cove [Accessed on: 21/09/2016].

Peripheral vision and haptic sensation

We usually rely on our sense of touch either when we are not sure of what we are seeing or when we are moving in complete darkness. Morton A. Heller[101] conducted several experiments to demonstrate that in situations in which vision is peripheral or blurred, touch may become the dominant source used by the viewer to gain information. His studies show that the majority of the subjects experienced an inter-sensory conflict and relied on the sense of touch to determine what they were seeing.[102] Vision and touch cooperate in the definition of what we perceive, assisting each other: "Peripheral vision serves to help guide haptic exploration of objects and forms. However, clear foveal vision may distract us while we feel stimuli. Although vision can aid touch, the two senses may not always cooperate. They can exist in conflict and can provide discrepant information to the perceiver".[103]

In *The Eyes of the Skin Architecture and the Senses*,[104] Pallasmaa refers to the eyes as a physical extension of our body that can touch during the act of seeing and are a means of developing a fully mental encounter with the space through peripheral and unfocused vision.[105] The fact that our vision has the highest acuity at the centre of our visual field doesn't mean that the rest of what we can perceive has less importance or does not contribute to our experience. In fact, foveal vision corresponds to the sharpest point we can perceive in our visual field and anatomically is represented by the fovea, which is situated in the centre of the retina and "is used for scrutinising highly detailed object or surface whereas peripheral vision is used for organising the spatial scene, for seeing large objects and for seeing areas to which we direct our foveal vision".[106]

According to Laura U. Marks, "Haptic perception is usually defined by psychologists

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[101] Heller, Morton A. (1992) *Haptic Dominance in Form Perception: Vision versus Proprioception*, Winston-Salem State University, Winston-Salem, NC, USA.
[102] The abstract of the article in which the experiment is discussed in available online: http://pec.sagepub.com/content/21/5/655.abstract [Accessed on: 21/09/2016].
[103] Ballesteros, Soledad; Heller, Morton A. (2008) *Haptic Object identification*, in *Human Haptic Perception Basics and Applications*, edited by Martin Grunwald, Springer Science & Business Media. p. 221.
[104] Pallasmaa, Juhami (2005) *The Eyes of the Skin Architecture and the Senses*, in *Touching the Word,* John Wiley and Son Ltd, Great Britain.
[105] Pallasmaa defines the theoretical architectural discourse interested in focused and "conscious and perspectival representation" and believes that "[a] remarkable factor in the experience of enveloping spatiality, interiority and hapticity is the deliberate suppression of sharp focused vision". Ibid.p. 13.
[106] Livingstone, Margaret (2002), *Vision and Art the Biology of Seeing*, published by Harry N. Abrams New York, in *Acuity and Spatial Resolution: Central and Peripheral Vision* pp. 68-71.

as the combination of tactile, kinesthetic and prospective functions, the way we experience touch both on the surface of and inside our bodies."[107]

She discusses the distinction between haptic and optical images in the visual system according to Alois Riegl. He asserts that optical visuality demands a separation between the object and the subject, while haptic visuality implies participation and a bodily involvement by the viewer: "Haptic looking tends to move over the surface of its object rather than plunge into illusionistic depth … It is more incline to move rather than to focus, more incline to graze than to gaze."[108]

Compositions and environments defined as haptic appeal to the sense of touch, embracing the viewer in a deeper encounter with what is experienced, especially because he/she instinctively explores the picture or the environment in search of the depth of field that is not clearly represented.

According to Pallasmaa, the detached feeling and the sense of alienation usually experienced when looking at modern architecture is a result of the dominance of centred, focused vision. Peripheral vision "transforms retinal images into a spatial and bodily involvement and gives rise to an engaging atmosphere and personal participation".[109] Therefore, it is not a simply blurred and unfocused impression but is connected with bodily movements and proprioceptive awareness of our body inside the space.

Architectural environments made through the interplay between light as a sculptural mass and the annulment of any point of focus stimulates our peripheral vision, increasing our haptic perception so that the eyes become organs that can touch. The use of transparencies, overlays and juxtapositions, reflections; gradations of shade, gradual variation of hue in colour projections, and the use of mist in the creation of environments and installations contribute to the creation of an immersive experience in which the viewer becomes able to feel light density.

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[107] Marks, U. Laura (2000), *The Skin of the Film: Intercultural Cinema, Embodiment and the Senses*, Duke University Press, Durham, London, in *Hapticity Visuality* p. 162.
[108] Ibid. p. 162.
[109] Ibid. p. 244.

The dissolution of the image and the collapse of the camera obscura model

The canons of linear perspective introduced in the Renaissance by Leon Battista Alberti in 1436 defined the rules of realistic painting and standardised spatial representation. This humanist method promoted the centre-focused vision as to what constitutes the truth of seeing; the eye was considered to be at the centre of the visual world and detached from the rest of the body.

In the linear perspectival representation of space, the insertion of a plane in the cone of vision delimits the frame, and at the same time the hegemony of centre-focused vision related to the vanishing point.

According to Jonathan Crary, by the early nineteenth century the linear perspective representational model started losing its authority and some artists were already using alternative solutions in the representation of the space. In the paintings of Hieronymus Bosch and Pieter Bruegel, for example, the viewer is invited to move the eye around the details of multiple scenes and events inside the frame.

Crary defines these attempts as still constrained by "techniques for the rationalization of vision",[110] and describes the work of Turner[111] as the real "breakdown of the perceptual model of the camera obscura".[112] The dissolution of the images in Turner's late paintings was determined by the "loss of a fixed source of light, the dissolution of the cone of light rays, and the collapse of the distance separating the observer from the sight of optical experience"; these elements contributed to the start of a different approach to the visual representation of space and to a renewed interest in a more subjective perception process (mechanisms suppressed till then by the hegemony of the camera obscura model).

Turner established the elimination of the point of focus through the dissolution of a specific light source and the vanishing point as a result of the dematerialisation of the image. Crary defines *Light and Colour (Goethe's Theory) – The Morning after the Deluge*

[110] Crary, Jonathan (1992) *Techniques of the Observer: on Vision and Modernity in the Nineteenth Century*, MIT Press, in *Visionary Abstraction* cit. pp. 137-138.
[111] Crary also mentions the work of Goethe, Schopenhauer, Ruskin and Turner, grouping them by the revolutionary change they made in representation, which had started by 1840. In section 5, *Visionary Abstraction*, he discusses Turner's work in particular. For a specific description of the work of Goethe and Schopenhauer, see section 3 of the same volume, *Subjective Vision and the Separation of the Senses*, pp. 67-95.
[112] Ibid. p. 138.

(1843) (fig. 2.21, p. 192) as a work that breaks the camera obscura model because there is a process of fusion between the eye (the source of observation) and the sun (the representation). This feature was developed in Turner's late works, in which he tried to reproduce the colour sensation generated by the after-image experienced after staring at the sun for a long time. Crary defines this mode of production as an "abstract optical experience"[113] that is directly connected with the body and with the possibility of translating these impressions through a novel mode of representation. This change in spatial representation aims to deconstruct the composition through a subjective process that reflects later modes of representation in art, such as that of Impressionists, the dematerialisation of figurative contours, Paul Cézanne's compositions of masses and the multiplication of focal points in the same picture seen in Cubism.

Dematerialising a figurative image through the representation of light started a diverse and more dynamic approach to space presentation in which the representation of spatial imprecisions obtained by a blurring effect or by the elimination of the contours, generates dynamism in the composition—(the same aspect can be seen in the dematerialisation of the projection's frame by using light reflections or overlaying multiple projections; this is an aspect I developed in the way the projections are installed in Viva Exhibition space).

Experiencing elements approximately represented activates the glance of the viewer, which continuously moves inside the frame. This aspect is described by Margaret Livingstone as the *illusory conjunction phenomenon*, that is, the activity of peripheral vision when it completes images or objects represented in an imprecise way: "Our peripheral vision occasionally makes erroneous correlations between objects seen and objects known to exist. This phenomenon, called illusory conjunction, occurs when items are presented either peripherally or transitionally."[114]

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[113] Ibid. p. 141.

[114] Livingston, Margaret (2003) *Light Vision*, Harvard Medical Bulletin, online at: http://switkes.chemistry.ucsc.edu/teaching/CROWN85/literature/lightvision.pdf [Accessed on: 8/8/2016] cit. p. 19.
For more information about Margaret Livingston's approach to peripheral vision and the perception of painting, see Livingston, Margaret (2002) *Vision and Arts: The Biology of Seeing*, Harry N. Abrams, New York, London, in which the author describes the experience of viewing Monet's *Rue Montorgueil in Paris festival of June 30* (1878) along with other works, in section 5, *Acuity and Spatial Resolution: Central and Peripheral Vision*, p. 74.

The peripheral projected illusion

The stimulation of the sensory realms determines an excess of receptivity that can activate the viewer's sensory awareness. The stimulation of peripheral vision increases the sense of immersion in the space and contributes to expanding the vision field. By considering the frame as a screen with borders, the concept of the IllumiRoom, designed by Microsoft[115] (figs 2.22 and 2.23, p. 193), takes advantage of the activity between foveal and peripheral vision to expand what we can 'see' outside the boxed frame of the TV screen. The total 'game' experience is based on the peripheral projected illusion, which is realised through the expanded projection of what is shown live on the monitor. The images move from the screen to the wall and around the space, interacting and mapping the structural features of the room and its furniture. The system takes advantage of the overstimulation of both foveal and peripheral vision: the high resolution of the screen's content—which is the centre of the attention—enhances the primary game experience, while the low-resolution projection around the screen provides additional information to the user through the peripheral projected illusion, contributing to the immersive game experience.

The projection of light outside the screen's borders stimulates the peripheral vision versus the foveal-focused vision. The optical flow perceived by peripheral vision is directly connected to our perception of motion.

Summary

Unfocused or undetailed representation of the space or objects activates our peripheral vision, which is connected with our proprioceptive sensation, and stimulates our haptic perception while we are seeking confirmation of what we are seeing. Light and Space art[116] facilitates these conditions and the constitution of a

[115] IllumiRoom was first introduced in 2003 by Microsoft but it is still not commercially available and is currently the subject of research. More details about the research project are online at: https://www.microsoft.com/en-us/research/wp-content/uploads/2016/02/illumiroom-illumiroom_chi2013_bjones.pdf [Accessed on 11/08/16].

[116] Dawna Schuld defines Light and Space art as *Phenomenal Art*, moving from the categorisation of these works as *perceptual* and connected with phenomenological philosophy specifically referred to in the cognitive philosophy of Maurice Merleau-Ponty and Edmund Husserl, see in Schuld, Dawna (2011) *Practically Nothing: Light, Space and the Pragmatic of Phenomenology* in *Phenomenal, California, Light, Space and Surface*, edited by Robin Clark, the Museum of Contemporary Art San Diego, pp. 108-109.

total experience by embedding light in the architectural context and using translucent or reflective material—light and colour projections—and other optical tricks.

These findings are reflected in my practice in the form of understanding the strategies that allow for the activation of a perceptual space around the projection frame through the use of light in the installation space.

The work of James Turrell and some of the experiments conducted during the 1960s and 1970s by other artists[117] subverted the normal situation of seeing creating a link between what we see and our body awareness. This process involves the overstimulation of our trained eye and our sensory realm and makes the viewer aware of perceptual mechanisms that in a normal situation he/she is not able to experience. Light and Space art facilitates the constitution of experience that uses light in the architectural space to create a situation of hyper-receptivity in which we experience *ourselves as a body rather than merely having one.* This experience is not particularly relevant to the psychological introspective sensation of the self, but it contributes to the physical/physiological understanding of our visual mechanisms, creating a link between the awareness of our body while we perceive and the work exhibited.

[117] I refer here to the group of artists initially working in Los Angeles during the 1960s and 1970s for whom light became the primary medium of production as well as a means for investigating perceptual mechanisms; see the work of Robert Irwin, Doug Wheeler, Maria Nordman, and Eric Orr.

2.4.2 Olafur Eliasson's perception machines and proto-cinematic vision

I was interested in light from the very beginning because it negotiates strongly with the spatial conditions, which means that it can be an independent object on the one hand, a projection such as a form on a wall, a light projection; yet it can also be the source of light in general, the lighting for the entire room. That means we have a situation where an object and a phenomenon exist simultaneously. There is also no separation between the transition from the phenomenon to the space. One could say that the space and the phenomenon become one.[118]

In the work of James Turrell, the concealment of the apparatus contributes to creating an experience where the viewer is completely immersed in the display context. The voiding of the gallery by filling it with light contributes to the process of 'seeing yourself seeing', producing a boundless visual experience that encompasses the extension of the viewer's body. By contrast, Olafur Eliasson exposes the object. He emphasises the sculptural qualities of light with the presence of the equipment in the space and through interventions that reflect the optical perceptual mechanisms of light visualisation.

Olafur Eliasson's practice is discussed here to examine the properties of light in its encounter with a sculptural object within the installation space. The observation of the relationship between the dematerialisation of the object in Turrell's work and the materialisation of optical phenomena in Eliasson's sculptures has influenced the transition of my practice from the use of moving image to the experimentation with sculptural materials, such as steel, ceramic and translucent glazes; together with the manipulation of slide projectors and photographic slides and the use of different light sources and mini digital projectors.

In works such as *Reversed Light* (2013) and *LightSign_Rainbow* (2014) (described in section 2.4.3) and in the final body of ceramic works produced for the Viva Exhibition (described in section 3.6.2) I have investigated the relationship between the viewer and the cinematic apparatus producing a body of works in which I have

[118] Eliasson, Olafur (2002) *Your Double-lighthouse Projection*, Summary and work description, Tate Modern, *Olafur Eliasson in Conversation with Holger Broeker*, 2 January 2004. Online content available at: http://www.tate.org.uk/art/artworks/eliasson-your-double-lighthouse-projection-t11842/text-summary [Accessed on: 17/06/2016].

combined the shape and mechanisms of the lamp as design object and the film projector as cinematic object.

Eliasson uses and transforms the projection equipment experimenting with different materials, projection lamps and luminous/reflective surfaces, he encompasses the focus on using a specific medium and this practice situates Eliasson's work between art and design. This is an aspect that I am pursuing in my practical research in terms of multidisciplinary exchange, and I am interested in understanding what the relationship is between these disciplines and moving image.

How can Eliasson's work be defined in relation to the cinematic, and what is the role of moving image in my practice? What is the link between the expectations of the cinematic equipment in the gallery space and the experience of light projections?

The use of lamps and light projectors is a recurring presence in Eliasson's installations. He says that the public usually expects to see the video projector among the equipment used in his installation. In works such as *Notion Motion* (2005) (figs 2.24-2.27, pp. 194-195), for example, the kind of lamp projector installed has often been misinterpreted as a video projector:

"This lamp projects a circle of light onto a shallow plastic pool which has a few centimetres of water inside it and a dripping device above it. Water drips into the pool and the reflections from the pool and the dripping create a pattern of moving rings on the wall. But the funny thing with this piece is that, despite the fact that all elements of the construction are fully visible – the pool, the projector lamp – and the dripping device – people always said *I see the light illuminating the pool, but where is the projector?*"[119]

I played on the viewer's expectation to see a video projector in the space in which moving image is projected with the body of works produced for the Viva Exhibition. I noticed the viewer interacting with some of the ceramic sculptures exhibited and assuming they were video projectors because they were emitting light and they were placed in front of a video projection (aspect described in section 3.6.2, paragraph *Sculptural Component*).

The interplay between the installation equipment and light contributes to situating

[119] Blom, Ina (2006) *Bright Shadows, A Conversation between Ina Blom and Olafur Eliasson*, p. 179, in *Your Engagement has Consequences on the Relativity of your Reality*, exhibition catalogue, Lars Muller Publisher, Switzerland, printed in Germany.

Eliasson's work at the early stage of proto-cinematic devices, so we are not looking at a single screen spectacle but at an optical phenomenon that is closer to the technological demonstrations, between education and entertainment, that were conveyed at the origins of cinema.

In fact, Eliasson revises optical toys and instruments originally belonging to the prehistory of cinema[120] by making objects inspired by the magic lantern, the kaleidoscope and the camera obscura, not only in terms of reproducing the optical effects but also in the way in which the viewer interacts with these objects.

In Kaleidoscope with Camera Obscura (2006) (fig. 2.28, p. 196), Eliasson merges the principles related to both instruments, inviting the viewer to look inside the kaleidoscopically shaped object that reflects a frame of reality upside down which is refracted along the extension of the sculpture. I make the same invitation in work such as *Reversed Light* (fig. 2.32, p. 199) (work description, p. 78), where the viewer has to look inside the slide projector to see the images.

The unfolding of a visual spectacle that stimulates the eyes is at the root of cinematic language. Eliasson revises the principle of proto-cinematic machines, transforming their shape using contemporary materials in the gallery space.

The state of reception determined by viewers experiencing kaleidoscopic surfaces and camera obscura brings the work to the staging of the effect of wonder and the scientific/technological experimentation of the early cinematic spectacles.

The cinema of attractions

The study of light and shadow through optical projection experiments was taking place by the second half of the fifteenth century; it was a matrix that generated the culture of optical devices before cinema was invented. Among these instruments and discoveries, there were techniques and tricks that were often linked with the paranormal,[121] which fascinated the public. However, the purposes of these devices

[120] Instruments that belong to the prehistory of cinema such as the camera obscura, magic mirrors and the magic lantern, as well as other optical toys such as the Phenakistiscope, the Thaumatrope, the Zoetrope, the Praxinoscope, and the Choreutoscope are described in Mannoni Laurent (2000), *The Great Art of Light and Shadow: Archaeology of the Cinema*, University of Exeter Press.

[121] Giovanni da Fontana first projected demonic figures using one of the first versions of the magic lantern in 1420. The Pepper's Ghost illusion introduced by Henry Dircks (1806–1873) was realised in a more complex technical setting than the magic lantern projection. The use of the Phantascope, invented by Etienne-Gaspard Robert, known as Robertson by the end of the eighteen-century, contributed to the development of the phantasmagoria spectacles.

were entertainment, popular spectacle and education.

The objects and installations used for staging optical phenomena in Eliasson's work brings the viewer into a dimension defined by Tom Gunning as the *Cinema of Attractions*[122] and the early staging of cinematic tricks before the advent of narrative and feature films. According to Gunning, film before 1906 was not dominated by narrative; instead it showed the magical possibilities of cinematic light reflections and projections: "in the earliest year of exhibition Cinema itself was an attraction. Early audiences went to exhibitions to see machines demonstrated [...] rather than to view films."[123] Cinema was not conceived as a recording of reality or a language dependent on visual narrative. Before the advent of editing, Cinema showed the spectacular power of the technological invention. The relationship between technology and public entertainment was based on the creation of an immersive environment which employed light projection. The phantasmagoria (fig. 2.29, p. 197), for example, applied the law of optics and perspective to the use of the projector beam and the magic lantern.[124]The use of the Phantascope contributed to the production of visual effects such as the illusion of motion in the projections, which appeared to increase and decrease in relation to the movement of the machine behind the screen during the spectacle. Gunning defines the phantasmagoria as "the predecessor of special effects cinema (or the audio-visually enhanced contemporary theme park ride), offering illusionistic (and safe) terrors while producing a 'how-did-they-do-that' or 'wow' factor".[125]

Summary

Eliasson uses contemporary equipment and sculptural materials to revise the principle and the shape of proto-cinematic objects; he makes sculptures and installations that bring the viewer the effect of wonder of the early cinematic spectacles. His practice develops connections between practices related to visual art, lamp design, model-making, light technology and architecture.

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[122] Gunning, Tom (1986) *The Cinema of Attractions: Early Film, its Spectatorship and the Avant-Garde* in http://www.columbia.edu/itc/film/gaines/historiography/Gunning.pdf [Accessed on: 21/04/16].
[123] Ibid. p. 65.
[124] The difference between the Phantom Ghost Show and the magic lantern projection was that the screen and the projectionist were totally concealed during the ghost but was only sometimes hidden in the dark in magic lantern projections.
[125] Baker, Brian (2014) *The Occult and Film* in the *Occult World*, by Christopher Partridge, Routledge, p. 445.

The observation of his practice allowed me to develop connections between moving image and sculpture, and between the practices of early cinema, the experience of proto-cinematic devices and the contemporary staging of time-based installations in which cinematic elements are transformed.

These complex relationships have contributed to the development of my practical investigation of the study of light's projective qualities and its materialisation in its encounter with sculpture.

2.4.3 The use of sculptural materials in my practice: An attempt to give form to light and its abstract components

The body of works finalised for the Viva Exhibition aims to activate a dialogue in the gallery space between moving image and disciplines such as sculpture and design.
The process leading to the Viva Exhibition was gradual and started with the use of the analogue media (in works such as *Enlighten*, *RGB, Reversed Light*), the observation of the projection process and the presence of the projector as a sculptural object in the exhibition space (in the work of Rasa Barba, Guy Sherwin, Anthony McCall). This observation allowed me to have a better understanding of the sculptural implications of light passing though the projector to hit the celluloid strip, and what the viewer's expectations are in the encounter with the projection equipment in the exhibition space (observing the work of Olafur Eliasson).
In this section I describe the transition from the exclusive use of the projected image to the inclusion of sculptural materials in my practice.
My working process considered the observation and the interaction between (i) the elements related to light emission (lamps and artificial light sources), the projection apparatus (film, slide and digital projectors and proto-cinematic devices) and (ii) the use of sculptural materials, such as steel, ceramics, silicon, rubber and plexiglass.

Reversed Light

During the projection process, the attention of the viewer is focused on the image projected on the wall rather than on the equipment. *Reversed Light* (2013) (figs 2.30-2.33, pp. 198-199) is a work conceived to transpose the viewer's attention from the image projected to the machine. In this piece, I used a Noris medium-format slide projector, which is not exhibited as a projector but as a sculptural optical box emitting light.
I designed and adjusted a metal octagonal carousel which allows the projector to carry eight groups of medium-format slides instead of two. The viewer perceives the light coming out from the lens but he/she needs to interact with the object by manually moving the carousel to see the images. The images placed on the carousel are medium format slides which were given to me when I bought the slide projectors: they depict a couple of English tourists travelling around Europe. I saw the slides and their figurative content as existing material that I could work with in

the deconstruction of the conventional function of the slide projector. I assembled the images as a collage of transparencies and looked at the light effects and the balance between dark and bright spots to avoid causing eye damage to the viewer because the slides are backlit by the light source of the slide projector. The reception of the work requires an interaction with its sculptural body. By looking through the lens, it is possible to see the images, which are realised by overlapping three glass slides. In this process, the viewer becomes aware of the apparatus: he/she realises how the slide projector works and sees that the light coming from the projector's bulb backlights the slides, creating a three-dimensional image—magnified through the lens—that flashes in relation to his/her position. The work dictates an individual reception that implies a use of the device that is opposite to what it was originally designed for, thus to show a projected image to the public.

The wonder-effect and the interaction with the machinery bring the viewer into a dimension of entertainment, popular spectacle and education and provide a link to the early cinematic devices similar to the ones discussed in the work of Olafur Eliasson and the *Cinema of Attractions*.

Moreover, the Noris slide projector is reminiscent of the rudimentary features of the magic lantern in its shape and the use of glass slides. When I was working on *Reversed Light*, I did not directly think about the magic lantern itself, but about the possibility of observing how light interacts with the projection and how I could modify the relationship between the projection, the projector and the viewer. Later I realised my aim was also related to the transformation of the slide projector, an object that appears almost obsolete in the contemporary technological panorama, into a sculptural optical box to provide an experience similar to that of a proto-cinematic device and it is exhibited in the gallery.

Both the slide projector and the magic lantern are apparatuses designed for the purpose of projecting light. The magic lantern illustrated the first encounter between an artificial light source, lenses, images, and sculptural materials, it also incarnated the principles of the projection process and was a result of years of observation of

natural light.[126] Its features originally solved the problem of controlling an artificial light source for projecting an image to an audience. *Reversed Light* incarnates the simplicity and rudimentary aspects of the principle of the magic lantern although it is necessary to look into the lens to see the images, as the projection beam is blocked through the slides' superimpositions. This is an approach similar to that used in the kaleidoscope and in the work *Kaleidoscope with Camera Obscura* discussed earlier when looking at Eliasson's approach to the remodelling of proto-cinematic devices.

Early kaleidoscopes[127] contained pieces of coloured glass mounted inside a rotating tube with angled mirrors and lenses which created a complex pattern or reflections that stimulated the eye of a person who looked inside while rotating the tube. I used medium format slides in a similar way to create light effects by superimposing them and backlighting them in a particular way, while the viewer moves the carousel specifically designed for the work.

The action of looking inside the projector to discover the images made me think about Edison's Kinetoscope (1888) (figs 2.34 and 2.35, p. 200) and the fact that the machinery required an individual to look inside it as the filmstrip was running through its body.

The invention of the Kinetoscope was a technological development achieved by a series of experiments done for centuries with different 'toys' based on the phenomenon of the persistence of vision, along with the contribution of, first, photography and, later, chronophotography. The Kinetoscope was a precursor of the film projector,[128] and its features—a wooden box with a filmstrip running in its interior—made the evolution of the film projector and the film printer possible, even though it had originally been conceived as a unique reversible machine.[129]

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[126] The observation of solar rays and the phenomenon of its projection have been known about since antiquity and were developed through the study of the principles of the camera obscura: Aristotle (384–322 BC) observed the passage of a light beam through an aperture, which projected a circular image no matter what the shape of the aperture was; Roger Bacon (1220–1292) added a screen (a wall onto which the light was projected) to observe the sun without damaging the eyes; Leonardo Da Vinci (1452–1519) described the possible use of this method for viewing a reverse image of the outside world; Gerolamo Cardano in his book *Desubtiliate* (Nuremberg, 1550) introduced the use of a biconvex lens placed in the aperture, which improved the quality of the image projected.

[127] The kaleidoscope was invented by Sir David Brewster in 1816; three years later, his book *A Treatise on the Kaleidoscope* was published.

[128] Louis and Auguste Lumière modified Edison's 35mm filmstrip. They wrote in their *Memoires* about the idea of projecting Edison's filmstrip using a magic lantern and then using the film format of the Kinetoscope with some modifications. The perforations had one round hole on each side of the image instead of the four rectangular perforations on each side of the Edison filmstrip.

[129] The Lumière brothers invented the Cinematograph in 1895. It was a combination of a camera, a projector and a printer. It was seen as an improvement on Edison's Kinetoscope.

The manipulation of the slide projector and its interaction with other sculptural materials (in the case of *Reversed Light*, an octagonal carousel made of steel) contributed to my investigation of the projector objective and self-referential dimension, where the main function of projecting is subverted.

The observation of the sculptural and optical qualities of the magic lantern and the Kinetoscope, along with the manipulation of the proto-cinematic devices designed by Olafur Eliasson, propelled my work towards the possibility of giving consistency and shape to light by analysing the relations between the following:

- The evanescent aspect of light as a component of moving image
- The consistency of light in the interaction with a sculptural body
- The observation of the principles of and the viewer's approach to the instruments of the pre-historical stage of cinematography.

The Quality of Scale

In the installation *The Quality of Scale* (2014) (figs 2.36-2.41, pp. 201-203), I investigate the relationship between the perception of masses in sculpture and light, the exhibition space, and the viewer. The project analyses the principles observed in the work of both Eliasson (light and the approach to the object) and Turrell (light and the approach to the space).

The installation comprises the following:

- A 16mm colour film transferred onto digital video
- Two truncated pyramids made of steel in different sizes
- A monumental polyhedral structure made of wood, which is combined within the exhibition space and modifies the architectural extension of the gallery
- The structure is illuminated by two light projections, one analogue (slide projection) and the other digital based (video projection).

Room 1

The exhibition is divided into two rooms. In the first one, there are two truncated steel pyramids, which are completely identical in structure but different in scale. At the top of each a projector lens is installed. The viewer needs to look inside the lens to see the backlit 35mm slide (installed in the small sculpture) (fig. 2.37, p. 201) and the medium-format slide (installed in the big sculpture) (fig. 2.38, p. 202). The

sculptures summarise the principle of *Reversed Light*: there is a lens at the top of the pyramidal trunk and the viewer needs to look inside the sculpture to experience the image, which is perceived underneath the lens.

The formal features of a slide projector and its mechanism are simplified in a polyhedral object which assumes the features of a pyramid. To make these sculptures, I synthesised the function of the slide projector, using material that belongs to the mechanism which allows the projection (a light source, a lens, and a slide).

When considering the pyramids' sizes I referred to the relationship between the viewer and the sculptural bodies in Robert Morris's discussion about the difference between *monument* and *object*.[130]The space occupied by the object and its scale establishes the difference between the notion of *object* and *monument* and the notion of *intimacy* and *public*, which reflects the viewer's perceptual approach to the mass observed. A smaller object (the small pyramid) needs less visual space around it, establishing a more intimate relationship with the viewer; a larger one requires a larger space around it to be entirely seen, and in these terms it is possible to define the difference between *monument* and *object*. Moreover, with the simpler polyhedrons, such as cubes and pyramids, there is no need to move around them to understand or perceive their spatial configuration. They give an immediate sense of their shape because of their shape's simplicity and due to their 'constancy of shape' and their 'tendencies towards simplicity', which are perceptual theories related to memory and physiological factors such as the nature of binocular parallax vision and the structures of the retina and the brain.

Room 2

The installation of a giant polyhedron in the second room completely modifies the architecture of the existent space. There is an immediate sense of its simple shape even though the viewer cannot experience the entire form (figs 2.40 and 2.41, p. 203).

The giant structure clashes with the small extension of the room because part of it is built in the architectural space. The structure becomes dependent on the exhibition

[130] For a specific discussion about the subject, see *Note on Sculpture* by Robert Morris (1995), Part 2 *Continuous Project Altered Daily, The Writings of Robert Morris*, October Book, the MIT Press, Cambridge, Massachusetts.

space, assuming an autonomous signification related to the perception of its shape, that is, a section of a parallelepiped. The space and the structure are modified by the projection of two different light sources. I used two projections (one analogue and one digital) because I wanted to test the differences between the kind of light projected by an analogue source (the 35mm slide projectors with a slide show of pure primary colours on a loop) and the digital projector (with a video made of colours shaded from the maximum peak of their saturation to their weaker component). These decisions also reflected my observation of the use of analogue and digital media in Anthony McCall's work. He describes the consistency of the projection in relation to the medium used and refers to "shooting stars" when observing the black value of 16mm film. In his works produced since 2003, the sharp quality of the mathematically reproduced lines and the deep black value of the DLP projectors contribute to having a value that is "almost as rich as film"[131] but never changes.

In my case I used the 35mm coloured slide to give a richer and deeper tone to the light-coloured projection than the projection of the standard definition video on which, if you get close, you see a texture consisting of a small grid of pixels.

The viewer doesn't immediately realise that the light effect is generated by the projectors; some thought that the structure was emitting the colours, like a giant lamp installed in the space. This was because the projectors are not immediately visible in the room.

The examination of Turrell's dematerialisation of the object and concealment of the equipment, and Eliasson's optical sculptural installations moved my attention towards the concealment of the projection source and its transformation into a sculptural light object. This process contributed to subverting and transforming the relationship between the projector and the projection in my work, through the making of sculptures that reassume the perception of materialised light on its surface.

LightSign_Rainbow

LightSign_Rainbow (2014) *(*figs 2.42-2.45, pp. 204-205) is a box made of steel which I designed referring to the classic shape of a light sign. In this work there is no

[131] Godfrey, Mark; McCall, Anthony, *Anthony McCall's Line Describing a Cone,* Tate Papers Autumn 2007, Tate's Online Research Journal, http://www.tate.org.uk/download/file/fid/7350 [Accessed on: 30/02/2015]. Mentioned here before in p. 37.

relationship between the source of the projection and the surface of the projection: Light is perceived directly on the surface of the sculpture. Here the viewer experiences the different shades of the light spectrum through the application of an iridescent material placed between several rows of light bulbs that are attached directly onto the surface of the object (for a total of 99 light bulbs). The interaction between the light bulbs and the iridescent material activates the perception of the colours of the rainbow. The reflections vary according to the movements of the viewer in the space.

This piece represents the starting point of my analytical examination of a simple geometrical form and its relation to light emission, reflection and perception with the elimination of elements such as the projector and the screen. *LightSign_Rainbow* aims to recreate the effect of looking, simultaneously, at the following:

- Pure light (figuratively represented by the light bulbs)
- The whole range of colours perceived by humans (figuratively represented by the iridescent plastic paper)
- A sculptural mass that summarises and gives shape to the impression of light and colours in the space.

The making of this object unfolded the possibility of materialising the optical phenomenon of light visualisation through the auto-referential aspect of a sculptural body that is neither a lamp nor a projector. During the making of this sculpture, I did not find it easy to mould steel and shape it by hand, so I realised that I needed to experiment with a more organic material through which I could model the shape of the projectors and/or the lamp, as well as experimenting with pictorial interventions on the surface. I further developed these aspects through the production of ceramic sculptures and the study of translucent, lustre and reflective glazes conceived for interacting with the space and transforming the experience of the projection.

The study of the relationship between the object and the background when reconsidering the space for the projection is something I have investigated in the body of works produced for the Viva Exhibition *Between the Glimpse and the Gaze*. The use of ceramic allowed me to integrate the light sources and mini digital projectors inside the sculptural body; their reflections on surrounding walls and the use of a naturalistic camouflage pattern repetition applied in the installation space were carefully studied to activate a certain experience for the viewer—one that

modifies the experience of the object and background, and transforms the cinematic container inside the gallery space. I discuss these aspects in the third chapter and analyse movie theatre architecture and the contemporary moving image pavilion.

2.5 Conclusions

The investigation conducted in this chapter led me to a better understanding of the aspects that contribute to the development of a perceptually boundless visual experience, and then to an understanding of how it is possible to activate a perceptual space around the projection frame through the use of light in the installation space.

The use of light as a creative means has strong relationships with the cinematic element of the projection and its encounter with the space. The immersive experience of the typical dark and enclosed place used for cinema reception is related to what the viewer sees inside the frame and to the film content, whereas the immersive experience of the pervasive use of light in the encounter with the architectural space is related to the alteration of our way of seeing and the use of light. This creates an experience that goes beyond the retina and towards a corporeal and physical involvement, where the object–viewer relationship is transformed and the boundaries of our visual frame are expanded.

Anthony McCall's approach to the cinematic elements illustrates how to expand the space of cinematic reception as well as the projection frame, placing the viewer inside the film. The use of projective apparatus (film, video projectors, spotlights, lamps) in the exhibition space defines an experience in which the viewer is closer to the object than to the space that surrounding it.

The elimination of any point of focus (object, projector), the reconsideration of the camera obscura model as a way to represent space, and the shift of attention from what we perceive to be in the centre of our field of vision to the periphery of the frame contribute to an immersive experience for the viewer, which is caused by the following:

- There is a stimulation of our peripheral vision that is connected with our haptic perception and the proprioceptive expectation of movement (where the eyes themselves became organs of touch)
- There is an overstimulation of our peripheral vision that activates a connection with the awareness of our body and creates a link between the eye and the extension of the body. The experience is a circular (outside – eye – body – outside) and not a one-way transmission (outside – eye –

brain).

Light has tactile qualities that are connected to the phenomenon of the projection, and the viewer is subjected to different experiences which are related to seeing or not seeing the equipment used to project light in the space, as well as to seeing or not seeing the object or a point of focus in the installation space.

However, it is possible to create a link between the experience of the object and the background: Eliasson's approach to the object led to the development of my practice in the encounter with sculpture. This has allowed me to develop connections between moving image and other disciplines and between the practices of early cinema and the contemporary staging of time-based installations in which the cinematic elements are transformed.

Chapter 3

The exploration of cinematic screen architecture and the hybrid context for the display of moving image in contemporary time-based installations

3.1 Introduction

The contemporary displacement of moving image from the cinema to the gallery and its confrontation with the museum, in terms of disseminating and re-exhibiting historical time-based work, has led to the unfolding of a hybrid context for the moving image display whose parameters are in a process of continual evolution.

This chapter focuses on these developments by analysing artists' productions in which the crossing of the boundaries between the practices of cinema and screen-based exhibition activates a hybrid display context for the staging of time-based installations. It examines different critical approaches of moving image and its displacement from the cinema to the gallery and the museum (section 3.2). Section 3.3 focuses on the description of time-based installations—film and video based—in the contemporary art museum and institutional spaces. The second part of the chapter (sections 3.4 and 3.5) focuses on observing the architecture of the movie theatre and analyses the contemporary screening space, which is seen as a sculptural cinematic container.

This investigation aims to define the contemporary space of moving image and how this is structured in relation to the mobile spectator and cinema's and the art museum's metamorphosis in response to the installation of time-based works. Moreover, it contributes to an analysis of the differences between the auditorium, the movie theatre and the pavilion, considering the history of the movie theatre and paying particular attention to John Eberson's Atmospheric Theatre.

Observing how the architectural space is structured and manipulated by artists, depending on the media used and the type of installation, has contributed to both the progression of my practice and the design of the Viva Exhibition installation.

How does the interaction between the movie theatre architecture and the moving image projected produce novel forms of exhibition? How can the space around the frame be manipulated to create a total installation environment and subvert the original cinematic context of reception?

The space conceived for *Between the Glimpse and the Gaze* remodels the auditorium

into a space of mobility and transition where what is inside the screen continues outside its borders in an interaction with the objects exhibited.

3.2 The displacement of moving image to the gallery and the museum

This section outlines different theoretical positions classifying artistic approaches that displace and transform structures, apparatuses, narratives and languages which belong to the cinema into the gallery and museum.

Staging moving image defines a point of distinctiveness in the exchange between (i) the evanescent aspect of the projection, (ii) the dependence on the equipment used (from production to exhibition), and (iii) the objecthood of the screen (which can be intended as a surface for projection or a screen/wall/structure). These elements activate a relationship with the architectural space and the viewer. The interdependence between the architectural space and the projection (and/or the screen) leads to the space becoming part of the work exhibited.

According to Catherine Elwes, "the moving image has the capacity to both reiterate and dissolve the existing architectural boundaries of the gallery".[132] The properties of light in its projection and the reconsideration of the screen outside the cinematic context can shape the space and has what Elwes defines as "the ability to both affirm and dematerialise the wall and ceiling which remains one of the defining characteristics of moving image installation".[133] The immersive power determined by the installation of the moving image is to activate the space around the frame and to constitute autonomous exhibition forms in which elements of Cinema are displaced into the gallery and the museum.

According to Erika Balsom, "Cinema appears as an outmoded image-regime in desperate need of the shelter provided by the gallery wall"[134] and it is "the reinvention of the cinema that has opened new paths that will continue to be explored in the years to come".[135] My contention is that Cinema is not in a state of crisis but metamorphosis related to technological developments and the encounter of its elements with visual art and screen media. This process started with the transposition of film—considering its materiality, apparatus and functions—in the gallery space, and it is contributing to the evolving process of establishing

[132] Elwes, Catherine (2015) *Installation and the Moving Image*, Wallflower Press, Columbia University Press, New York and London, in *Architectural Space,* cit. p. 13.
[133] Ibid. p. 83.
[134] Balsom, Erika (2013) *Exhibiting Cinema in Contemporary Art*, in *Architecture of Exhibition*, Amsterdam University Press, cit. p. 31.
[135] Ibid. p. 25.

correlations between technology, sculpture, and moving image.

The role of the spectator in relation to the work exhibited and the surrounding space is determinant in the reconsideration of traditional cinematic reception and the changes introduced since 1960. As I discussed in Chapter 1, Expanded Cinema introduced new forms of exhibition, especially those that considered the relationship between the architectural context and the medium used, which became, sculpturally, part of the display. Works of artists like Annabel Nicolson and Malcolm Le Grice, among others, introduced the first experiments in multi-channel film projections that were intended to be events related to a performative happening within the reinterpretation of the apparatus and the cinematic reception. The contexts for the display of such events were usually alternative venues that challenged the traditional cinematic reception of film, such as the London Film-Makers' Co-op.

'Transitional' artists

Kate Mondloch discusses the relationship between Structural Film and Expanded Cinema and contemporary time-based installation through defining artists such as Paul Sharits and Michael Snow as "transitional" artists who were consciously aware of crossing the boundaries between art and cinema in the 1960s and 1970s. They "carefully distinguished among various filmic and artistic genres in both writing and practice".[136] Sharits' striking statement "cinema is occurring when one looks at the screen, not through them"[137] specifies the differences between sitting in the movie theatre and walking through the space where moving image is installed. In his 1974 Manifesto, Sharits defined the precise requirements that "Locational Film"[138] gallery-based media works have in the gallery space: (1) they must exist "in an open, free, public location"; (2) the form of presentation must not "prescribe a definite duration of respondent's observation (i.e. the respondent may enter and leave at any time)"; (3) the very structure of the composition must be "non-developmental" and offer "an immediately apprehensible system of elements"; and, finally, (4) the content of

[136] Mondloch, Kate (2010) in *Interface Matter Screen-Reliant Installation Art* p. 5, *Electronic Mediation: Screens: Viewing Media Installation Art*, University of Minnesota Press.
[137] Ibid. p. 5.
[138] Paul Sharits' filmography in *Paul Sharits* (1981) by Stuart Liebman includes a list of "Locational Film" pieces as follows: *Sound Strip/Film* (1971), *Synchronous Soundtrack* (1973–1974), *Vertical Continuity* (1974), *Damaged Film Loop* (1973–1974), *The forgetting of Intention and Impressions* (1974), *Shutter Interface* (1975), *Dream Displacement* (1975–1976), *Epileptic Seizure Comparison* (1976) and *Episodic Generation* (1979), p. 19.

the work must "not disguise itself but rather make [...] a specimen of itself".[139]

The activation of the space around the screen is initiated by the relationship between the ambulant spectator and the display of the apparatus in its electronic or analogue materiality. The combination of wandering in between screens, the expansion of the frame to a multi-screen set-up and multi-projections defines a space where "the aesthetic of the 'glance' is replaced with the aesthetic of the 'gaze'".[140] The screen is no longer the focal point of the gaze, nor the point of focus of the cinematic auditorium; instead it merges with the surrounding architecture.

As Chrissie Iles noted during the conference "*Inside Out: Expanded Cinema and its Relationship with the Gallery in 1970*",[141] there is a difference between Expanded Cinema with a capital E and a capital C, which is a historical movement which began during the 1960s, and the more recent experimentations with what she called "expansion" and "contraction" of the cinematic experience. However, both can have in common the expansion of space and time, visual viewpoint distortion, screens, equipment and spectatorship. The introduction of the 'gallery film/video' phenomenon by 1990, showcased with increasing frequency in galleries and museums, relates to Iles' 'expansion' and 'contraction' definition and is delineated by the expansion of cinematic narratives through the screen-based experience. The explosion of multi-screen and monumental, immersive moving image installations established a consistent relationship with the interaction of cinematic narratives in a gallery context. The exhibition *Dreamlands: Immersive Cinema and Arts, 1906–2016* (28 October 2016–5 February 2017), curated by Chrissie Iles, and Anne and Joel Ehrenkranz at the Whitney Museum of American Art, focused on the ways in which artists have reshaped the cinematic experience and the cinematic space through the installation of moving image. The selection of works covers 100 years of moving image production. The exhibition comprised contemporary and historical artists such as Oskar Fischinger, Liam Gillick, Dominique Gonzalez-Foerster, Pierre Huyghe, Anthony McCall, Philippe Parreno and Stan Vanderbeek, among others, and

[139] Paul Sharits in the *Statement Regarding Multiple Screen/Sound 'Locational' Film Environments-Installations*, pp. 79-80, quoted by Mondloch, Kate (2010) *Electronic Mediations: Screens: Viewing Media Installation Art*. Minneapolis, p. 5.
[140] Hansen, Miriam (1993) *Early Cinema, Late Cinema: Permutations of the Public Sphere*, in *Screen* 34, no. 3, Autumn.
[141] Iles, Chrissie, *Inside Out: Expanded Cinema and its Relationship to the Gallery in the 1970s,* paper presented at *Expanded Cinema: Activating the Space of Reception,* Tate Modern London 17–19 2009.

Expanded Cinema events (such as Malcolm Le Grice's *Horror Film 1*, 1971 and Stan VanDerBeek and Joan Brigham's *Steam Screens*, 1979, among others) at the Microscope Gallery. The show illustrated the use of different techniques, from analogue and hand-painted film to the latest 3D technologies for the production of moving image and the creation of immersive experiences.

Ways of exploring cinema through moving image installation

The reconsideration of cinematic reception—with the displacement of film from the traditional cinematic context to the consolidation of galleries and museums as venues for the moving image—seems to have promoted two related ways of exploring cinema, which oscillate between the different reception models of (i) a black box (with fixed spectator's attention to the screen) and (ii) the gallery/white cube (with ambulatory spectators).

These reception modes usually cross the borders of display contexts, for instance by installing a small cinema in the gallery, or by screening a film for a specific length of time and allowing no access during the projection times.

The use of the moving image in between the use of analogue and digital media across a variety of contemporary displays has promoted two categories of moving image installation art:

1) Single and multi-screen timed-based installations, where moving image, the frame and the narrative overlap by using different forms of monumental video projections and screens—generally through the use of digital media from production to exhibition (but also film), for example Isaac Julien's *Playtime* (2014) (fig. 3.1, p. 207); Douglas Gordon's *Henry Rebel* (2013) (fig. 3.2, p. 207); Diana Thater's *Life is a Time-Based Medium* (2015) (fig. 3.3, p. 208); and Eija-Liisa Ahtila's *Vaaksaura-Horizontal* (2011) (fig. 3.4, p. 208).

2) The revival of interest in analogue media (as a result of the impact of digital technology which I have considered in Chapter 1) brought 16mm and 35mm film formats into the gallery space with the dissemination of works that deal with film's specificity and explore its concrete technological apparatus. These installations often reassess the cinematic apparatus and its historical filmic incarnation within new

contemporary display contexts.[142]

According to Erika Balsom, "the integration of cinema into the spaces of art after 1990 must be seen as abiding by an interplay between old and new media, whereby cinema is both an old and new medium in which one might encounter the redemptive possibilities of the outmoded and the new technology that has brought dramatic changes to the place of the moving image in art and to the spaces of art more generally".[143]

The moving image appears fragmented in a puzzle assembled by the relationship between the technology employed and the reconsideration of cinematic language and its analogue components. Catherine Elwes[144] defines the new millennium as a time when the renewed interest in obsolete and analogue media reaffirms the film and video apparatus again on stage; she classifies different approaches of artists working with moving image in relation to the medium used:

1) "The analogue turn" category includes work by Rosa Barba's "sculptural film", Gibson and Recoder's *Light Spill* (2006) (fig. 3.5 p. 209) which is described as a "funeral pile of lost movie" and David Hall's *End Piece* (1972- 2012) (fig. 3.6 p. 209) as a "graveyard of televisions".

2) The "digital media" category is divided into multi-screen works by Jeffry Shaw; "convivial installation" by Pipilotti Rist's *Worry Will Vanish Horizon* (2014) (fig. 3.7 p. 210); video used as a "discursive medium" by Adrian Piper, Stuart Marshall, John Akomfrah and Eija-Liisa Ahtila; and "documentary and ethnographic regime" with Hito Steyerl, Omar Fast, and Sven Augustijnen.

These classifications can be extended to the work of artists who have revisited cinematic codes through the moving image installation, thereby contributing to the displacement of cinematic language to the gallery: Christian Marclay's *The Clock* (2010) (fig. 3.8, p. 210) looks at new challenges regarding the notion of cinematic time and space; Chantal Akerman and Chris Marker use the documentary in a more

[142] In relation to the two categories described above, relevant examples of the first group are work by artists who manipulate and revisit cinematic codes through video installation, such as *DeadPan* (1997) by Steve McQueen, *Third Memory (*1999) by Pierre Huyghe and *Through a Looking Glass* (1999) by Douglas Gordon. Works in the second category are those that manipulate elements of film in its materiality and substance, such as Michael Snow's *Two Sides to Every Story* 1974, Anthony McCall's *Line Describing a Cone (*1973) Paul Sharits' *Shutter Interface* (1975), Tacita Dean's *Film* (2011) and Rosa Barba's *Subject to Constant Change* (2013).

[143] Ibid. p. 19.

[144] See the relevant section *Thematic and Staging*, in Elwes, Catherine (2015) *Installation and the Moving Image*, Wallflower Press, Columbia University Press, New York and London.

experimental way, Douglas Gordon and Stan Douglas transpose Hitchcock's films to the gallery, and Steve McQueen's practice involves the production of both feature films and installations.

The questions arising at this point are related to the definition of what moving image installation is and what the condition of Cinema is in relation to this form of exhibition.

Different authors have named the staging of moving image using concepts and terminology that imply the variegated relationships between the projected image, screen media, the gallery and cinematic language: Raymond Bellour defines it as 'another cinema', but Jean-Christophe Royoux prefers to describe it as 'cinema of exhibition'; Kate Mondloch calls it 'screen-reliant installation art', Malcolm Turvey narrows the definition to 'projected image installations' and Erika Balsom revised Bellour's concept, and uses the term 'othered cinema', while Catherine Elwes prefers to say 'moving image'.

Passage de l'image, curated by Raymond Bellour, Catherine David and Christine Van Assche at the Centre George Pompidou in 1989, was an exhibition that specifically interrogated the presence of moving image in the gallery space as a hybrid intermedial form defining a moment when moving image itself could no longer be defined as only related to cinema but became an independent art form in its installation. The exhibition presented works by Dan Graham, Gary Hill, Thierry Kuntzel, Chris Marker, Michael Snow, Bill Viola and Jeff Wall. The concept of the show is based on what Bellour defines as 'multiple cinemas' and 'l'entre-image' or 'between image'; the latter is described as a "permanent re-evaluation of the mutation and exchange between different images and media".[145]

The exhibition is presented as an overview in which cinema is used by artists who want to experiment in the museum and as a language that can merge different media (sound, text, and moving image).

According to Bellour and the definition of 'multiple cinemas', Cinema can be retrieved by its displacement to the gallery space. He defines the work of the following artists as examples of "installations that use cinema as an object to be reformulated": Douglas Gordon, with *24 Hour Psycho*, and the installations of the

[145] Bellour, Raymond (2013) *Multiple Cinemas*, *"Cinema alone"/ "Multiple* Cinemas" *Alphaville*: Journal of Film and Media Screen Issue no. 5, available on line at: http://www.alphavillejournal.com/Issue5/PDFs/ArticleBellour.pdf [Accessed on: 03/07/18] p. 4.

film-makers Chris Marker, Peter Greenaway, Raùl Ruiz, Alexander Sokurov, Hans-Jurgen Syberberg, and Raymond Depardon. Bellour expands this concept with the notion of 'saving the image', which defines the proliferation of moving image into the gallery space as a productive form that constitutes a novel exhibition format as well as carrying a new language of cinematic production.

Summary

The gallery is a territory in which artists are free to experiment with new possibilities, while simultaneously exploring the history of cinema and its language.

The transfer of moving image from the cinema to the gallery contributes to the definition of novel forms of exhibition as well as to the transformation of cinematic codes through artistic experimentations.

The activation of the space around the frame defines the displacement of cinematic elements and codes to the gallery through the installation of the screen and the mobility of the viewer.

The projection of light creates a transitional surface, a space that is both inside and outside the projection's borders. This system of relationships leads towards a form of architecture dominated by light "as an expansion of material built space through the virtual window of the film, television or computer screen. The historical specificity of the cinema screen – and the luminous moving image upon it – forms a transitional surface as light becomes a building element in a newly immaterial architecture."[146]

The activation of the space around the frame and the constitution of an immersive space of reception are identifiable not only in the use of multi-projections (which construct multi-layered narratives in the gallery space) but also in the constitution of a space in which the auditorium is activated through the encounter of experiences belonging to different display contexts (museum, pavilion and gallery).

What is the role of the medium used and its relationship with the quality of immersive experience produced in the exhibition space?

In the following section I discuss relevant examples in order to answer this question.

[146] Friedberg, Anne (2009) *The Virtual Window, From Alberti to Microsoft*, MIT Cambridge, in *The Architecture of the Spectatorship*, cit. p. 151.

3.3 Contemporary exhibition spaces: Apparatuses and forms of immersiveness in the exhibition of moving image

This section discusses contemporary time-based installations (exhibited in the Tanks galleries at Tate Modern in London and the Hangar Bicocca in Milan) to describe the space for displaying moving image created by the combination of reception modes from both the movie theatre and art venues. It focuses on differences and similarities between different multi-projection works, through describing the site-specific use of film and video and making connections with the cinema space and the cinematic experiences.

What is the role of the apparatus and how can the use of film and/or video along with the staging of display structures determine different experiences in relation to the work in the space? How can the installation of the screen as wall/window/architectural structure amplify the space of reception, contributing to the creation of an immersive experience as well as a path of movement between and through its extension? How does the introduction of a cinematic box within a multi-screen video or film installation define a separation in the exhibition space?

This analysis aims to introduce the concept of the *moving image container* and to understand how the transformation of the exhibition space when exhibiting moving image is activated by the correlation of the cinematic elements (in terms of the medium used and its installation) and the crossing of the boundaries between the practices of cinema, visual art, and architecture.

Moving image installations and Cinema at Tate Modern

Tate Modern has conceived the Tanks galleries as venues dedicated to moving image, performance, film, and video in the encounter between the participatory aspect of the viewer's experience and the dissemination of historical artworks along with new commissions. The curatorial strategy looks specifically at the dialogue between novel display solutions and the 1960s, a time defined by France Morris[147] as a "moment when high Modernism erupted" because of determinant social and political shifts

[147] For a report on the interview with France Morris and the discussion about the new Tate Modern's extension, see Luke, Ben (2016) *Global and Industrial: The concept behind the new Tate Modern*, the Art newspaper, available online at: http://theartnewspaper.com/reports/tate-modern/global-and-industrial-the-concept-behind-the-new-tate-modern/ [Accessed on: 25/06/2016].

which influenced art and its new dimension of experience.

The connection and exchange between the historical framework of Expanded Cinema and contemporary productions was particularly evident in the first opening programme (*Art in Action*, 18 July–28 Oct 2012). The exhibition comprised performance, screenings, and live works that were part of the Filmaktion group, such as Gill Eatherley's *Aperture Sweep* (1973) and Malcolm Le Grice's *Horror Film I* (1971), while Lis Rodes's *Light Music* (1975) (fig. 3.9, p. 211) was installed as a piece running continuously next to new commissions such as Sung Hwan Kim's *Temper Clay* (2012) (fig. 3.10, p. 211).

Four years later, when Switch Tower's extension was completed, the Tanks were reopened (17 June 2016–3 July 2016). The moving image installation works exhibited were closer to the sculptural dimension of digital media, electronic imagery and TV rather than to the filmic incarnation of Filmaktion's works. Some of the works of the programme comprised: the electronic and TV wall monitor showing *Hermitos Children, the pilot episode* (2008) (fig. 3.11, p. 212) by Marvin Gaye Chetwynd; the interactive light environment, *Séance de Shadow II* (blue) (1998) (fig. 3.12, p. 212) by Dominque Gonzalez-Foerster and *Umbrella* (1971) by Wen-Ying Tsai; the minimalist approach to space in Rasheed Araeen's *Zero Infinity* (1968–2007) (fig. 3.13, p. 213); and Robert Morris's *Untitled* (1961) (fig. 3.14, p. 213).[148]

The *Starr Cinema* (in the Boiler House Level 1) is a Cinema space dedicated to artists' film and video shown in a movie theatre setting, demarking what is supposed to be experienced frontally seated (single-channel video/film) from the experience of multi-channel installations.[149] The constitution of different levels of experience inside the museum asserts not only the various possibilities related to moving image and its exhibition but also the state of cinema, which affirms its presence and autonomy via the screening of moving image productions that need to be experienced in the movie theatre.

[148] The *BMT Live program* was also part of the event and comprised works and performance from 1960 including Rasheed Araeen's *Zero Infinity* (1968-2007), Robert Morris's *Untitled* (1961) that have a sculptural orientated presence, although always thought as interactive pieces in relation to the public.

[149] The opening programme at the *Starr Cinema* took place between 17 and 19 June 2016, comprised a selection of works by Lucy Raven's *China Town* (2009); France Stark's *My Best Thing* (2011); Anri Sala's *Dammi i Colori* (2003); Derek Jarman's feature film *Blue* (1993); and Rabih Mroué's *On the Three Posters* (2004). For the full text that includes Andrea Lissoni's statement, see *Tate Modern Launch New Cinema Programme* on *The Economic Voice* at http://www.economicvoice.com/tate-modern-launches-new-cinema-programme/ [Accessed on: 29/06/2016].

The space of video projection and the 35mm feature film in the installation *Primitive*

Primitive (2009)[150] (figs 3.15-3.18, pp. 214-215) it is a multi-screen video installation by Apichatpong Weerasethakul that dominated one of the Tank galleries during the event dedicated to their reopening in 2016.

The installation comprises eight short video works and one 35mm feature film, *Uncle Boonmee* (2010), which won the Palme d'Or at the Cannes Film festival in 2010. The shooting material accumulated by Weerasethakul during a research trip for the making of *Uncle Boonmee* became the installation.

The piece brings film and video together, activating a space in which the movie theatre architecture is revised through the interaction of the projections with the existent architectural setting. The circular perimeter of the gallery contributes to the creation of a space of reception in which the cinematic auditorium is remodelled as a gathering/viewing space in between the two dominant screens facing each other. Here the viewer sits or lies down on a red carpet with pillows between the two main screen structures, defining a space of total immersion and reception. Along the perimeter of the circular gallery a path of movement is defined around and in between the screens with a separate sound system. *Primitive* is shown on the screen that dominates the space. Its monumentality is amplified by the dynamicity of the two synchronised projections and the horizontal line which divides the surface into two parts (fig. 3.15, p. 214). This structure becomes vertically multiplied in two cinema screens placed on top of each other, with a horizontal extension that develops a double focus of attention on the same surface. The rectangular niche facing the main screen incorporates part of the 'auditorium', separating the installation from the main entrance.

The audience cannot look simultaneously at more than one screen while inside the installation. The attention switches from one story to another and is affected by the flashing lights and the different sound systems. The impossibility of frontally experiencing at the same time both of the giant screens/structures while sitting or lying down on the red carpet creates an overstimulation which is also amplified by the glimpse of videos on the smaller screens in the space.

[150] The installation *Primitive* has been shown in various locations since 2009: at the Haus der Kunst, Munich; FACT, United Kingdom; Musèe d'Art Moderne de la Ville de Paris, Paris, and in the New Museum in New York, USA. It is part of the collection of Tate Modern and of the Musèe d'Art Moderne de la Ville de Paris too.

The different projection layers are structured in relation to the media used and the multimodal aspect of the installation, which also comprises a publication.[151]

Uncle Boonmee was installed in a separate space—a small cinematic box—that is isolated from the rest of the installation although also part of it (fig. 3.18, p. 215). The film almost disappears inside the dynamicity of the rest of the installation. This division is amplified by the different shooting styles, which are related to the medium employed during production. Weerasethakul describes both works as sharing the same core but having completely different styles. He describes the use of video as the aesthetic of short glances and overlapping narratives that can be achieved through video installations, and the use of film as the aesthetic of the gaze and the viewer's embodiment that can be activated through the frontal cinematic reception. He declares: "The art video has a lot to do directly with the emotional responses that the audience may feel, so it is more immediate. It can give the audience the whole sensual experience of space and time. In film, it is more of a gradual accumulation of feelings. So creating video installation and making film are like different animals".[152]

The quality of the medium employed in the staging of moving image can define the quality of the experience. However, there are some features of the multimodal use of both film and video that can be attributed to the same medium but which change in how the medium is installed in the space. In this work, the constraint of using a single-channel film inside a cinematic box clashes with the dynamicity of the rest of the installation, amplifying the multi-projection level. The viewer is immersed in the auditorium (because of the circular disposition of the screen) and therefore, paradoxically, spends more time inside this experience than watching the feature.

The space of 16mm film projections in the installation *Papagaio*

An installation that contrasts with Weerasethakul's stylistic preferences is *Papagaio* (2014) (figs 3.19-3.26, pp. 216-220) by the artists Joao Maria Gusmao and Pedro

[151] On the back wall outside the same room, the publication *Cujo* is displayed as part of the rest of the multi-modal project.

[152] In an interview with Kim Ji-Hoon (2011) *Learning about Time: An Interview with Apichatpong Weerasethakul, Ji-Hoon Kim talks to the prizewinning filmmaker about his cinematic and gallery work*, in Film Quarterly Summer 2011, University of California.

Pavia. The exhibition[153] comprises 35 films shown on 16mm, three camera obscura installations (figs 3.22 and 3.23, pp. 217-218) and a longer film (*Papagaio* 43') (fig. 3.24, p. 218), which is shown in a separate space, as for *Uncle Boonmee*.

Here the film medium is used as described by Weerasethakul, with the intention to maintain the aesthetic of the glimpse and the dynamicity of the multi-screen video installation. However, the presence of the projectors in the exhibition space relates the use of film with the materiality of its apparatus, maintaining a dimension that is directly connected to the roots of Cinema.

The physical and audible presence of the twenty film projectors is part of the experience of the work. According to the curator Vincent Todolì, the rattling of the machines accompanies the viewer while wandering in the space, defining the peak of immersiveness. The architectural setting is modified by wooden structures that function as both screens and exhibition walls, while the projectors are placed at different levels on plinths that also function as benches (figs 3.19-3.20, p. 216). The dynamicity of the experience is enhanced by the complex setting of the projections—they loop rhythmically, with images appearing and disappearing at different speeds. Each film has a duration of approximately two minutes, (roughly the time of one roll of 100 ft = 2 minutes 45 seconds); the artists decided to 'constrain' themselves by employing the time restrictions offered by the medium.

The films' short durations and the overlapping of different layers of narratives created by the multi-projections are elements similar to those of *Primitive*. Although the film's depth of field, the intensity of the images' quality and the projectors' presence (plus the combination of the different film speeds and the variation in the size of the projections that are placed on different levels in the exhibition space) contribute to the creation of a more intense experience. The viewer explores the interaction between each film carefully and tries to give meaning to the story, although the artists' aim is to display a selection of film without any clear meaning. They want to represent images detached from Western societal visual cultures, where moving image is used as an "anti-spectacular analogue form of expression" that contrasts with the plethora of images typically found in digital culture. Most of

[153] The exhibition was installed for the first time at Hangar Bicocca in 2014 and installed again at Camden Art Centre in 2015. Although the concept and the body of works are the same, the second display offered a completely different experience because of the smaller space it was installed in.

the films focus on landscapes and wild animals in an attempt to express the wildness and the aspect of a mystical vision, this is amplified by the use of different film speeds. The stress on daily activities and on not having any specific connection between events aims to create a science fiction-esque feeling of wonder and relates the shooting style to the origins of cinema, in particular to the documentary strategies of the Lumière brothers and the introduction of special effects by George Méliès.[154] The connection with the early cinematic dimension of spectacle is reinforced by the three camera obscura installations which produce the illusion of flashing light and movement on the wall of the exhibition path. The viewer doesn't immediately perceive where the projection comes from, but he/she is able to notice a brighter spotlight on the wall; looking through the lens he/she finally realises that the mechanism producing the illusion is hidden behind the wall. The installation of the proto-cinematic mechanisms defines a deeper encounter of the viewer with the mechanical features which are used to stage the illusion.

The installation as a whole creates a complex relationship between a tribute to film and its material through the display of the apparatus together with the *mise-en-scène* of proto-cinematic devices, where the convergence modes of contemporary multi-screen projections construct a space where standing, sitting and walking are in direct dialogue with the installation.

The limitations of the black box in the gallery

In both *Primitive* and *Papagaio*, the space of reception is layered and divided in relation to the experience of looking and going through the moving image and its architectural extension. The level constituted between the staging of what requires a frontal and unique position and the multi-projection perspective is defined by Catherine Elwes as "[c]inema of instants" and "narrative cinema of developing situations".[155]

Uncle Boonmee and *Papagaio* are part of the same installation but necessitate a different reception mode for which it required the installation of a cinema-like black

[154] See the exhibition booklet, p. 17, for more specifications on this correlation on: http://www.hangarbicocca.org/wp-content/uploads/2016/04/HBJMGPPLibrino2.pdf [Accessed on: 5/07/2016].
[155] Elwes (2015) p. 86 quotes Tom Gunning in *An Aesthetic of Astonishment* p. 123.

box.

The placing of a screening box inside the space of multi-layered projections constructs a sublevel of specific cinematic reception that defines the difference between cinema and installations. This separation also creates connections between reception modes within the same exhibition context. The installation of a black box in the gallery fails, however, where the spatiality of the auditorium and the immersive presence of the screen are constrained within the existent architecture. The cinematic experience is also nullified because the viewer is not mentally prepared to watch a feature film while visiting the gallery space, unless he/she goes there specifically for that purpose.[156]

The possibility of experiencing cinema outside its premises fails in the installation of a space that simplifies the cinema architecture. Moreover, having a cinematic box in which a feature film or moving pictures longer than 5 minutes (specifically when displaying linear narrative forms that unfold over time, which require a different engagement for the viewer) is shown, does not facilitate the experience of the work within a multi-projection installation that creates a visual overload and prevents the viewer from concentrating or wanting to concentrate. "Therefore, it is the how I see, rather than what I see that triggers the experience. In the modality, rather than the object, that turns me into a moving image spectator."[157]

The staging of moving image and the dialogue between different reception modes can succeed in the installation of cinema where the element staging moving image—even if it requires a frontal reception—aims to reproduce the spatiality of the movie theatre. I do not mean by this that one-channel narrative features and artists' film work (part of a total installation piece, as in *Primitive* and *Papagaio*) requires the reproduction of a small cinema inside the gallery, but it does need the same careful combination of elements produced by the spatiality of the cinema auditorium inside the experimental field of the gallery.

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[156] An example that illustrates this account is Steve McQueen's *Giardini* (2009), shown at the 53rd Venice Biennale. The film was shown to a limited number of people at a fixed screening time, the viewer could not move about freely while the film was showing. The spaciousness of the pavilion and the installation of several seat rows angled from a lower to a higher position, imitated the movie theatre's features in the making of a small auditorium, while the projection size was monumental and proportioned to the space around it.

[157] Casetti, Francesco, *Cinema Lost and Found Trajectory and Relocation, Screening the Past* no. 32. Available online at: http://www.screeningthepast.com/2011/11/cinema-lost-and-found-trajectories-of-relocation/ [Accessed on 5/07/2016].

Summary

The creation of a sublevel for experiencing the film within the installation context affirms the alternatives of seeing in relation to space and the possibilities opened up by the metamorphosis of Cinema and its architectural dimension; these possibilities relate to the disruption of perspectival vision, the expansion of the screen and its multiplication in the space.

The experimental approach typical of the gallery space opens a new system of spatial visuality in which the cinema architectural settings are revisited and in which the structures staging the film activate a space of mobility which becomes part of the installation and contributes to the viewer experience. The movie theatre auditorium can be transformed in the exchange with the visual art; this aspect represents the departure point for connecting the spectator's gaze with his/her moving body, developing what is referred to as the *geography of modernity.*[158]

Mobility is at the genesis of the division of cinema traits and their evolution into moving image installation and at the same time it is what differentiates the experience of single-channel and installations. This division and evolution produced a new way of organising spatial visuality, which involves the relationship between the projection, the site and the public.

The departure point of this transformation stays in the auditorium. In the contemporary definition of the space of moving image that sits between cinema and installation, the auditorium is the point of departure and the link to the constitution of the hybrid context of the development of moving image display.

[158] Giuliana Bruno defines *geography of modernity* as modern architectural venues such as "arcades, railways, department stores, the pavilion of the exhibition halls, glass houses and winter gardens" which incarnate the site of mobility as a form departing from the origin of cinema and its contemporary expanded field which includes a site of audience circulation. Bruno Giuliana (2002) *Atlas of Emotion*, in *Panoramas of Modernity*, p. 17, Verso, New York.

3.4 Housing the movie

Architecture of the moving image: dependencies and receptions

The most important quality of the auditorium is, on the one hand, its power of suggesting concentration of attention, even more important is destroying the sensation of confinement which may be involved in the focal concentration of the spectator on the screen.[159]

Before the constitution of the cinema building, moving image was shown with musicals and plays as part of the same spectacle to shock and entertain the public. This combination sited film inside fairgrounds, variety theatres, and town hall shows, most of which were temporary structures that had been built at sites across Europe by 1896.[160]

An important date for the definition of the cinema building is 1 January 1910, when the Cinematograph Act was passed owing to the fire risks caused by the high concentration of cellulose nitrate (gun cotton) in celluloid film. The main consequence of this legislation was the placing of the projector booth far away from the auditorium, which defined an internal division between the projector and the public. Following this Act, a lot of shop conversions and other temporary premise that had been showing moving pictures closed down.[161]

The structural modifications made to the shape of the auditorium, the screen and the space around it saw the cinema building changing through history, and the consequent constitution of different cinema spaces such as the Movie theatre, the Movie Palace, the Odeon, the Multiplex and the IMAX.

Originally, cinemas were social spaces and film a form of entertainment in which the exhibition of the 'magic' was far more important than the realistic and narrative aspect of the film content. The projection was accompanied by live music and performances inside opulent surrounding with variable lighting, all these aspects contributed to the making of a total experience. The Berlin Winter Garden Theatre (fig. 3.31, p. 221) was one of the first variety theatres in Berlin to host movie

[159] Kiesler, Frederick, *Building a Cinema Theatre*, *New York Evening Pos*t, 2 February 1929.

[160] For details about this see Gray, Richard (1996) *Cinema in Britain: 100 Years of Cinema Architecture*, Lund Humphries, in the sections *The Early 1920s* and *The First Super Cinema,* pp. 33-46.

[161] An example of an early purpose-built cinema in London is the Electric Cinema in Portobello Road, which has been open since 1911.

presentations with an entrance fee in 1885. The Bioscope,[162] and early movie projectors invented by Max Skladanowsky, was used along with music and performances during the spectacle.

Gwendolyn Waltz defines *Stage-and-screen Hybrids* as the integration of forms that accompanied the presentation of early cinema, such as theatrical performances or the combination of illusionistic backgrounds and moving panoramas in theatrical settings with actors.[163]

The time frame between the institution of the cinema building and the experimentations made with projector and optical tricks in other locations determines the differences between *pre-cinema* and *early cinema* and the raise of questions related to what actually was cinema before its institutionalisation: "[C]an we define a separation or a distinction between early cinema practices before Cinema institutionalisation and those that came with (and after) it? Wouldn't we have good reason to postulate the existence of a clear break, a radical rupture, between so-called early 'cinema' and institutional cinema?"[164] André Gaudreault answer to these questions is that what "the era's cinematographists (a term used in both English and French at the time to describe the camera operator or filmmaker) were producing was not cinema", but defined the difference and the time frame between "Primitive Cinema" and "Kine-Attractography".[165]

The aesthetic of amazement provided by live music performances and announcers during the early cinema era finds echoes in the hybridity of the contemporary practices related to time-based installations and the staging of moving image along with performative events and multi-media spectacles.

Relationships

According to Catherine Elwes, it is "the common emphasis on the staging of the work" that determines the relationship between "the realm of art and underground

[162] The machine was used to loop 54mm film that did not have perforations. It was not easy to control the film, and this aspect might have contributed to the success of the Cinématographe, invented by the Lumière brothers, whose first charged-for screening was on 28 December 1895 (1 November for that of the Skladamowsky brothers).

[163] For more details about the subject and the specifications of the performances and films defined by the author, see Waltz, Gwendolyn, *Alternation Format Stage-and-Screen Hybrids* in *A Companion to Early Cinema* (2012) (Editor) André Gaudreault, (Editor) Santiago Hidalgo.

[164] Gaudreault, André, *From "Primitive Cinema" to "Kine-Attratography*" in *Cinema of the Attractions Reloaded* (2006) Amsterdam University Press, pp. 87-88.

[165] Ibid. p. 88.

film", and it is here that we find connections with early cinema practices. She continues: "As the story of film unfolds, it is possible to identify points of convergence between incipient modes of film presentation and later expanded cinematic practices in 1960 as well as contemporary moving image installation correspondences." [166] The projection of light and the multidisciplinary artists' approach to film transport the spectator to an early stage of cinematic experimentation staged in the gallery and contribute to the constitution of a total space of reception where the moving image context engages with the work on the display and define diverse experiences for the viewer.

The experimentations being carried out with 'new' and 'old' means of moving image production, using practices that belong to both cinema and art venues reception modes, are contributing to the evolution of the contemporary display context (museums, galleries, project spaces, pavilions), with artists seeking new solutions for staging multidisciplinary works. Moreover, the artists' manipulation of the architectural model represented by the movie theatre auditorium through the installation of the moving image in the gallery and the museum, activates the space around the frame which becomes a sculptural container for the moving image work exhibited.

The *Arena*

The *Arena* (figs 3.32-3.35, pp. 222-223) (designed by the architect David Adjaye and installed in the Central Pavilion of the Giardini section at the 56th Venice Biennale, 2016) was a temporary pavilion conceived as a dynamic sculptural container in which the cinema auditorium is reinterpreted as a transitional space that crosses the theatre, cinema and gallery. This space is described as a "gathering place of the spoken word"[167] with a programme offering a selection of film screenings and performances.[168]

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[166] Elwes (2015) p. 88.

[167] Okui Enwezor's Addendum, *The Arena*, La Biennale di Venezia's website, available online at: http://www.labiennale.org/en/art/2015/okwui-enwezor-addendum [Accessed on: 06/07/18]

[168] The event part of the programme shown in the *Arena* is the live reading of the three volumes of Karl Marx's *Das Kapital*, along with other events during the biennale. The film programme comprised of a selection made by the curator Okwui Enwezor in collaboration with Isaac Julien and Mark Nash. Works by Chris Marker were shown, along with Charlie Chaplin's *Modern Times* (1936); Isaac Julien's *Franz Fanon: Black Skin White Mask* (1995), *Stuart Hall Memorial* (2014) and *Territories* (1984); and

Its design encourages the encounter with different models of reception belonging to the cinema/theatre and gallery/museum, by mixing pavilion and cinematic/theatrical architecture, and this contributes to the definition of a hybrid space for the display of performances and screenings.

There are some elements of cinema architecture, but the space is not completely darkened. The focus of attention is directed to a large central platform that has full-height red curtains on either sides, at the front there is a large screen and two smaller ones to each side of the platform. The screens are multiplied in response to the viewer's movements. Around the three sides of the stage there are banks of seats on three levels from which the audience can have a closer look at the event, and the front section of seats (raised above the entrance) allows an overview from above the space and a frontal view of the larger screen (fig. 3.32, p. 222).

The main entrance inscribes a passage between the stage and the front row of seats. This corridor allows the viewer to move freely around the space, while the access to the raised front seat was through a rear passage where the work of Isaac Julien (*Kapital*, 2013) and Marcel Broodthaers (*The Winter Garden II*, 1974) were installed. The mobility of the audience belongs to a gallery reception mode of a cinematic/video event, although the possibility of the frontal view of the event from the raised front seats implies a theatrical/cinematic reception mode. The viewer can choose to look at the spectacle from above, be inside the event, moves around the stage, sits in the lower row of seats around the platform, or just walk away.

Summary

The combination of the installation of the screening space and the different solutions adopted in the revisitation of the installation of auditorium outside the cinema defines the transitional element introduced by Maeve Connolly in *The Place of Artists' Cinema, Space, Site and Screen.*[169] In her analysis, the use of the cinematic in contemporary art installation is a transitional element that can set up a new range of questions related to the 'in between' of contexts in the definition of an ongoing hybrid space for the projected image. She describes the space generated by these

Sandra Lahire's *Uranium Hex* (1987), among others.

[169] Maeve Connolly examines Francesco Vezzoli's *Trailer for a Remake of Gore Vidal's Caligula* (2005), Andrea Forgassi' *Workers Club* and *A Machine For* (2006) and Tobias Putrih's *Venetian Atmospheric* (2007). In these works, the architecture of the cinema is transported to the gallery context and reshaped by the artist in the redesigning of the screening space.

interventions as amorphous, a new kind of context that explores the relationship between the architecture of the movie theatre and the pavilion.

The elements observed in this section informed my practical research in definition of a space where there is no separation between reception modes (such as the frontal reception in the dark or the multi-projection set up) and where the combination of languages such as art, cinema, design, and architecture merge, activates a hybrid transitional form of display. In the contemporary art panorama the constitution of a space for moving image with these features is not utopian but is in a process of definition and ongoing transformation, and it reflects the degree of artists' experimentations with the multidisciplinary use of media and languages for displaying moving images.

I describe these elements in the following case study section and I considered it when designing the Viva Exhibition space.

3.5 Case study: Tobias Putrih's screening spaces and the contemporary moving image pavilion

The creation of a space where the architecture housing the screen is intended to be both a sculptural installation and a pavilion can be observed in the work of Tobias Putrih. He designs screening spaces that function as self-referential installation works. His work reviews the classic cinematic space by analysing the relationship between the architecture of the movie theatre and that of the museum.

Since 2001, Putrih has worked on different projects involving the realisation of screening spaces as cine-material structures with installations such as *Argos Cinema* (2007); *Cinema Attitudes* (2008) (figs 3.43 and 3.44, p. 227); *Cinema Printemps* (2009) (figs 3.45 and 3.46, p. 228) and *Siska International* (2010) (figs 3.47-3.50, pp. 229-230).

The main feature of these works is the transformation of the original display context in relation to the screen and the reconsideration of the existent architectural structure of the museum or the gallery. The screening space becomes completely autonomous as a pavilion inside the institution. *Siska International*, for example, was conceived as a designed exhibition space within a museum context for the exhibition *Promises of the Past. A Discontinuous History of Art in Former Eastern Europe*, shown at the Pompidou Centre at the Espace 315 (14 April–19 July 2010).[170]

For the realisation of this subspace, Putrih revised the architectural structure of two cinemas built in 1960, the Kino Siska in Ljubljana and the Kino International in Berlin. The space is realised by using the modularity of geometrical forms assembled in an apparently precarious balance because of the use of ephemeral materials like cardboard, styrofoam and plywood. Everyday materials are used to make small modular objects that repeat in the creation of a larger installation environment.

The point of this reconfiguration departs from Putrih's idea of cinema as a phenomenological space in between "the reality of the sidewalk and the fiction of the projection".[171] His practice mixes both cinema and museum receptions modes, defining the first as a place that completely disappears in the dark of the projection and the second, instead, as a place that is always present and is "built upon the

[170] The exhibition comprised work by Marina Abramovic, Yael Bartana, Dimitrije Basicevic (Mangelos), Tacita Dean, Liam Gillick, Sanja Ivekovic, Julius Koller, Jiri Kovanda, Edward Krasinski, David Maljkovic, Marjetica Potrc and Monika Sosnowska.
[171] Ibid. p. 5.

mutual respect between the display and the displayed".[172]

Putrih's *Venetian Atmospheric* and Eberson's Movie Palace

Venetian Atmospheric (2007) (figs 3.36-3.40, pp. 224-225) is a temporary outdoor cinema installed as the Slovenian Pavilion at the 52nd Venice Biennale in 2007. It was located on San Servolo island and functioned as a screening space showing a selection of works by other artists.[173] Here the idea of the pavilion is transformed by revisiting the auditorium. Putrih uses fractured and imploded forms to define the wall and the seats, exploiting the simplicity of shape modularity used for the realisation of architectural models.

The structure of Putrih's pavilion is irregular, resembling the shape of a cave in which a projection of the nocturnal sky with stars is created on the ceiling, while scaffolding structures hold up its exterior.[174] The walls are made of fluctuating strips of PVC moved by the wind, which makes the space's borders almost inconsistent; it also creates reflections via the interchange of artificial and natural light that interfere with the projection. The space is conceived as a structure that is between an interior and an exterior and has continuous changes of luminance which interact with the screen and consequently influence the viewer's perception of the film. The installation of artificial light sources along the perimeter of the pavilion creates additional light-changing effects that continuously modify the illumination levels inside the space.

The screen is not an isolated focus of attention and its boundaries appear elusive owing to the relationship between the interaction with natural and artificial light and the architectural elements placed around it. The space around the projection is expanded through the amplification of the architectural surroundings, which is inspired by the 'Atmospheric Cinema' and the Movie Palace, first designed by John Eberson.[175]

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[172] Tobias Putrih interviewed by Natasa Pretresin, *On Quasi Scientific Experiments, Collective Built Objects and Random Structures*, in *Tobias Putrih Venetian Atmospheric 52nd Biennale di Venezia, Slovenia Pavilion* (2007) exhibition catalogue.

[173] The programme included Chris Marker and Alain Resnais's *Les Statues Meurent Aussi* (1953) works by the OHO and John Smith and two curatorial selections, *Future in the Past and Cinematic Surface.*

[174] The same work was installed as a temporary screening place on the terrace of the Hayward Gallery for the exhibition *Psycho Building: Artists take on Architecture* 28 May–25 August 2008.

[175] John Eberson (1875–1954) was a specialist in cinema design; he realised the first atmospheric movie palace in 1923, the Majestic in Houston, and from 1923 to 1931 he completed more. By the end of his career he had completed almost 500 in the US, such as Lowe's Paradise (1929) in the Bronx and the Capitol (19279) in Grand Island; he was also responsible for the Rex (1932), in Paris, and the Capitol (1928), in Sydney.

In Eberson's Atmospheric Theatre (figs 3.41 and 3.42, p. 226), the illusionary aspect between the screen borders, the projection, and the surrounding space consisted in giving the audience the impression of sitting outdoors through the creation of an open space. This effect was obtained by installing reproductions of building facades with ornamental details such as statuary elements, birds and fountains around the seating space. On the ceiling there was an attempt to reproduce the sky, so it was painted blue and twinkling stars and rolling clouds were projected onto it using the Brenograph,[176] which created multiple effects of fading and dissolving light and produced images through glass slides and lenses. In the Movie Palace, the screen was not the main focus of attention and the movie theatre was not in complete darkness while the film was projected. Giuliana Bruno defines the experience inside the Movie Palace as an "error of vision – a spatial wondering [...] like the ancient Greek Amphitheatre, here architectural scenography converged with natural topography in a liminal exchange between exterior and interior. Garden and landscape design featured large in the auditorium, often turning the theatre into a Mediterranean courtyard."[177]

Although the use of basic and industrial elements such as unvarnished wood, scaffolding and PVC creates a look that differs from the baroque characteristics of Eberson's original Movie Palace, the aim is the same: the experience inside the auditorium is expanded by outlining the architecture around the screen and subverting the dark space of cinematic reception.

The conventional place of cinema as a dark and closed space of reception is transformed in Putrih's *Venetian Atmospheric* pavilion into a viewing machine that encourages perceptual illusion.

The light coming into the space modifies the perception of the projected image increasing the sensation of being inside a breathing perceptual architectural volume that has an active part during the projection of the film. The viewer is aware of the experience of the movie but is also influenced by, and immersed in, ever-changing

[176] The Brenograph was a complex double-slide projector similar to two big magic lanterns, introduced in the late 1920s and usually placed in the projector booth. It was used to project titles, movie credits and hundreds of special effects such as moving clouds, flying aeroplanes, fire, strobe effects and spotlights. Its use was limited, and with the introduction of sound in film, it was pushed aside. One of the few theatres still in possession of this machine and a large set of slides in its collection is the Embassy Theatre in Fort Wayne, Indiana, image available online at: http://www.fwembassytheatre.org/images/brenograph2.jpg [Accessed on: 09/10/2016].

[177] Bruno (2002) pp. 48-49.

light conditions that are determined by its surroundings, redefining the physical way he/she relates to it. Putrih's cinematic pavilion is a habitat-like structure, an architectural environment that is completely independent but at the same time related to the screen and the cinematic reception.

The relationship between the work and its frame is interchangeable within the realisation of a container that communicates with the screen and the moving image projected. The boundaries of the screen become elusive because of the interaction between architectural–sculptural interventions and light.

Collaborations in the gallery space

Putrih collaborated with Runa Islam for the construction of customised screening spaces in the gallery. This collaboration produced exhibition forms in which the cinematic elements are explored through their manipulation and within their installation. For the design of the screening space for *Empty the pond to get the fish*[178] (2008) (figs 3.51 and 3.52, p. 231) Putrih used the filmstrip itself to create a curved, undulated wall structure that surrounds the screen. The viewer can also sit on circular structures that are somehow reminiscent of the shape of the film can. The installation completes the work on display through the interventions around the screen and defines a space in which the surroundings and the film content are merged. Runa Islam's film investigates the space of a museum with analytical camera movements through sequences showing images of windows that resemble the sprocket of a filmstrip.

Summary

Putrih's pavilion can be considered to be an autonomous exhibition space which departs from the idea of the classic cinematic auditorium (the frontal cinematic reception and the monocular relationship between screen and viewer), but it is transformed through structural interventions in the surrounding space, which is considered as important as the moving image exhibited.

The cinematic structures of Tobias Putrih introduce a diverse exhibition form where the screen—as a structure and main focal point—engages in a direct relationship

[178] The screening space was designed for the exhibition *Runa Islam featuring Tobias Putrih*, 4 September–3 October 2008, White Cube Gallery, London.

with the context.

The observation of Putrih's screening space and Eberson's Atmospheric Theatre contributed to the development of the design of the viva exhibition's space, in which I aimed to reconfigure the auditorium as a space of transit in the gallery, and the cinematic experience not as a screen-focused black-box experience. With these aims in mind, I conceived the Viva Exhibition space as a space in which the objects exhibited and the interventions around the screen acquire the same level of attention as the moving image projected.

3.6 The Viva Exhibition and the making of a space 'between the glimpse and the gaze': Projective qualities of light and the use of ceramic in my practice

When we look out of a window we see the world as a cut-out of reality. There are several circumstances that can influence our experience. I see the window as a frame and the act of seeing as the physical act of looking through the camera's viewfinder. I compare the frame's limit with the border of reality within which images are contained.
How is it possible to interfere within this border and between what is seen and what is imagined to be outside its limits?

The body of work and the design of the installation realised for the Viva Exhibition *Between the Glimpse and the Gaze* (figs 3.66-3.79, pp. 239-247) aims to activate the space around the projection through the interaction between the objects exhibited and the experience of the moving image projected and through structural interventions in the gallery space. The exhibition is the result of a multidisciplinary experimentation involving the making of ceramic bodies, scenography set design, and digital and analogue film-making and summarises the different stages of the research.
As noted in Chapter 2 (paragraph *Lightsign_Rainbow*) I decided to use ceramic because of its organic and malleable properties, which allowed me to reshape the projection machine and its mechanisms and functions. The use of ceramic glaze and lustre finishes allowed me to examine the process of light reflection on the object's surface and to experiment with different artificial light sources installed inside the object.
The experimental interplay in the interaction of light with sculpture in my practice developed (i) a deeper observation of the architectural context and its relationship with the object exhibited, (ii) an understanding of the projective quality of light emitted by a sculptural object, and (iii) light's reflections on both the surface of the object and the surrounding space.
Before engaging with the main features of the Viva exhibition, I want to discuss the role of a selection of preliminary works which were linked to the findings that led to the reconfiguration of the space designed for the viva exhibition, the moving image projected and the relationship between the space and the sculptures exhibited.

3.6.1 Preliminary works

Lamps as artworks

The concept of using lamps as design objects and placing them in the gallery space as artworks were inspired by my new understanding of the use of light in the transition between the cinematic and the sculptural aspect observed in Anthony McCall's practice; the observation of the film apparatus and its sculptural qualities in Barba's work, Turrell's concealment of the equipment in the exhibition space, and Eliasson's transformation of the cinematic apparatus.

In *Lustreware_Pineapples* (2016) (figs 3.53-3.55, pp. 232-233), I designed two sculptural objects as pineapple-shaped lamps, examining the reflective aspect of the surface through the use of a lustre glaze and the installation of a rotating RGB light bulb inside their body. On top of their black and white glaze, one lamp is finished with a violet enamel glaze and the other with a mother-of-pearl enamel glaze, which create light reflections on each object's surface. The sculptures are conceived as two auto-referential objects that work as lamps. Yvonne Zieger in *On Lamp within the Connotational Field of the White Cube* describes the recontextualisation of the use of lamps by artists inside the gallery space, particularly referring to the transformation of the use of everyday objects, as in Marcel Duchamp's readymades. She questions the status of the lamp as artwork and asks in "what respect can lamps actually be work of Art?" In her opinion, "lamps created by artists belong to the type of artwork that crosses the boundaries between everyday life and art".[179]

The use of lamps as artworks in my practice contributes to the crossing of the boundaries between art and design and to reconsider the dynamic relationship between the space and the object exhibited. The presence of the lamp is able to modify the perception of the exhibition space while creating atmosphere and projecting light.

The installation *Gelaut Bis Ichs Hor* (2002) (fig. 3.56, p. 234) by Tobias Rehberger, shown at the ZKM Museum of Contemporary Art (Karlsruhe), for example, comprises 439 lamps which are grouped and controlled separately, affecting the light conditions in the museum. Rehberger plays with the borders between art, design and

[179] Zieger, Yvonne, *On Lamp within the Connotational Field of the White Cube,* in *Light from Artificial Light as a Medium in 20th and 21st Century Art* (2006) by Hatje Cantz, Weibel Peter, Jansen Gregor, KM, exhibition catalogue 19 November–6 August 2005 Museum für Neue Kunst, Karlsruhe.

its functionality: the object's 'dysfunction' subverts its presence as a functional design object and defines its autonomy in relation to its influence on the main illumination system. Another example is the intervention of Philippe Parreno at Arsenale for the 56th Venice Biennale (2016) (fig. 3.57, p. 234). His installation plays on the ambiguity between visibility, invisibility and the identification of the work on display. It consists of a series of 56 flickering lamps installed inside the exhibition space. The viewer doesn't immediately identify these objects as Parreno's artwork as they seem to be part of the illumination system of the Arsenale. However, their flickering and their arrangement in unusual places makes the audience aware of their autonomy, which is independent of the lighting system of the space.[180]

Lamps as self-referential design objects in the gallery space are used to investigate the limit between the reception of the artwork and the exhibition context. Moreover, their sculptural aspect expresses the physical light manifestation giving to light a solid matter. The use and redesign of the lamp in my practice contributes to an examination of the projection process and the emission of light through a sculptural body, and to the transformation of the projection machine and its imposing presence in the space (as described previously in relation to the use of analogue equipment in the gallery space and in the work of Rosa Barba). Moreover, as observed in the work of Olafur Eliasson, the use of lamps/projectors and lamps/sculptures activates a media experience which refers to cinematic language without using any specific film or video-projection equipment.

For the Viva Exhibition I reconsidered the lamp (design object) and reshaped the projector machine (cinematic object) by making ceramic sculptures that interact with different light sources (lamps and mini digital projectors installed inside the sculptural body) that have the scope to go beyond the traditional bounds and functions of the cinematic medium and to cross the boundaries between art, design, and architecture.

Bananas: the object and the background

The examination of the relationship between the object, the moving image

[180] The lamps are programmed using a DMX controller. The flickering is caused by a computer program that uses an algorithm. Philippe Parreno's *Anywhen* (4 October–2 April 2017, Tate Modern, Hyundai commission) is an example of the use of a controlled lighting system that connects sound, kinetic installations, video, and sculptural objects and is able to create an immersive experience in the exhibition space that is directly linked with its architectural features.

projection and the surroundings was fundamental for the intended immersive experience of the Viva Exhibition. My aim was to create a space of reception in which there is an interaction between all the elements exhibited and the background. In order to do so I intervened in the space around the screen in an attempt to shift the viewer's attention from the projection to the background and vice versa.

In *Bananas* (2016) (figs 3.58 and 3.59, p. 235), I initially attempted to develop an interplay between the object and the background. The sculptural object is on the floor and the application of wallpaper to the background wall creates continuity of vision and functions as a link between the object exhibited and the wall, which becomes an active visual and contextual part of the installation. The use of two colour changing light bulbs inside the sculpture diffuses light and some reflections on the object and the wallpaper (which is predominantly white and grey), while the projection of coloured light onto the sculpture from a mini digital projector creates movements and additional reflections. The white glaze finish applied to the sculpture using a dripping technique and refined with mother-of-pearl lustre, develops different colours when it interacts with light. These shifting reflections and colours aim to catch and keep the viewer's attention on both the glazed object on display and its background.

***Botany*: The camouflage background and ceramic sculptures in the film set**

The film set designed for the shooting of *Botany* (figs 2.60-2.64, pp. 236-238) inspired the main concepts and design of the viva exhibition.

Botany is a 16mm colour film that attempted to test on camera the relationships between my most recent production of ceramic sculptures and (i) the properties of their glazed translucent surface, (ii) their interaction with different light sources, (iii) their visual correlations with the wallpaper pattern (which was applied on wooden panels and other elements placed around the sculptures in the film studio), and (iv) the moving image source (a screen).

The colour and shape of the sculptures are conceived in relation to the naturalistic motif of the wallpaper installed in the set. This correlation aims to create the illusion of the object appearing and disappearing in the background, and this is also caused by the changes in luminance in the film studio. I used lighting gel sheets of the opposite

colour dominance (mostly red against the green background) to produce contrasting light effects on the wallpaper and against the light flashing inside the sculptures.

To make the film set, I applied realistic wallpaper with a naturalistic repeating motif pattern to wooden panels and film props (a staircase and furniture) and installed different light sources (LED strips and LED rotating lights) around the space.

A monitor showing the wallpaper pattern occupies the central part of the set. I thought about the peripheral projection illusion, developed using the concept of the IllumiRoom designed by Microsoft (figs 2.22 and 2.23, p. 193), and the activity between foveal and peripheral vision in a situation of overstimulation. My aim was to create an illusion such that the viewer can see the screen and at the same time has the impression that the images expand outside its border, and thus the video depicts the pattern of the physical wallpaper installed around the space. I developed this relationship further through the installation of a monitor showing the same wallpaper pattern of the background in the Viva Exhibition space to achieve the same visual effect between the standalone screen and the installation structures surrounding it.

The decision to use realistic garden-motif wallpaper relates to the idea of creating the illusion of an open space in the enclosed space of the film studio, which I directly connected to the experience of the viewer in Eberson's Movie Palace and to the making of a space in which the gaze loses its coordinates and wanders from the screen to the architecture around it. In Putrih's pavilion (section 3.5.1), the idea of expanding the space around the projection/screen is realised through the amplification of the architectural surroundings and the repetition of modular sculptural forms—in *Botany* this is achieved via the wallpaper pattern and its apparently chaotic repetition of naturalistic forms. The amplification of the illusory aspect around the screen contributes to defining the inconsistency of its borders as the "error of vision, a spatial wandering [...] like the ancient Greek Amphitheatre here the architecture scenography converged with the natural topography in a liminal exchange between exterior and interior" (Bruno 2009).

3.6.2 The Viva Exhibition, *Between the Glimpse and the Gaze*

Between the Glimpse and the Gaze (16 January–25 February 2017, figs 3.65-3.79, pp. 238-247), my Viva Exhibition, which took place at the James Hockey Gallery, UCA Farnham, focused on the following concepts, which I have analysed in this thesis during the different stages of the research and further developed during the shooting of the 16mm film *Botany*:

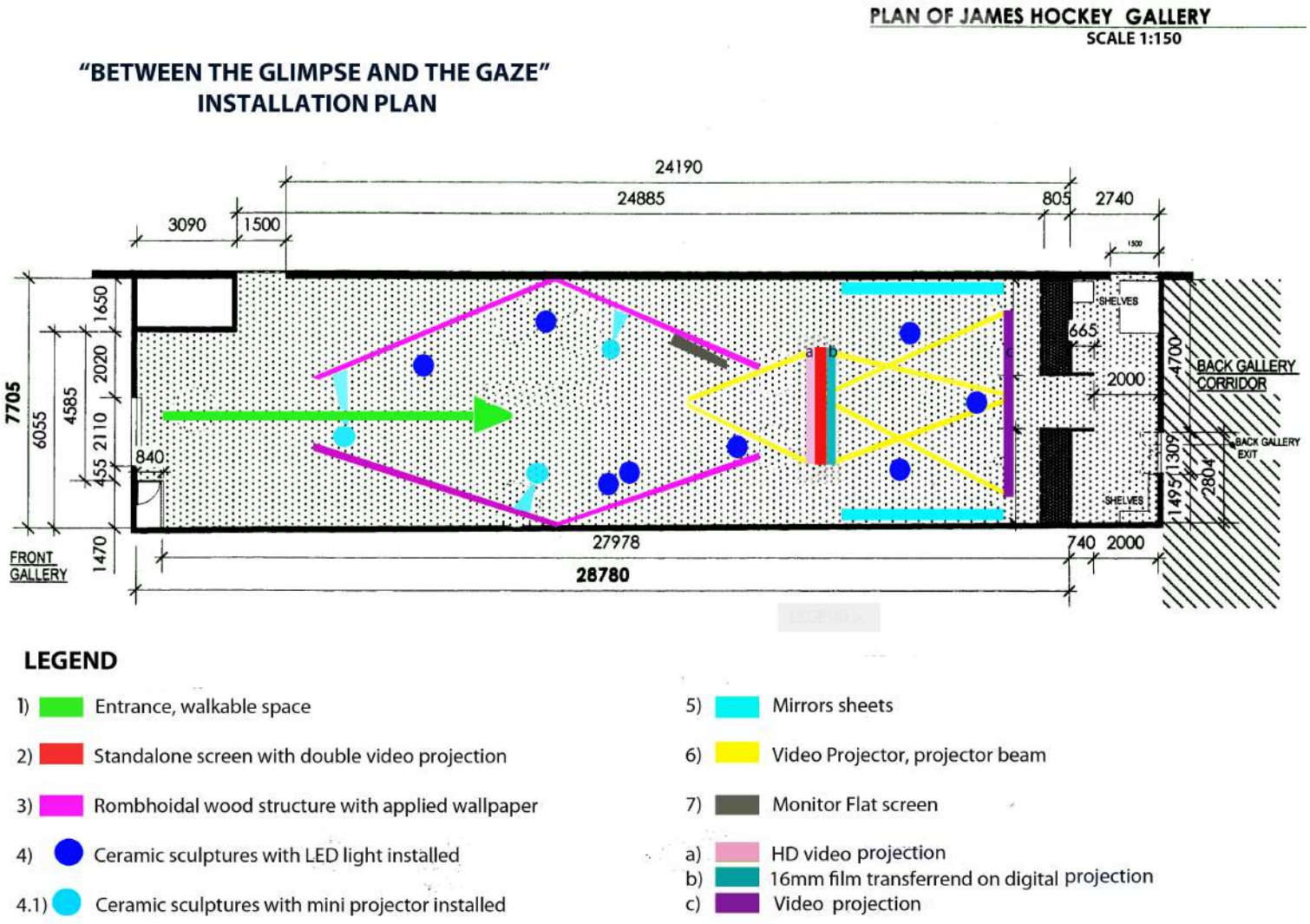
- The design of a screening space in which the idea of installing a black box inside the gallery is reconsidered and relates to what I observed in the installations *Primitive* and *Papagaio*.
- The design of a screening space in which the auditorium becomes a space of mobility and its structure is manipulated in the encounter between different disciplines (*Arena* by David Adjaye and Tobias Putrih's screening spaces);
- The use of film and video in the gallery space and understanding how the quality of the medium defines the quality of the experience: Tacita Dean, Guy Sherwin, Anthony McCall, Joao Maria Gusmao and Pedro Pavia, and Apichatpong Weerasethakul.
- The properties of light in relation to a glazed ceramic body, the use of sculpture and its interaction with the exhibition context, which relates to Eliasson's approach to the object and the cinematic equipment.
- The sculptural reshaping of the analogue projection machine going beyond the traditional uses of the film medium by using ceramic; the reconsideration of the lamp as a design object and its relationship with the cinematic equipment and its displacement to the gallery space, which relates to observing the use of the analogue equipment and its transformation in the work of Rosa Barba and Olafur Eliasson.
- The use and the selection of different realistic wallpaper patterns which relate to the object exhibited and the moving image projected. This use also refers to the modularity of geometrical forms assembled in an apparently precarious balance in Putrih's screening space; in my practice this is recreated by the naturalistic patterns which are repeated, creating an apparently random visual effect.
- The use of figurative naturalist elements in the making of a space that

encourages a perceptual illusion between interior and exterior, which is observed in Eberson's movie theatre.

The exhibition space

The space conceived for the Viva Exhibition aims to redesign the movie theatre auditorium from being a dark space in which the gaze focuses directly on the screen to a lit space of transition and mobility of both the body and the eye inside the gallery.

The structural installation elements are organised in relation to the viewer and to describe a path from the entrance to the standalone screen and to the space behind it. The plan below shows how the installation was structured.



The viewer is free to walk in the space (1), passing through the rhomboidal structure (3) and experience the moving image projected on the standalone screen (2a) (fig. 3.66, p. 339). While entering the gallery, the viewer is surrounded by the impression generated by the repeating wallpaper pattern applied on the rhomboidal structure and by the light being emitted from the sculptures installed in the space (fig. 3.66, p. 239; fig. 3.68, p. 241). He/she perceives that there is a video projection, although at first glance the moving image appears to be part of the wallpapered background, which repeats similar motifs to those shown in the film projected on the screen. This effect contributes to the creation of an illusion where what is on the screen continues outside its borders. When I was conceiving this effect I thought about the activity between peripheral and foveal vision when the viewer is in a situation of overstimulation, as described in Chapter 2. Peripheral vision works in relation to the organisation of the spatial scene in order to inform our foveal vision and our body in a situation of visual overstimulation. I didn't use the sensation of light to overstimulate the viewer, but instead I used the over-detailed figurative impression of the wallpaper and the way it was installed in the space. The rhomboidal shape was studied in order to surround the viewer and stimulate his/her peripheral vision in relation to the projection that is at the centre of the visual frame. The movement of the projection clashes with the stillness of the wallpaper, creating a short circuit that unveils the illusion. The design of this space focuses on the possibility of expanding the frame of the projection and the screen through the reconsideration of the shape of the movie theatre auditorium and the main point of focus inside it that is usually directed onto the screen. The repetition of the wallpaper motif, alongside sculptural objects that interact with light, contributes to creating the effect of endless vision where the screen and the moving image exhibited are not the main point of focus but are part of the total experience of the installation elements.

The standalone screen

The standalone screen represents the centre of the installation space; it connects and at the same time divides two environments and their respective experiences. This structure has two apertures at the sides that allow the viewer to enter the space at the back of it (fig. 3.71, p, 242; figs 3.74 and 3.75, p. 244). The decision to project on both sides of the standalone screen with works made through video and analogue media defined two different experiences which are related to the quality of

the medium used (film and video): the sharp and focused image of the wallpaper background used in the rhomboidal space and the grainy image of the film interacting with the mirror wall in the second space. I was influenced by the use of analogue and digital media in Anthony McCall's work, who describes the differences in the consistency of the projection, as well as the differences observed in the installation of both media in *Papagaio* and *Primitive*. However I thought about this separation not only in relation to the quality of the moving image projected and the wallpaper, but also in relation to the different features of the ceramic sculptures exhibited in both spaces. I wanted to create a separation and at the same time a passage through the installation. This was in part influenced by the experience of the standalone screen in Steve McQueen's installation *Ashes* (2014–2015) in the way it describes two different moments in time and activates a separation in the space defined by the medium projected. McQueen juxtaposes the two footages using different media and sensations related to his memory of the event, giving to the story a sensibility that is related to the aesthetical quality of the medium. The film grain and the colour saturation clashed with the cold digital images of the other projection.[181]

Moving image components

The projections part of the exhibition includes three works: a 16mm colour film, and two digital videos (a, b and c on the plan), all realised during the shooting of *Botany*.
The film and the two video projections show the exploration of the space of the film set and the relationship between light, ceramics, and the camouflaged naturalistic wallpaper background. Moving image is used in the same way as the wallpaper decorative pattern, but in motion.

a) The first work (*Botany*, HD video 6'10") is a high-definition video projected on the surface of the standalone structure (2a) that faces the main entrance. I decided to shoot and project the work in HD because I wanted to have a detailed image as sharp as the wallpaper to contribute to the illusion of the image moving outside the

[181] In Steve McQueen's work *Ashes* (2014–2015) (Arsenale, 56th Venice Biennale) the Super 8 footage depicted the protagonist on a small ship in the sea. The video projection depicted the construction of his tomb, with the voiceover of a friend telling the story of his death. The two footages were shot with 12 years difference, the film in 2002 by the cinematographer Robert Muller during a trip with McQueen to Grenada to make *Caribs' Leap/Western Deep* (2002). The footage was shelved until 2013 when McQueen returned to Grenada and found out about Ashes's death deciding to shoot the making of his tomb and to interview some of his friends.

screen's borders. In this space a monitor is also installed (7) (fig. 3.71, p. 342) showing an excerpt of the *Botany* HD video looping, recalling the wallpaper motif and the sculptures exhibited on shelves on the opposite wall.

One of the wallpapers installed in the rhomboidal structure is one of my first repeating pattern designs. I used a scan of analogue photographs of palm leaves and multiplied the image by following techniques used to repeat all-over print in textile and fashion (fig. 3.67, p. 240).

b) The second projection is at the back of the standalone screen and comprises the screening of two 16mm colour films (2b) (*Botany* 2'00" and *Astrid* 6' 27") (figs 3.74 and 3.75, p. 244) transferred to digital. The *Botany* film was shot on the *Botany* installation set, while *Astrid* was shot on a film set created with the body of works produced for the Viva Exhibition using a kaleidoscopic film kit (a set of lenses which I attached to the camera body). In both works, the particularity of the film grain and the unsharpened texture typical of the 500 ASA 16mm stock used (features still visible even though the film is transferred to digital) contributed to the creation of a hidden space at the back of the standalone screen. The installation of mirror sheets (5) hanging from the two walls creates light reflections, which spill all over the space, onto the floor and onto the opposite wall, where there is a third SD digital projection (c), (figs 3.78; 3.79, pp. 246, 247).

c) The third video is an excerpt from the *Botany* HD film (fig. 3.76, p. 245), it shows the light flashing on a wallpaper pattern while looping quickly and moving along the LED strips installed in the film set. The interaction of both of the projections with the mirrored sheets creates light reflections that affect the perception of the wall extension and the video projection's borders, which appear inconsistent. I used the reflections of light to expand the architectural extension of the gallery as well as the borders of the projection frame, as observed in Putrih's *Venetian Atmospheric*, where the use of fluctuating strips of PVC moved by the wind contribute to make the space's borders almost inconsistent and also create reflections caused by the interchange of artificial and natural light interfering with the projection. In my video there is no relation between interior and exterior, but there is a relation between the light reflections coming from the mirrored sheets and the illumination of the gallery, which stimulates the viewer to explore the space around the frame.

Sculptural component

The sculptures in the installation are studied to analyse the relationship between the perception of the object and the background, as well as the materialisation of light and its reflections on the surface and in the surroundings.

The group of ceramics exhibited inside the rhomboidal structure reflects the idea of the lamp as a domestic and a design object that is recontextualised in the gallery space as artwork. Each ceramic has a colour-changing light bulb installed inside its body (4) (fig. 3.69, p. 241). In the same space there is also a selection of pieces containing a mini LED portable digital projector, which projects light and images (figs 3.72 and 3.73, p. 243).

The decision to use a mini projector reflects the idea of merging the function of a projector with the design of a lamp, as well as the idea of transforming the facets of the projector itself as apparatus and subverting its main cinematic functions, as observed in Rosa Barba and Olafur Eliasson's practice.

The design of some of the sculptures and their position in the space amplify this concept. In fact some of the pieces resemble the characteristics of a film projector and are placed in front of the projection; they do not project any images but just give the impression of projecting because of the light perceived through the aperture (figs 3.70 and 3.71, p. 242). I sometimes saw the viewer interacting with the sculpture by waving in front of the hole which was resembling a lens and questioning the function of the sculpture itself and whether a projection existed or if the sculpture was projecting (as examined in Eliasson and the observation of the viewer's expectation that the projection equipment would be in the space).

The sculptures exhibited at the back of the standalone screen (where there are the mirror sheets and the two projections facing each other) play on this ambiguity in a stronger way because are made by the cast of a Super 8 projector (fig. 3.77, p. 245; and fig. 3.79, p. 247). I reshaped the original features of the apparatus by using the organic and malleable properties of ceramic. I did not want to obtain a precise cast of the film projector but an object resembling its shape yet without any projective function (as observed in Rosa Barba and the making of sculpture connected with the mechanism of a film projector but without its specific function). The projector is transformed into a sculptural object that is a simulacrum of a film projector but reconsiders its traditional bounds and uses.

All sculptures are installed on wooden stands made by using wooden banisters. The

light bulb or the mini LED digital projector is placed on a plexiglass plate. The choice of the wooden banisters and the wallpaper reflects the use of domestic objects and their displacement to the gallery space. The appropriation and the use of these materials aims to question the boundaries between disciplines such as interior design and visual art and to play with the domestic and the public dimension related to house décor and art gallery installation. Moreover, it contributes to the multidisciplinary aspect of the project and the interaction between disciplines.

The light emitted by the sculptures and projections produces movement and reflections which activate a point of transitional attention between the detail and the general impression of the surroundings. The interaction of the viewer with the space and the objects exhibited produces a visual experience that moves between a singular (focused) vision and a fragmented experience.

Summary

The aim of the installation is to reconsider the screening space in the encounter between the content of the moving image and the materialisation of the objects that became integral parts of the work exhibited. As discussed in section 3.3 the installation of a black box in the gallery fails when there is not the consideration of the spatiality and the architectural features of the auditorium in the encounter with the experimentation fields of the gallery space. In *Between the Glimpse and the Gaze*, the transformation of the auditorium and the reconsideration of the screening space contribute to the making of a space 'in between' where the cinematic container interacts with the sculptural elements exhibited and the moving image projected. The spatiality produced by the installation and the crossing between different reception modes contributes to the creation of an experience of both the inside and the outside of the screen as well as a path of movement for the viewer in the exhibition space.

The interaction between the mobility of the moving image projected, the immobility of the photographic wallpaper patterns, the light projection and the light emitted by the sculptures defines a relationship between what is inside and what is outside the frame. The space surrounding the screen becomes an extension of the screen's borders through the interventions in the surrounding space and through the relationships between the figurative content of the moving image projected and the materialisation of the objects in the space.

The mobility of the viewer when experiencing the work involves the body as well as the gaze, which move around the exhibition space subverting the focal point of attention of the camera obscura model of representation and the screen inside the auditorium.

These relationships contribute to reorganising the system of spatial visuality in the installation of moving image through the manipulation of the elements composing the screening space. In this space, the relationships between the projection, the site, the public and the object exhibited are reconsidered and the projection machine is remodelled so that its function is between that of a film projector and that of a lamp; this all contributes to the production of film–sculptural hybrids that interact with the surrounding space and the definition of a hybrid multidisciplinary field for the installation of moving image and an immersive experience for the viewer.

3.7 Conclusions

The multidisciplinary aspect of time-based installation and its dependence on technology and the architectural space contribute to the redefinition of the contemporary moving image display between Art and Cinema.

The use of cinematic code and elements in the experimental territories of the gallery and art venues does not reflect the apparent state of crisis of Cinema but the evolution of moving image's exhibition modes. Cinema is not substantially changing in the exhibition of moving image, but the reconsideration and the use of cinematic codes and apparatus into the experimental field of the gallery is contributing to the reinvention of its representational codes as well as to the constitution of diverse forms of exhibitions.

The gallery is a territory where artists are free to experiment with new possibilities while simultaneously exploring the history of cinema and its language. The staging of contemporary moving image in the exchange between different disciplines and reception modes defines a place that sits between the early moving pictures presentation—with the hybrid aspect of staging the event/spectacle along with other practices—and the expansion of the frame—with the staging of the video/film apparatus departed from Expanded Cinema.

The encounter between the reception modes of the gallery, museum and cinema and the installation interventions around the screen not only gives sculptural autonomy to the space where moving image is exhibited (that in the case of my work is intended to be a screening container for moving image) but also represents the departure point for a multidisciplinary autonomous installation environment in which the projection merges with the space around it and where the aesthetic of the glimpse coexists with the aesthetic of the gaze.

This relationship is contributing to the development of an architectural form in transition, a hybrid display context that aims to reconsider the movie theatre architecture and its components in the gallery, the museum, and the pavilion.

Merging the different languages of moving image, sculpture, design and light emission, and analysing the space of reception of the gallery and the cinematic experience, has contributed to the evolution of my practice and has enabled me to create an experience in which the eye can travel between the 'blur' and the 'focus', the glimpse and the gaze, and the foveal vision and the peripheral vision.

General Conclusions

The analysis conducted through this practice-based research aims to define the development of contemporary time-based installations to further an understanding of the place for the exhibition of moving image, observing its relationship with history, technology and the artist's choice of media.

The project observes the formal continuities between the time frame of Expanded Cinema and contemporary exhibition trends, examining the re-exhibition of historical works and the resurgence of the use of film. The use of 16mm and 35mm film in the gallery identifies the analogue medium as a contemporary exhibition format, and the hands-on artistic approach to film—in contrast with the impact of the immediacy of digital media—defines film as a contemporary source of sculptural experimentation in its interaction with other languages.

The displacement of the projection from the cinema to the gallery and the observation of the staging of moving image in relation to Expanded Cinema's framework also contributes to defining a correlation with early cinematic forms of exhibition. The hybrid context of proto-cinematic objects was related to technological discoveries and the staging of spectacular optical phenomena—the relationship between these elements is maintained within the staging of contemporary time-based installations.

This project aims to define the relationship between the experience of light, the projection and the cinematic equipment in the space. The observation of the projection process and the self-referential qualities of the light beam has provided additional approaches to the reshaping of the fixed cinematic experience in my practice. The activation of a space of reception between the projector and the projection surface deconstructs the perspectival representation of space in relation to the screen as a main point of focus, redefining the act of seeing as an action that is connected with the whole body and its movements. These aspects contributed to the understanding of how to create an immersive experience—optical and corporeal in the sense of perceptual boundlessness—where the relationship between the embodied and the unbounded can be observed.

The parallel practical and theoretical investigation achieved through the analysis of case studies and the production of a body of works, contributed to the integration of the use of sculptural materials along with the use of moving image in my practice.

Moreover, it has contributed to the understanding of how to activate the space around the frame through interventions related to sculpture, interior and object design.

The development of a multidisciplinary practice—investigated further with the Viva Exhibition—aims to define an experience in which the frame of the projection can be expanded through the revisitation of the auditorium and the transformation of the projection machine.

This framework of observations suggests further avenues towards a definition of the space of moving image installation and the activation of the space around the frame through the analysis of works in which the movie theatre is recreated and transformed inside the gallery and the museum.

Moreover, it aims to further approaches that use light as a means of artistic production and study the perceptual mechanisms activated in the exhibition space to create an immersive experience for the viewer.

The framework encourages exchanges between disciplines such as film-making, art and design, and collaborations between artists and other creators.

This research should appeal to artists and curators investigating multidisciplinary productions in which the quality of the experience is related to the property of the media chosen and its relation to the architectural features of the exhibition context.

The project raises further questions about the contemporary revival of analogue media and their relationship with the superabundance of digital media, and how the use and development of technology affect not only contemporary art but also the experience of reality and the approach to technological objects in society.

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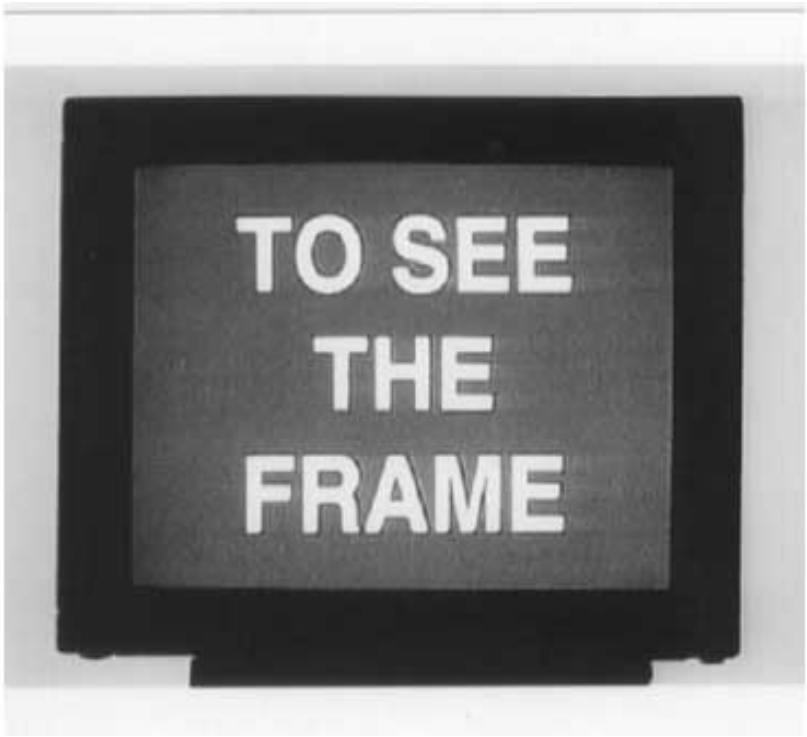

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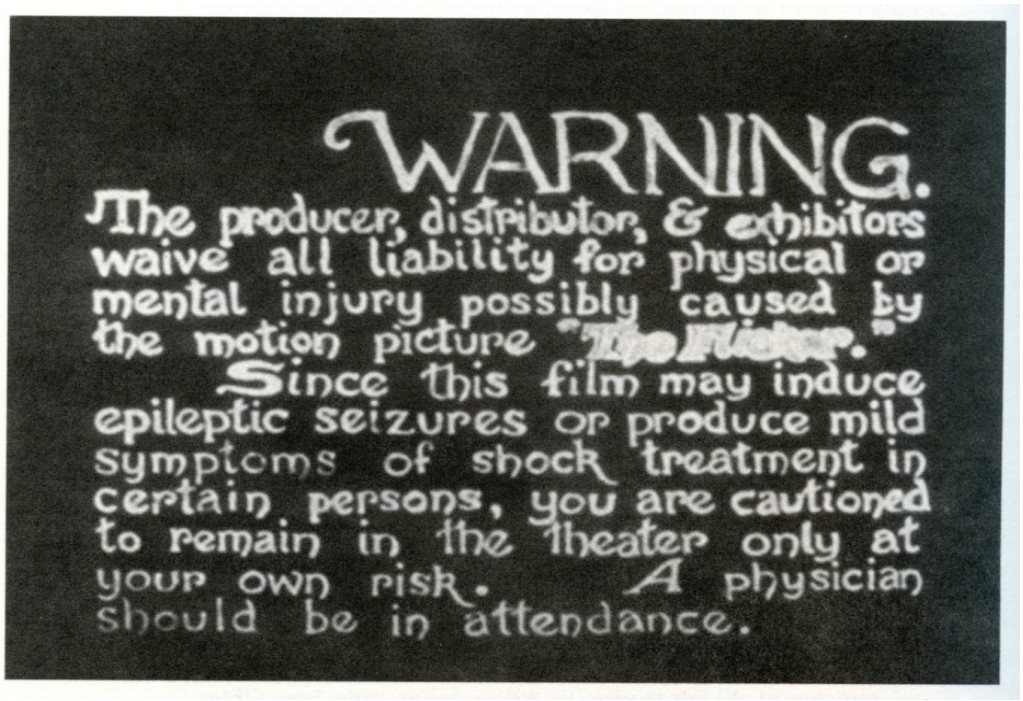

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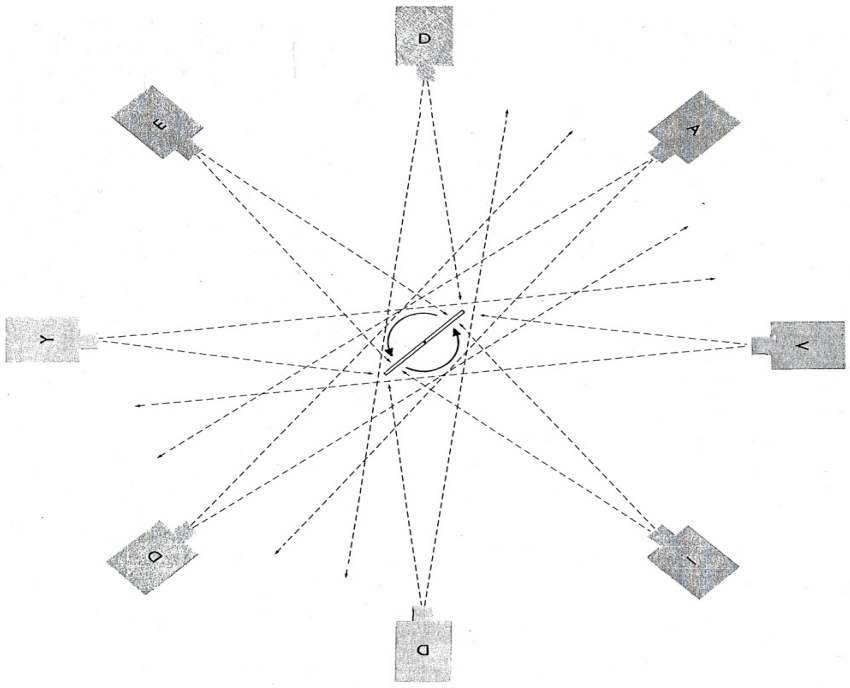

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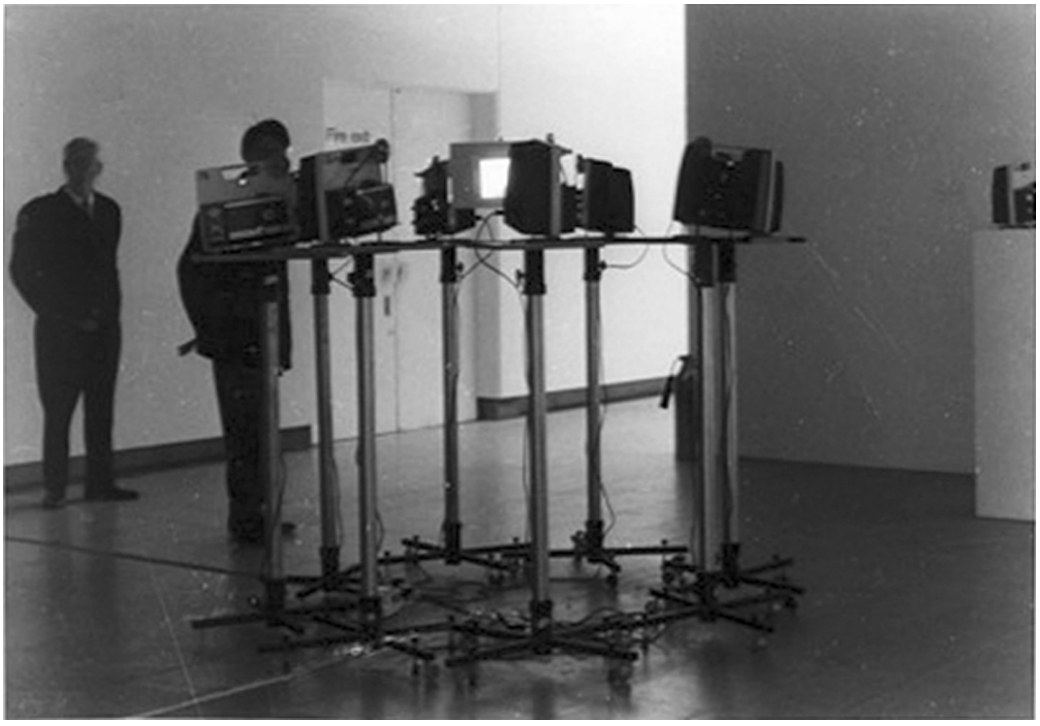

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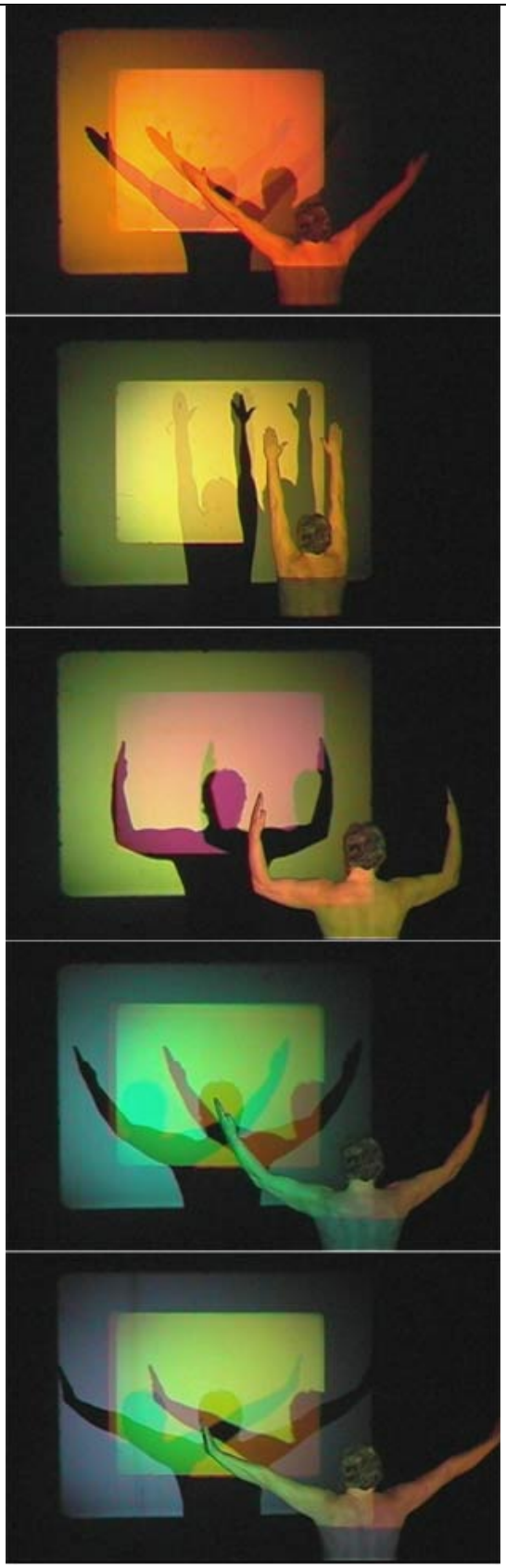

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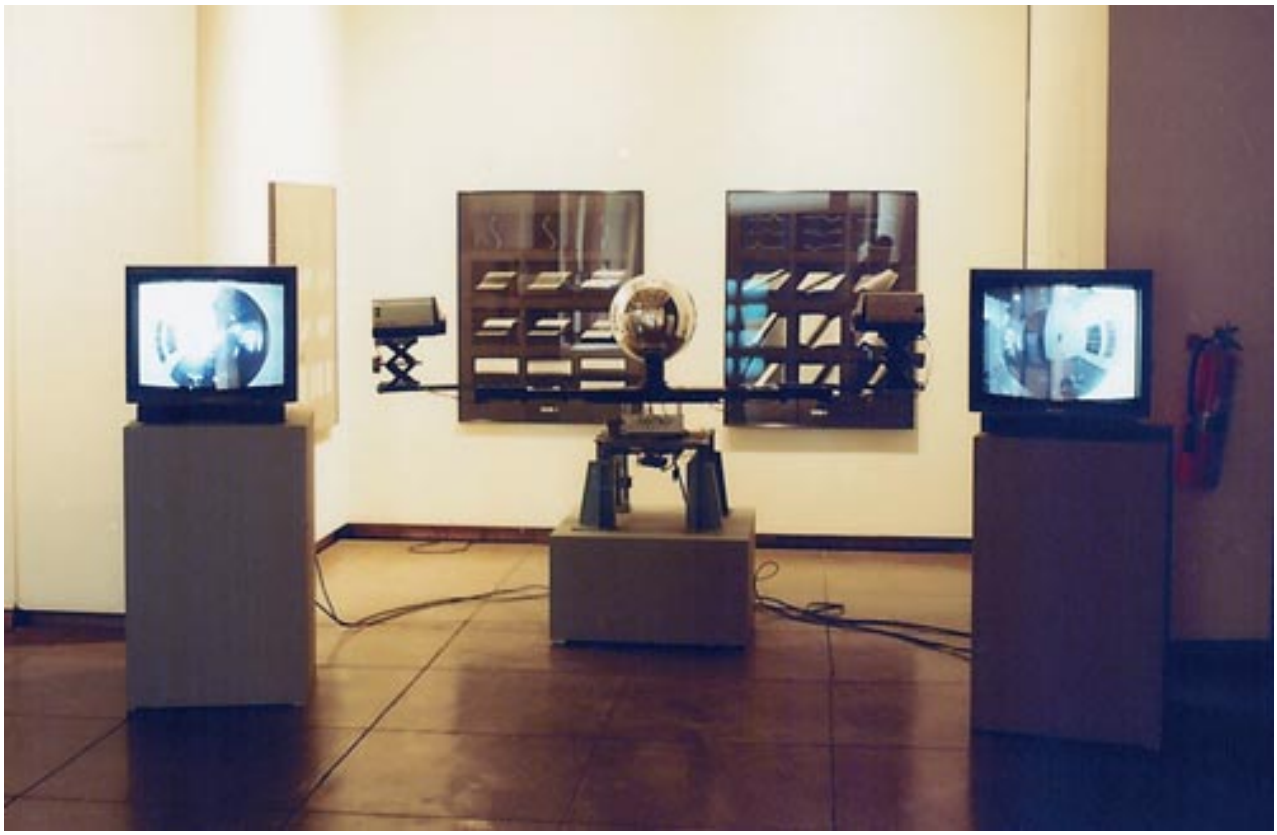

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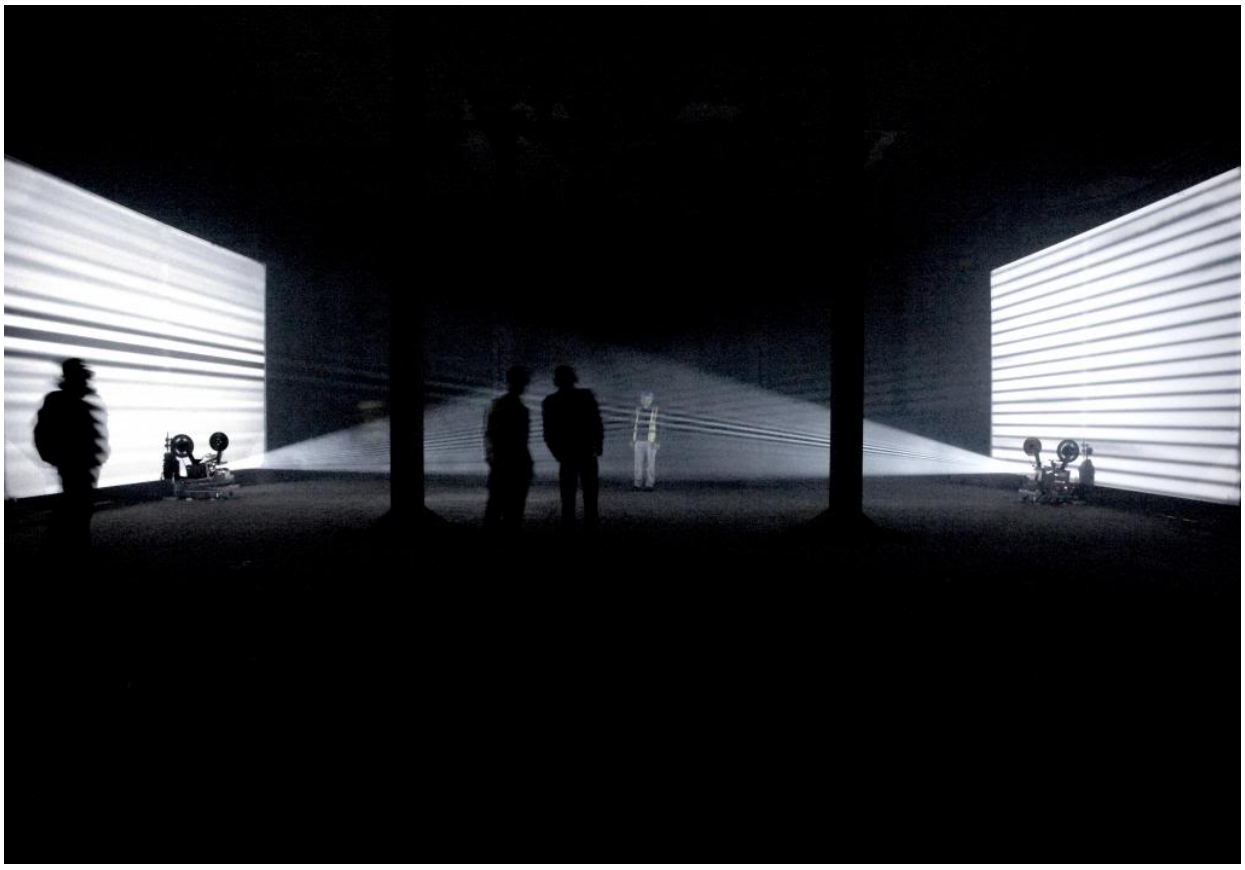

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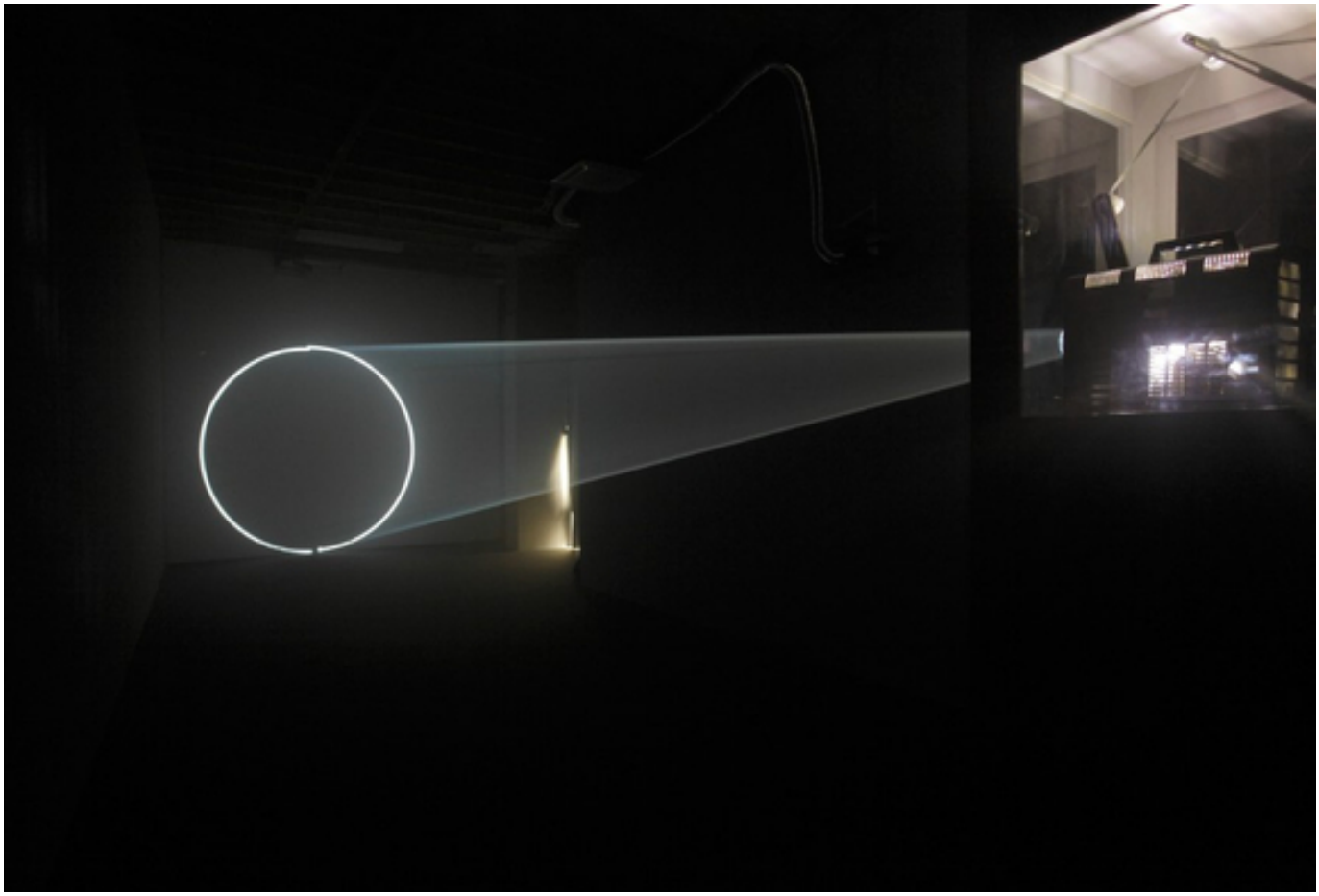

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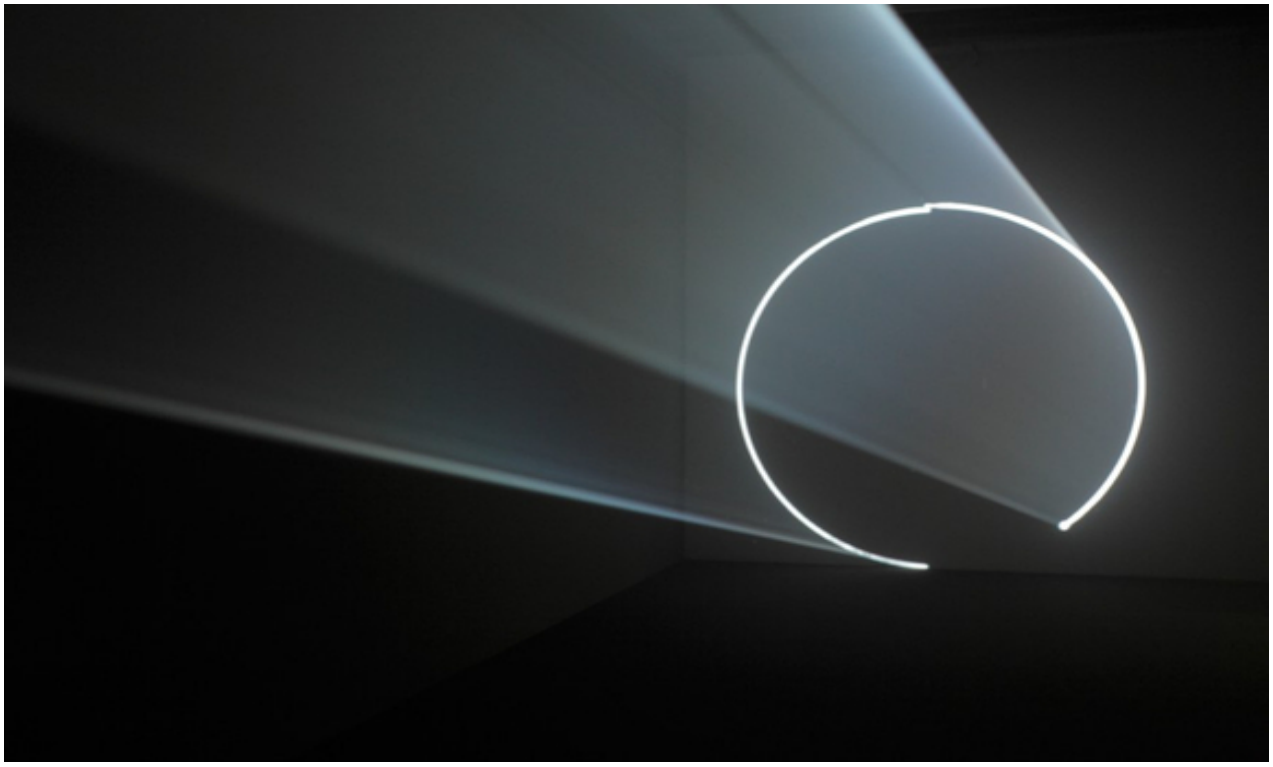

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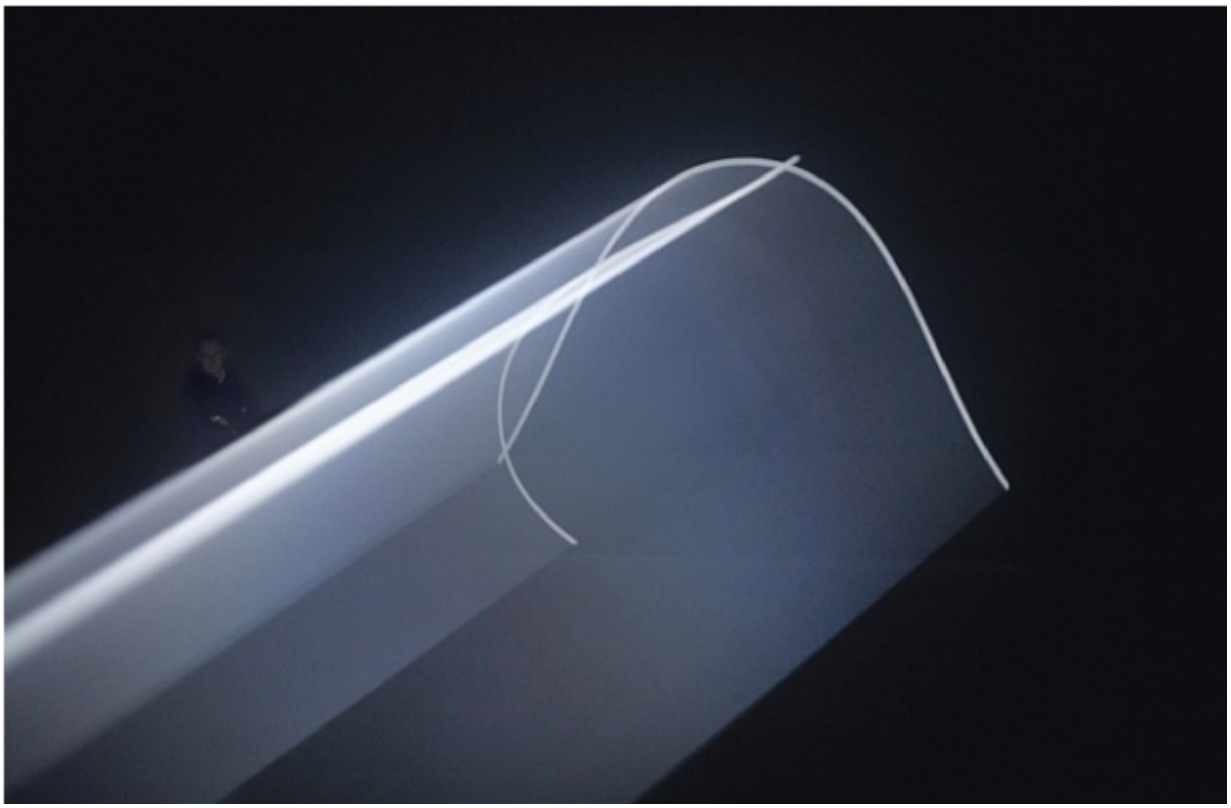

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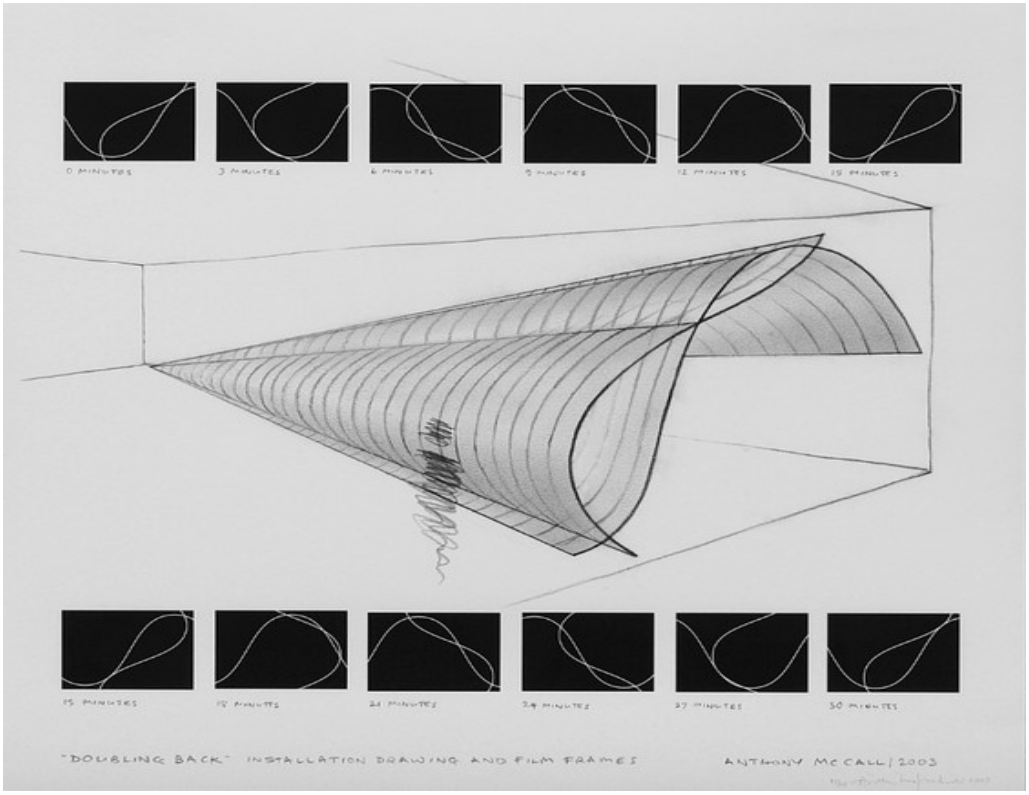

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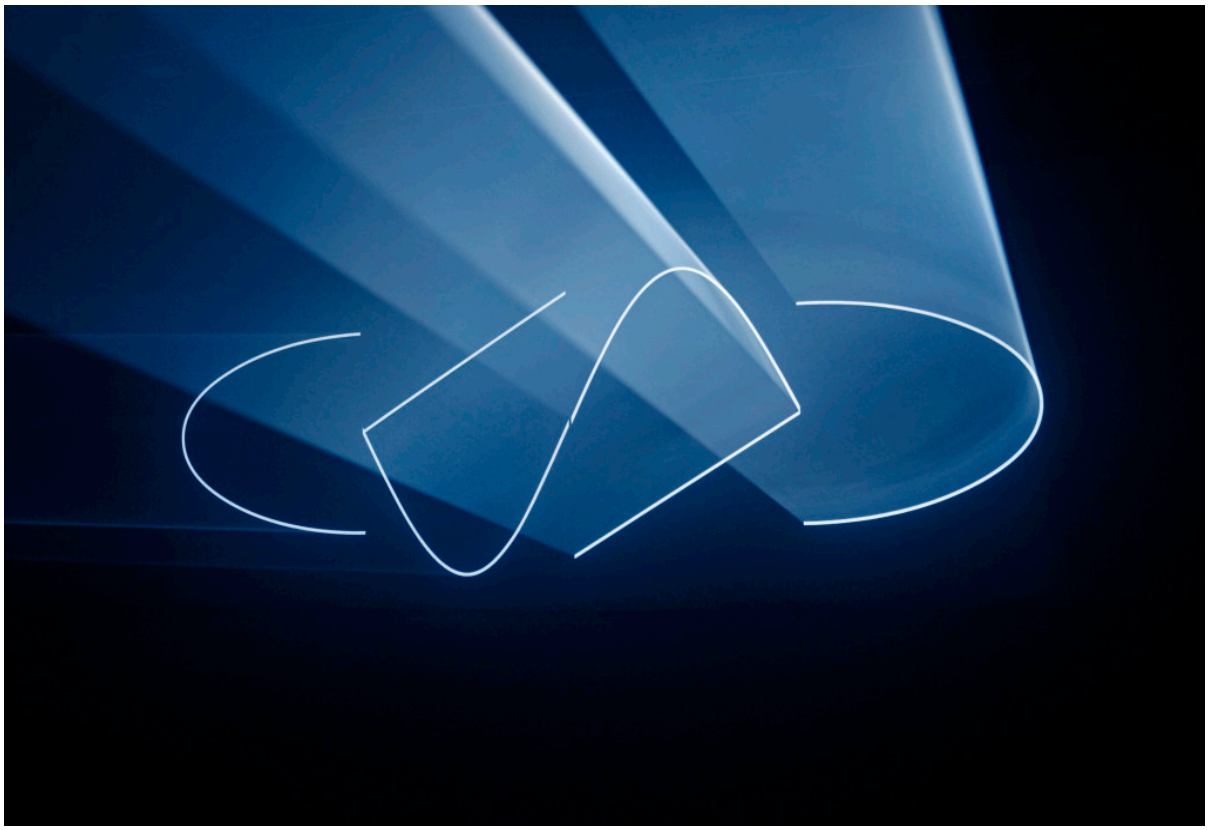

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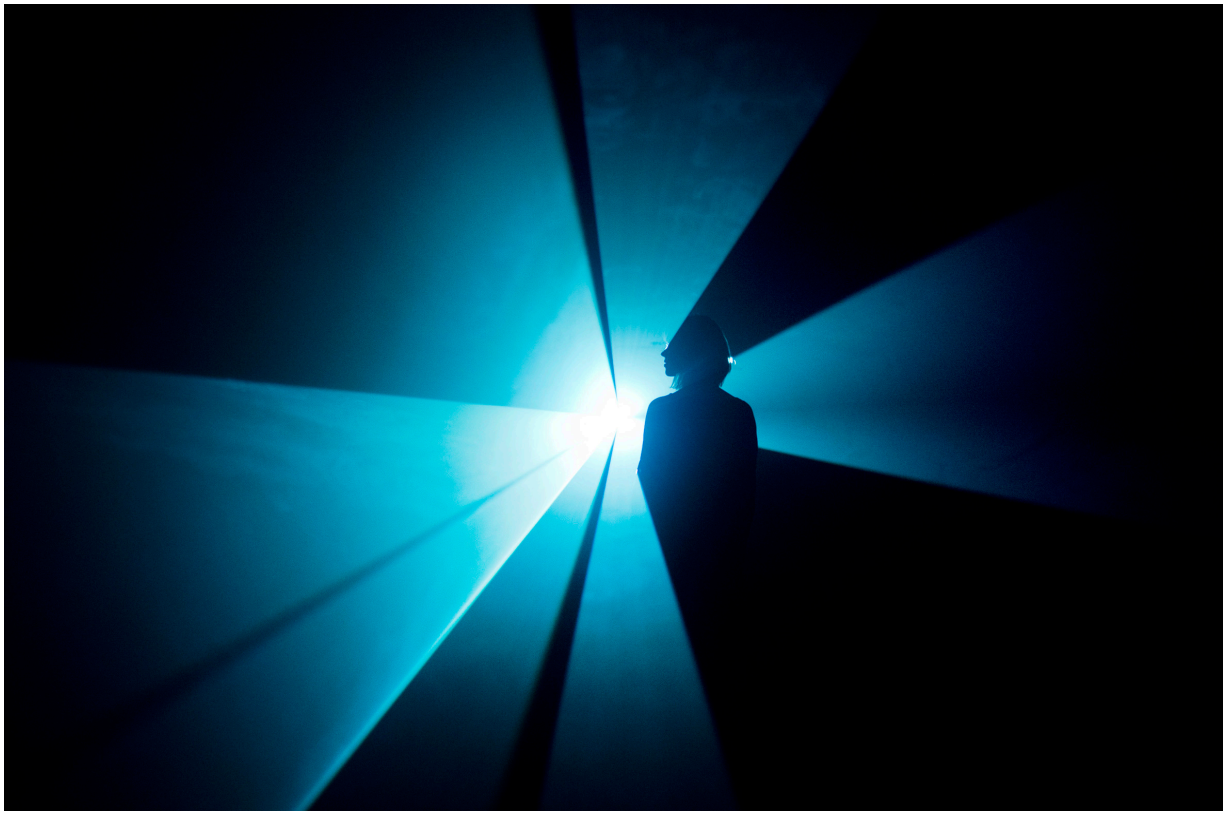

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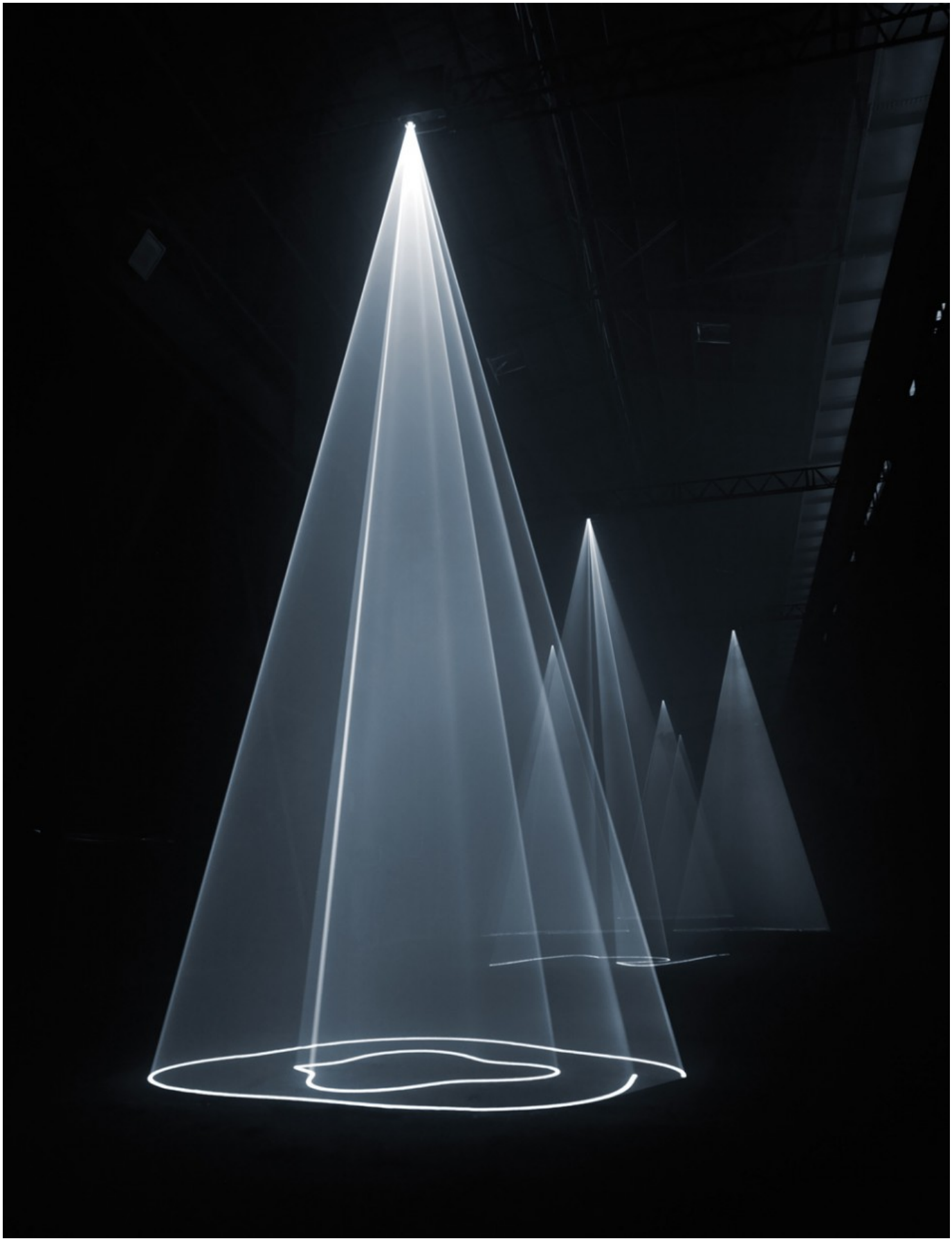

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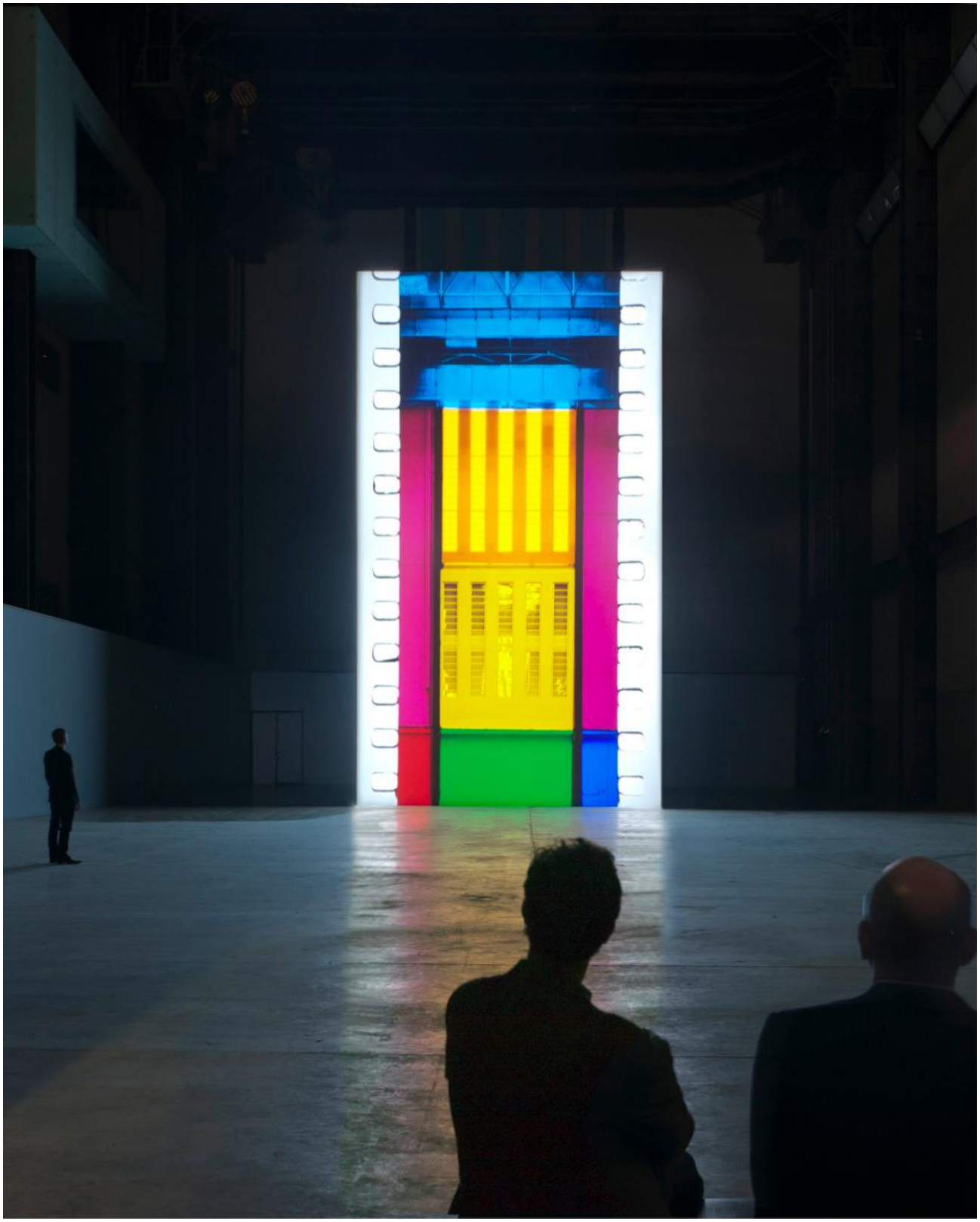

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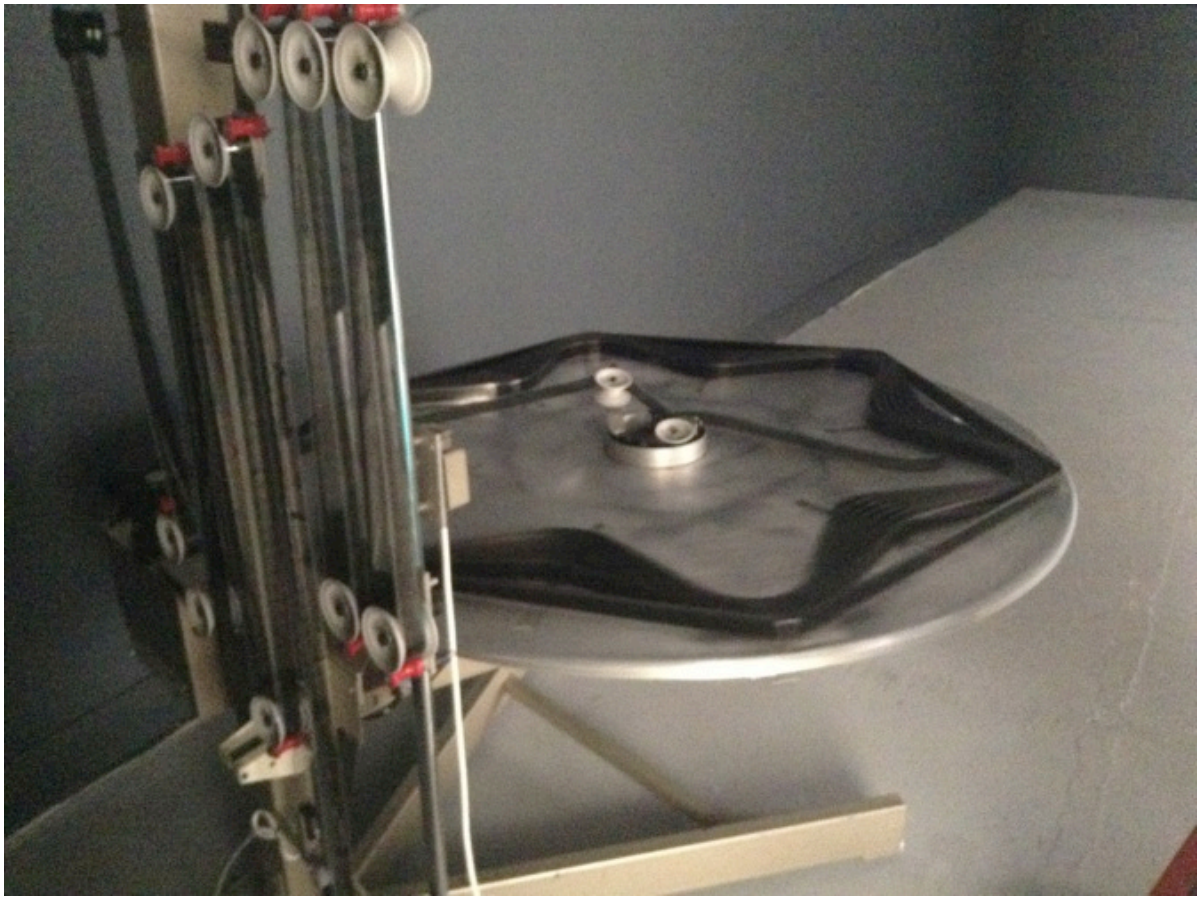

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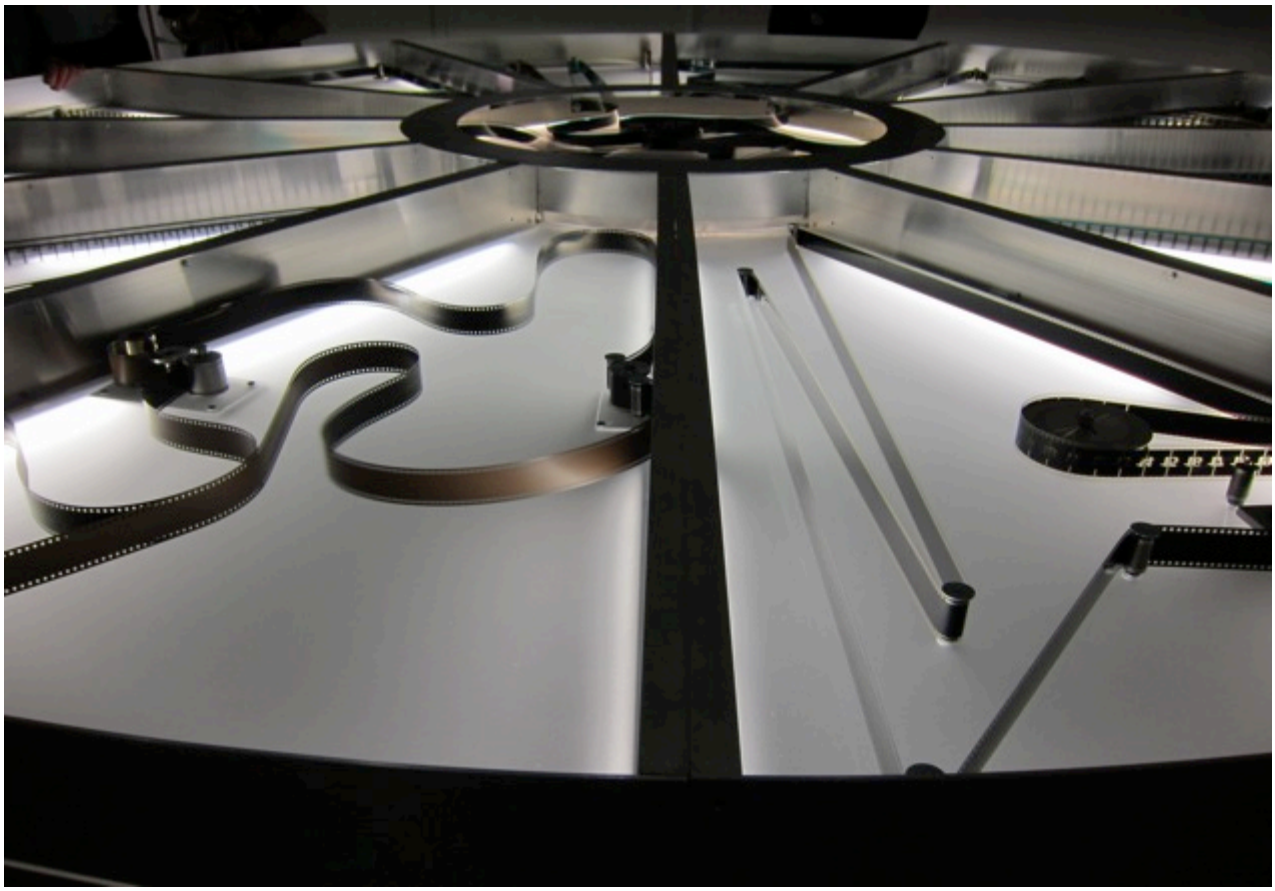

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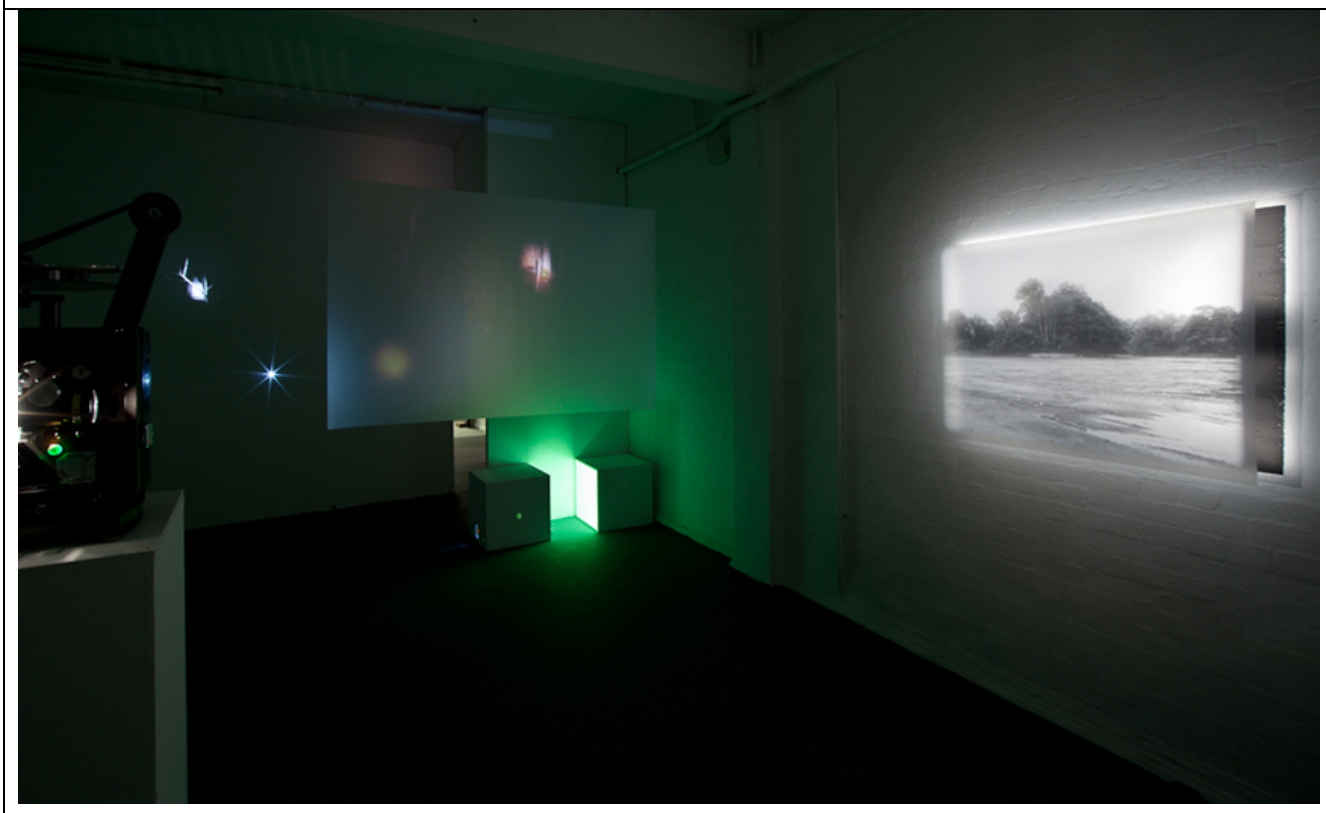

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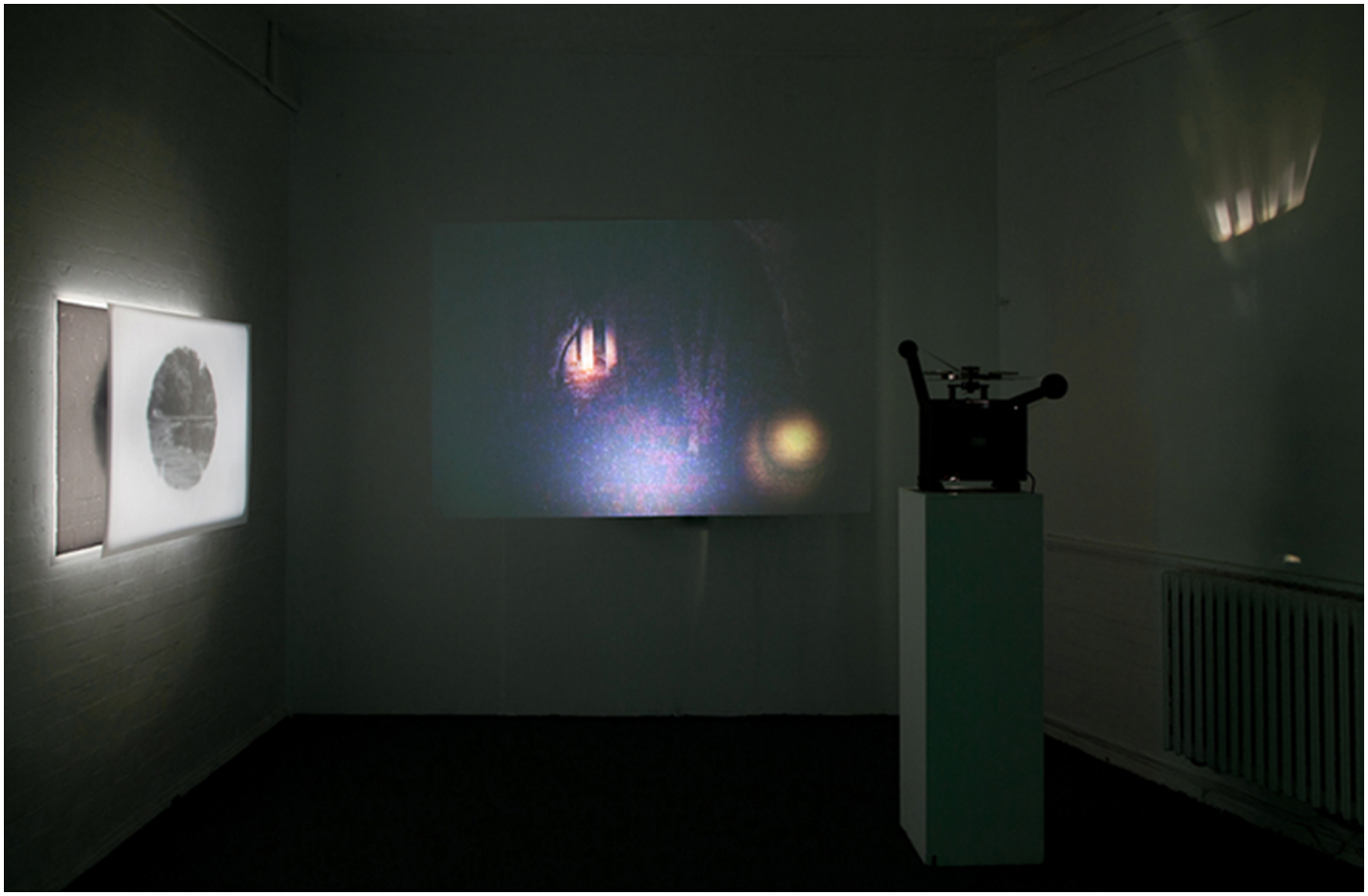

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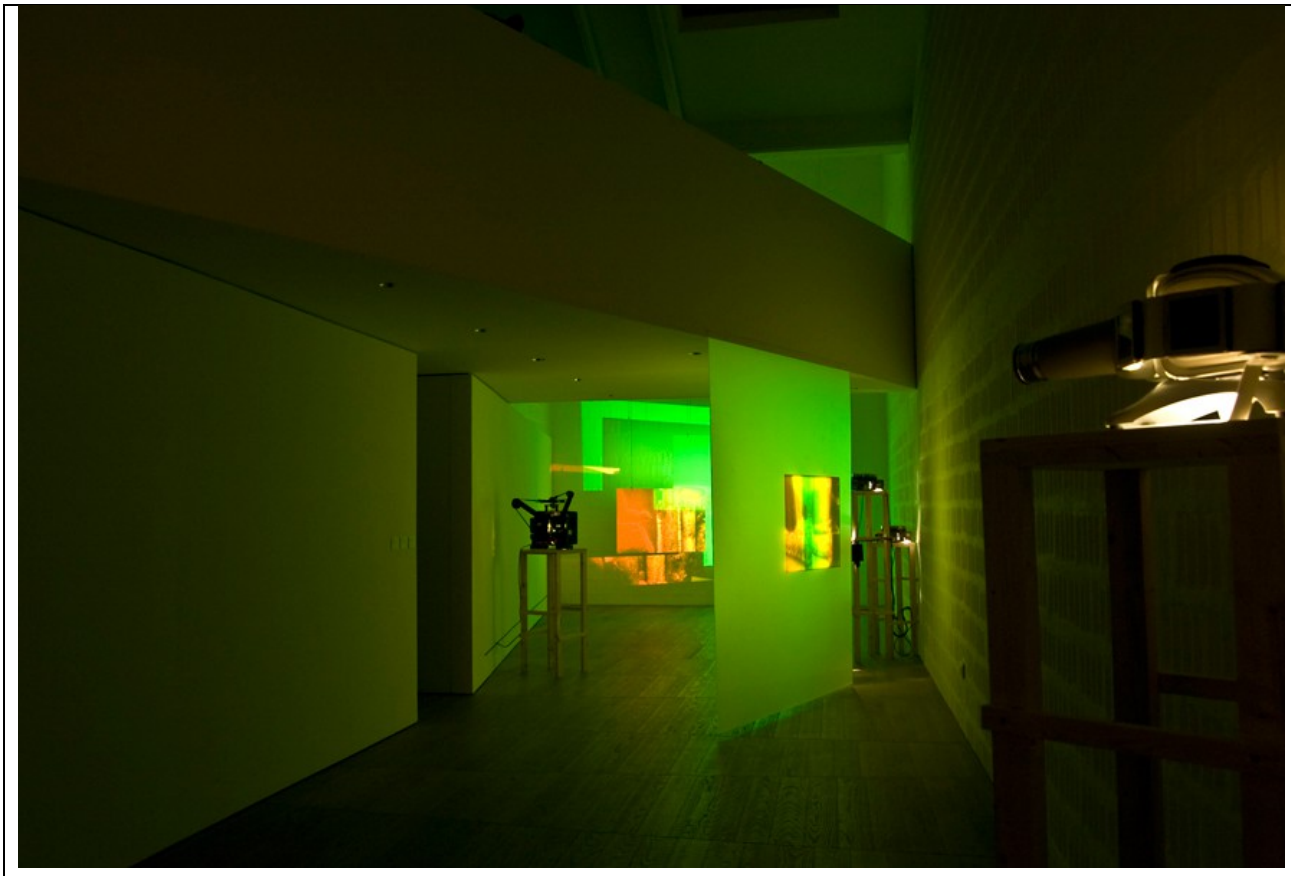

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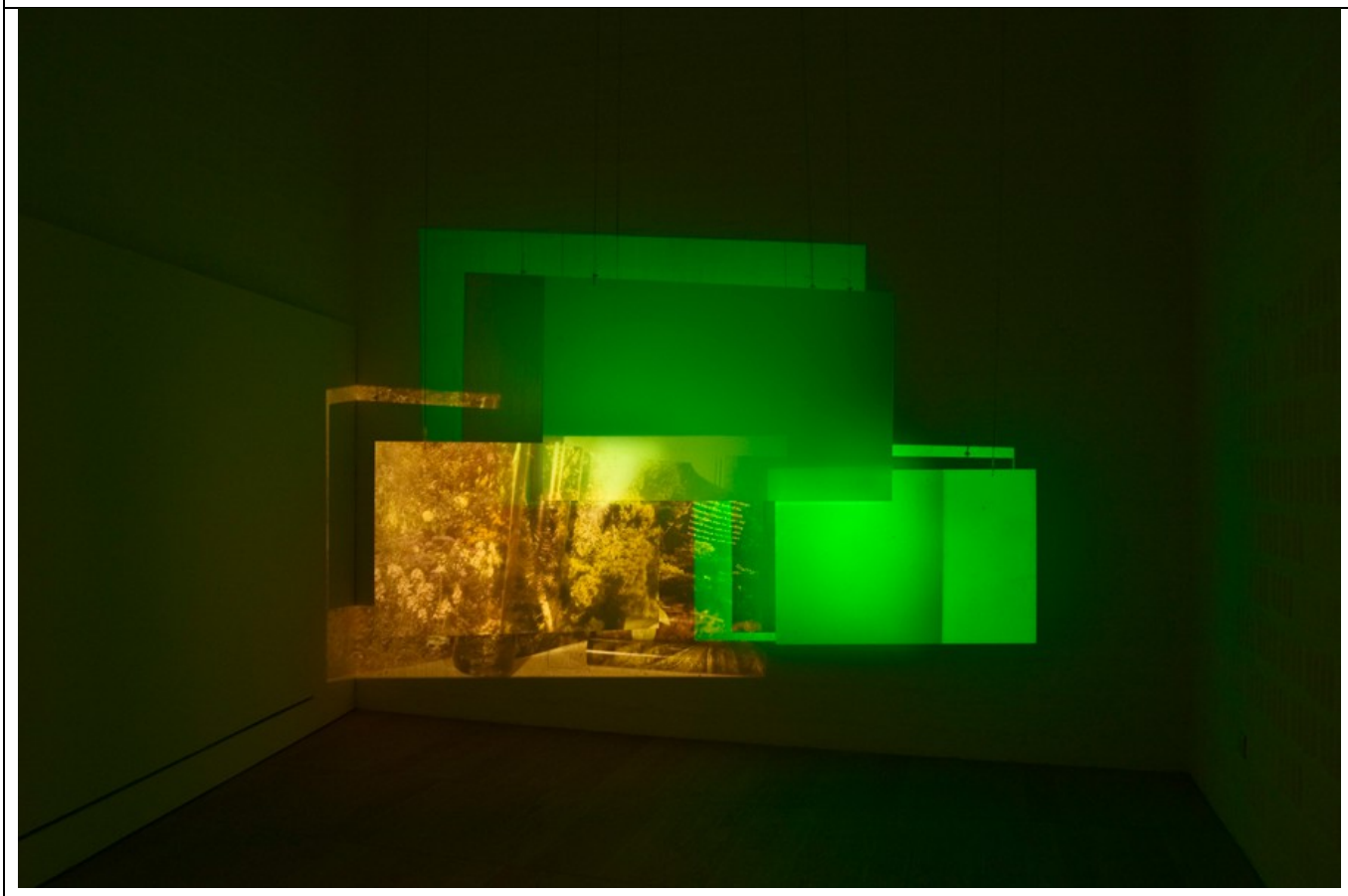

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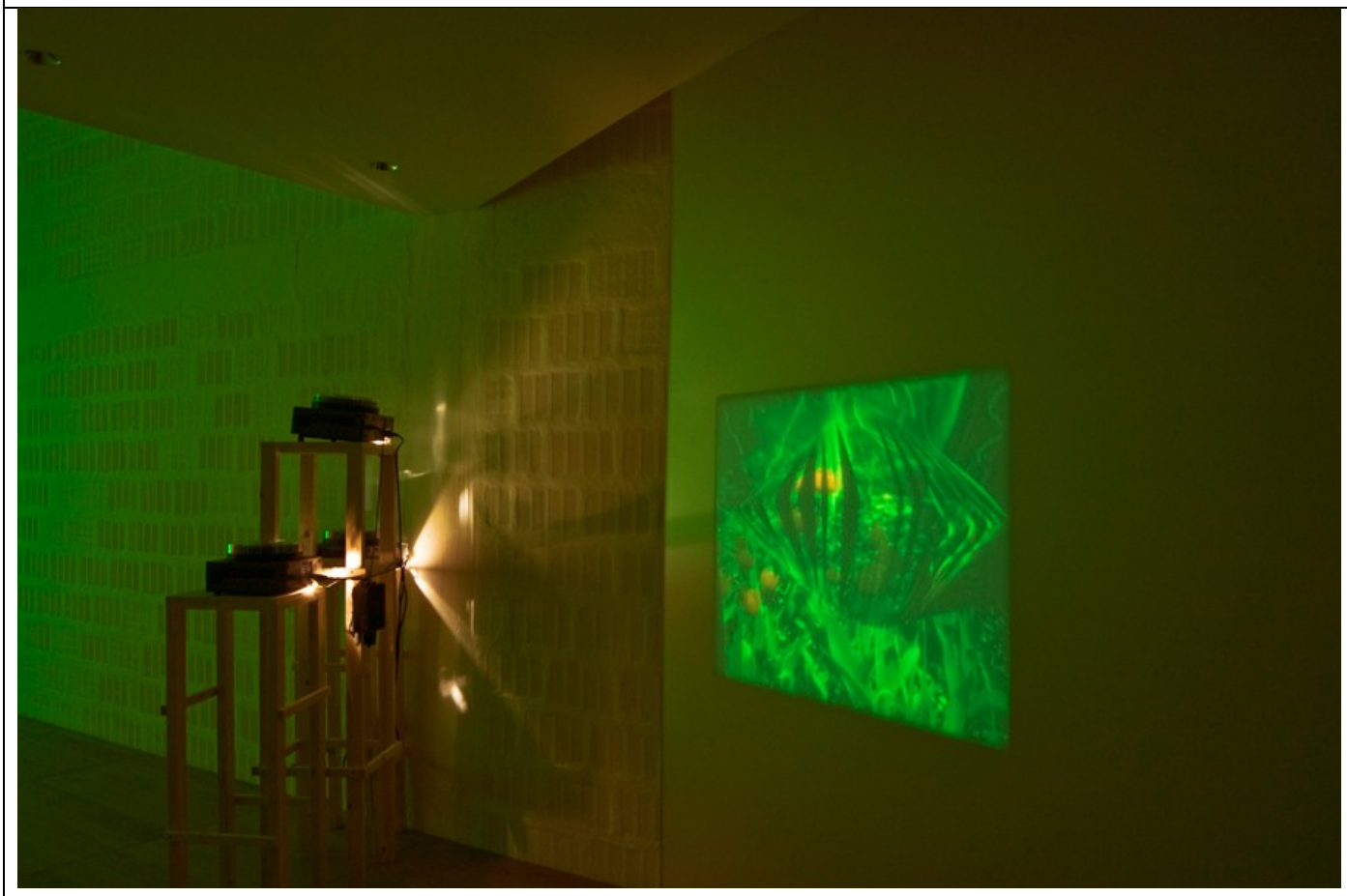

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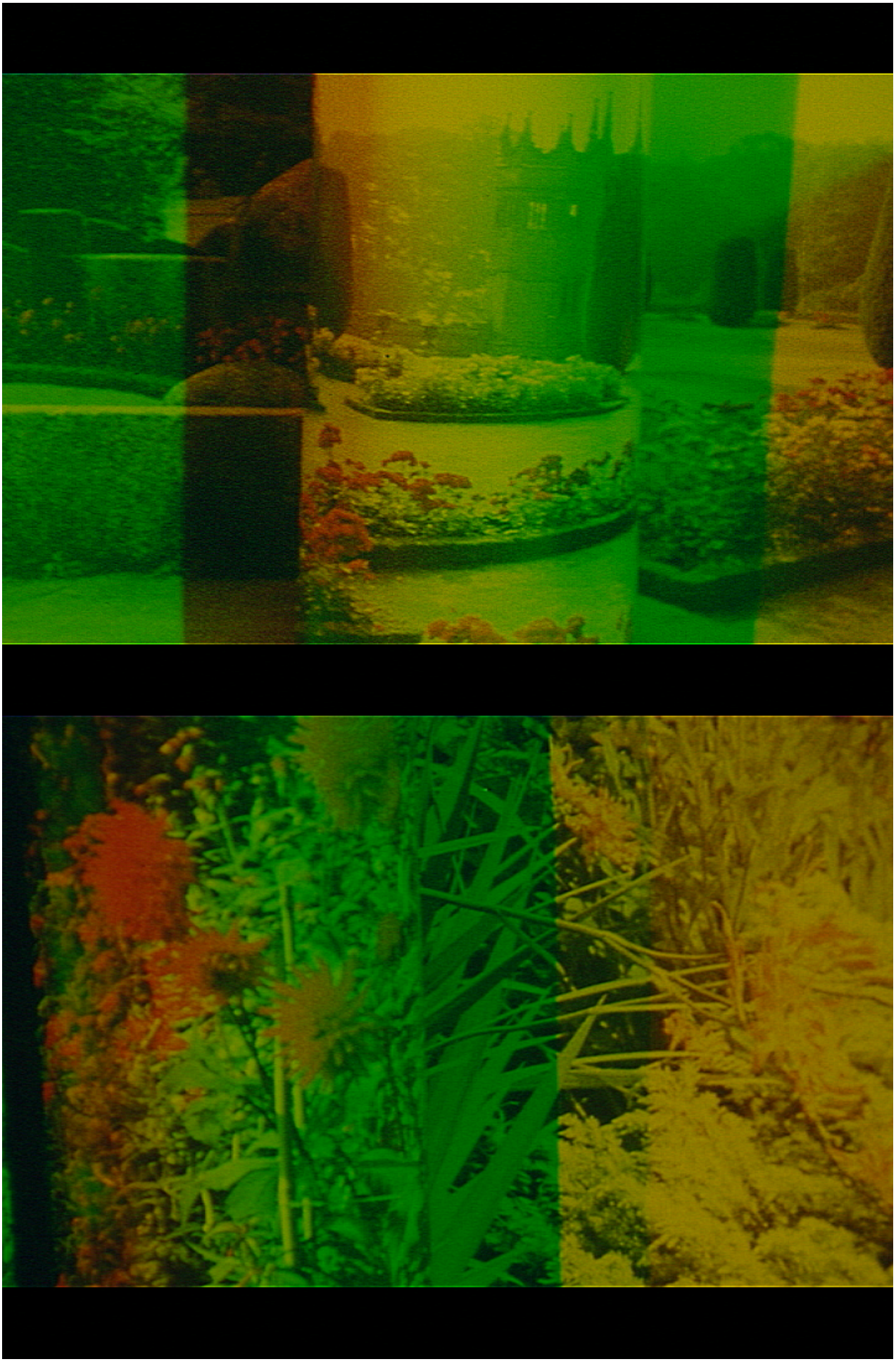

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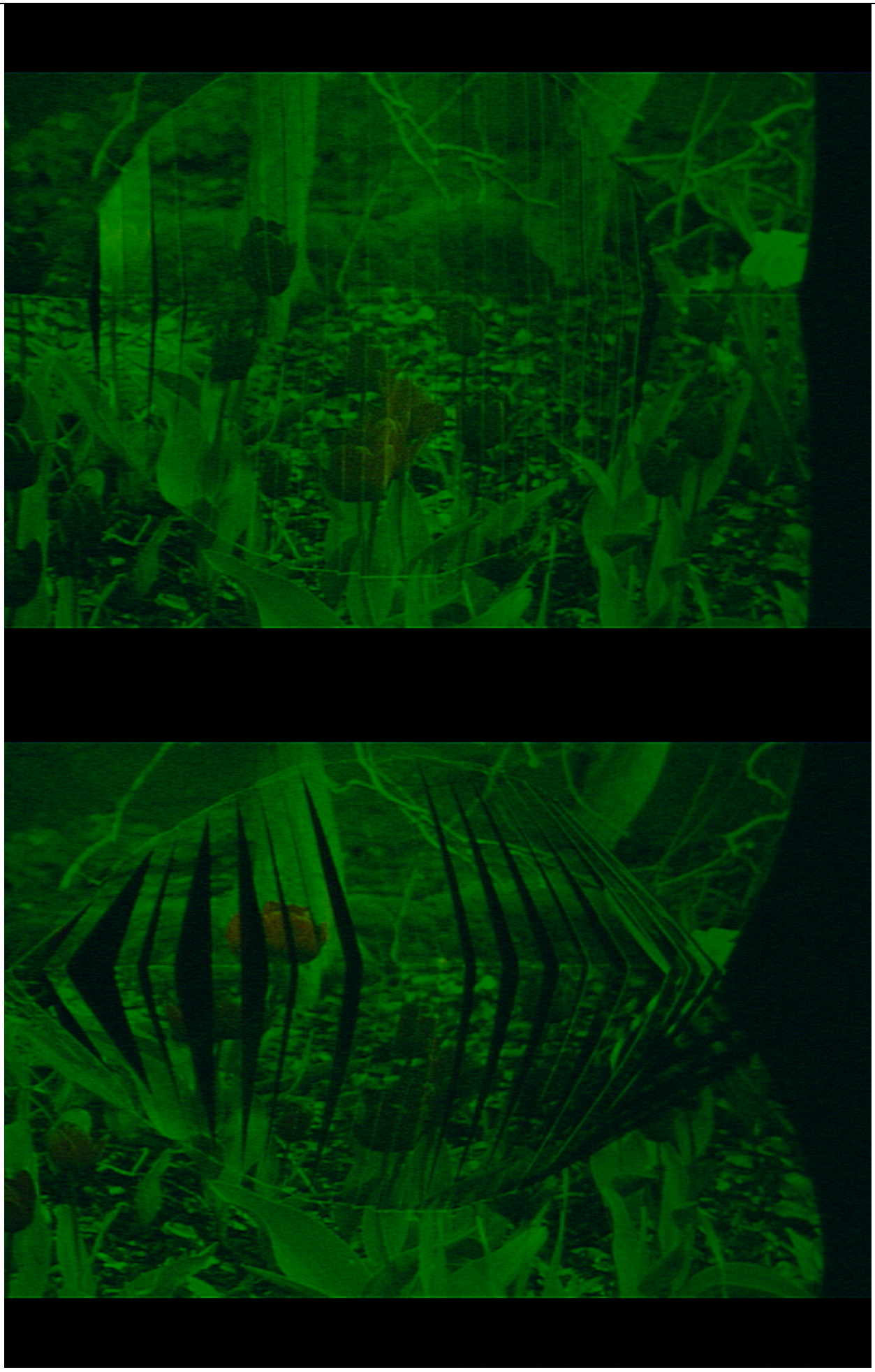

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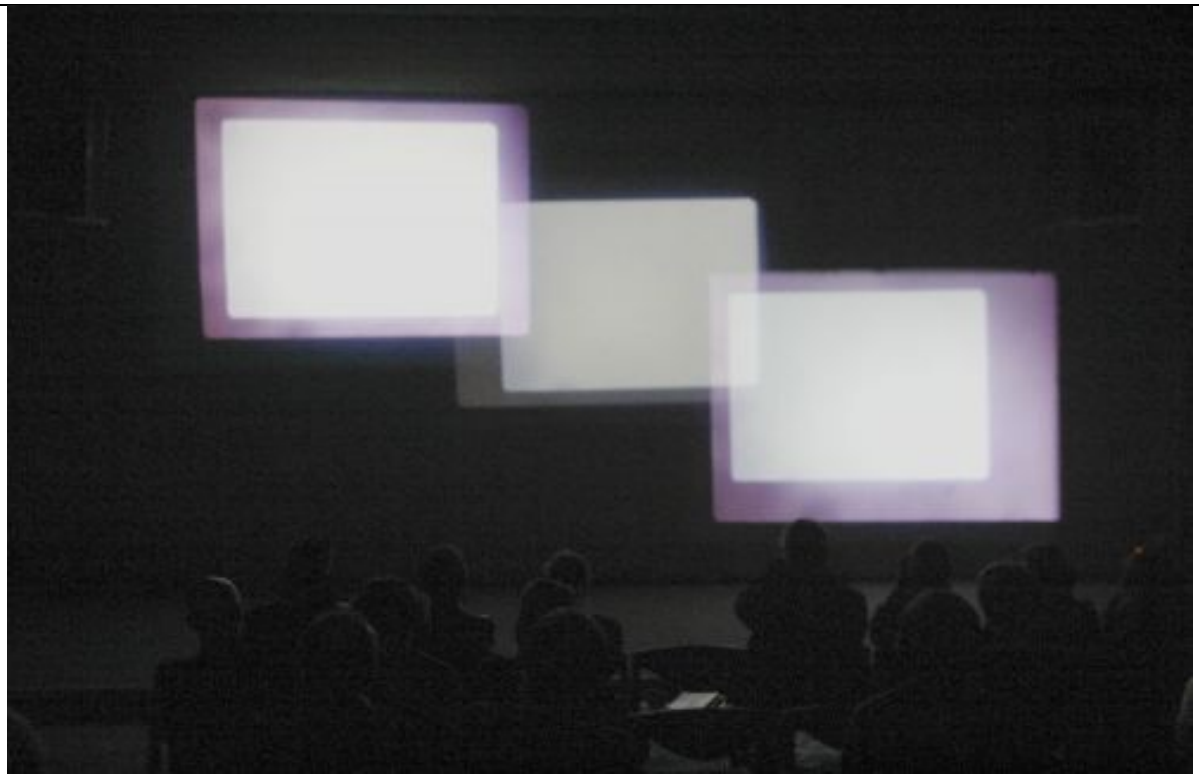

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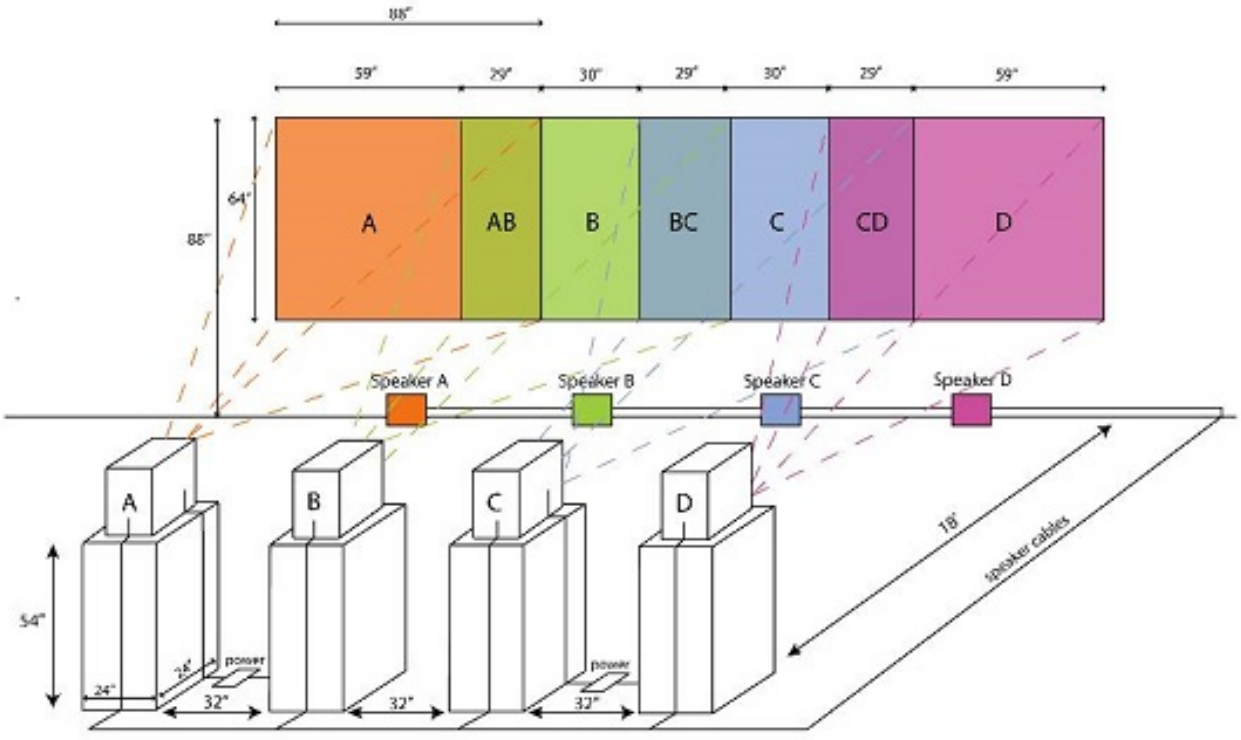

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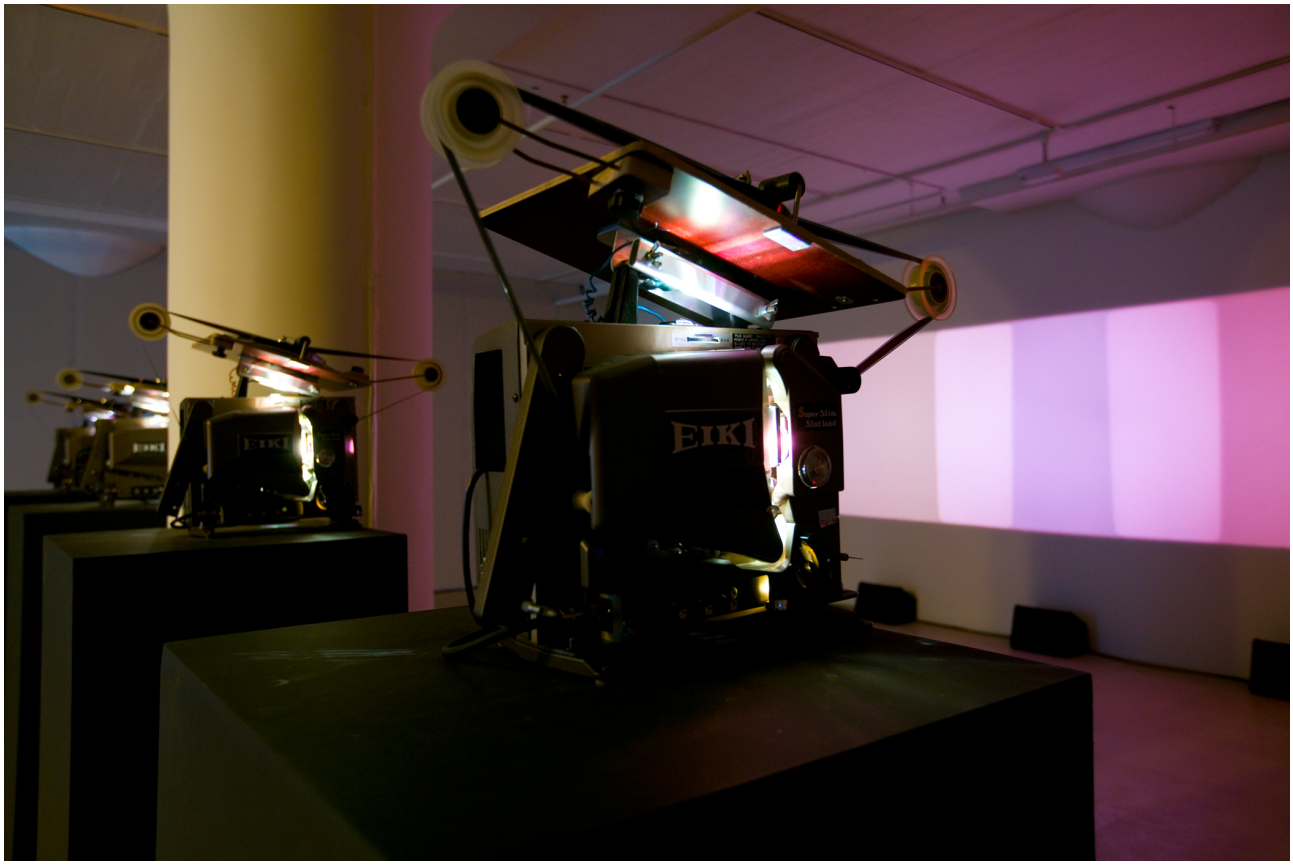

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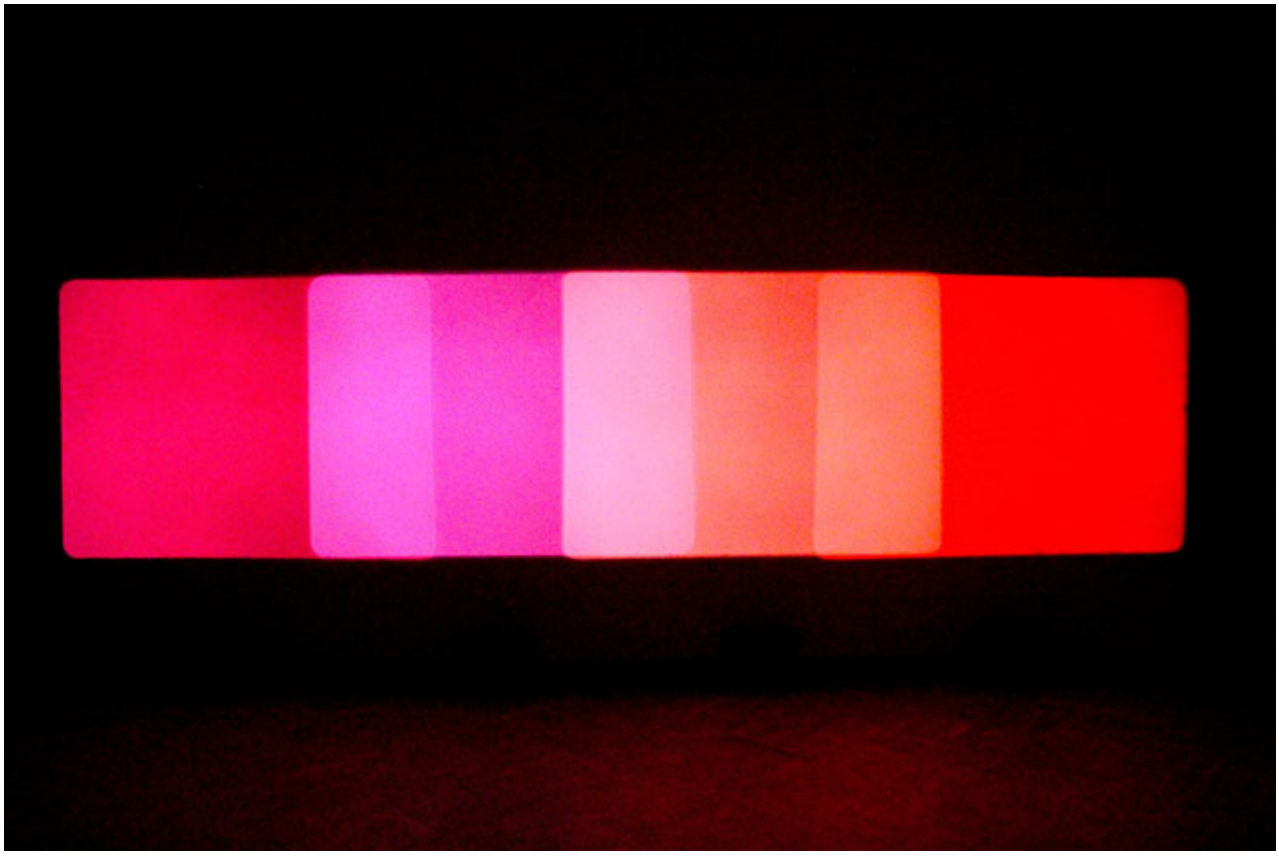

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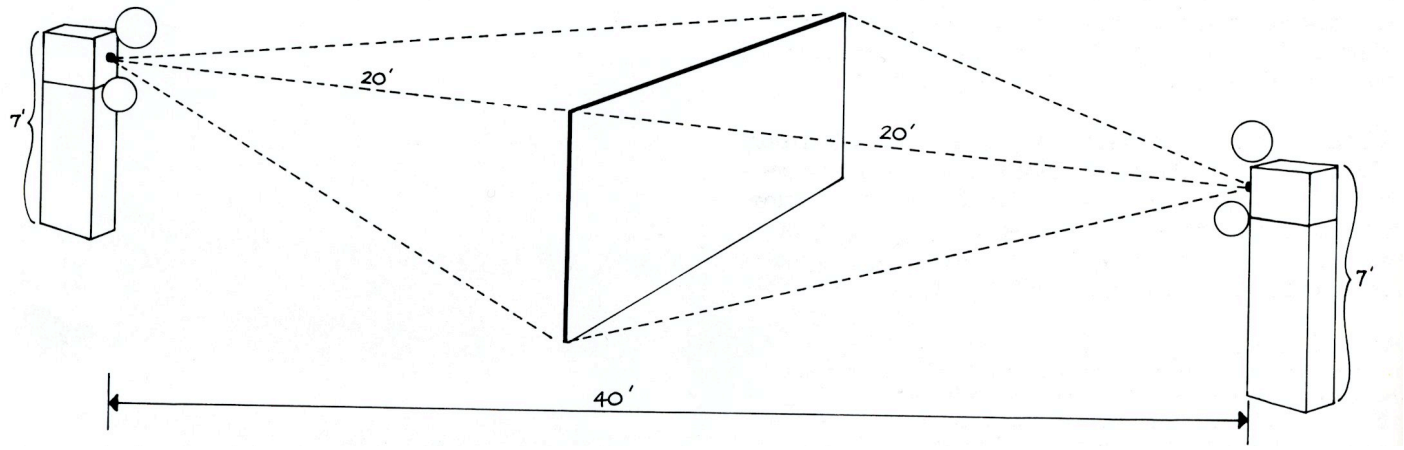

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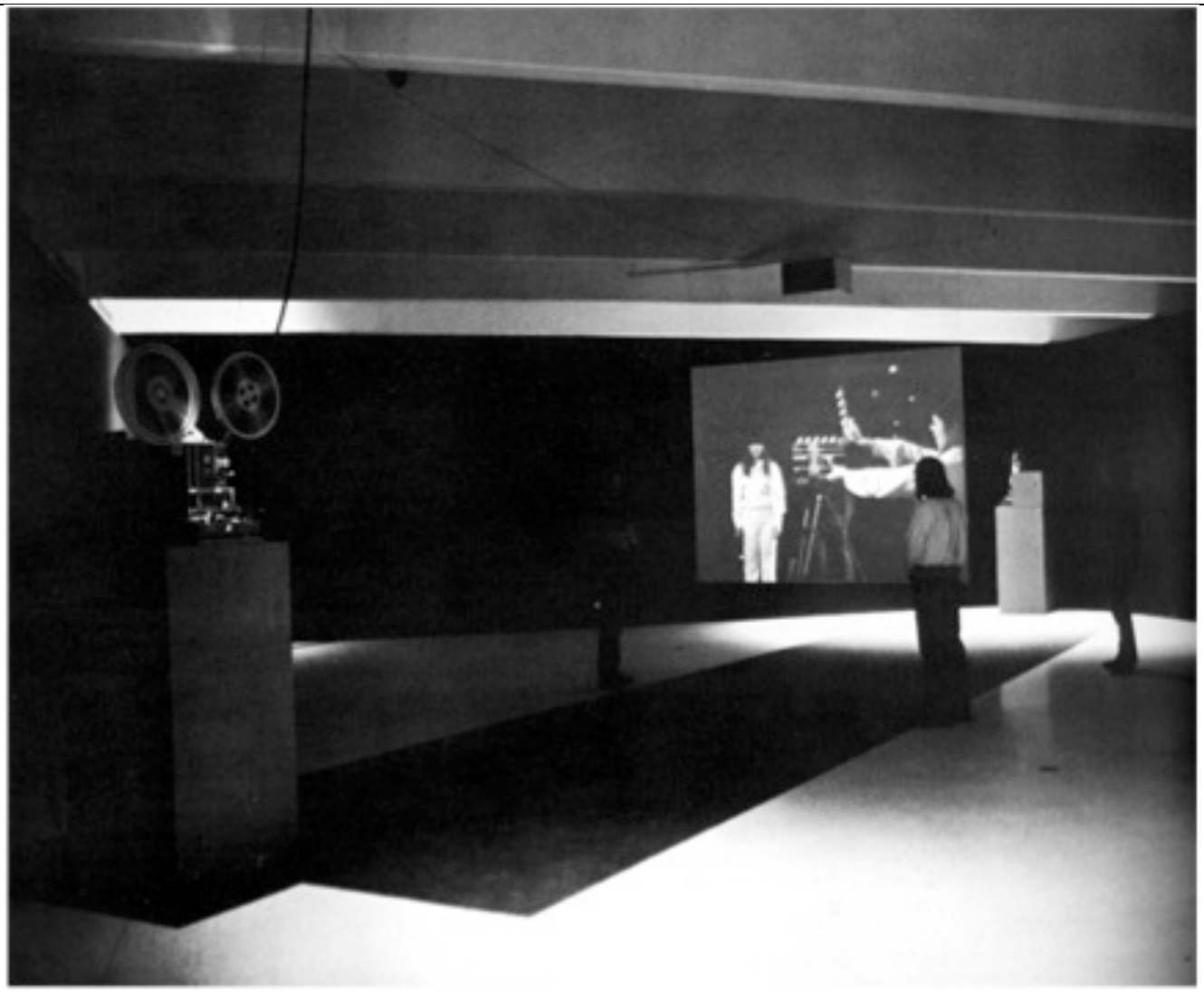

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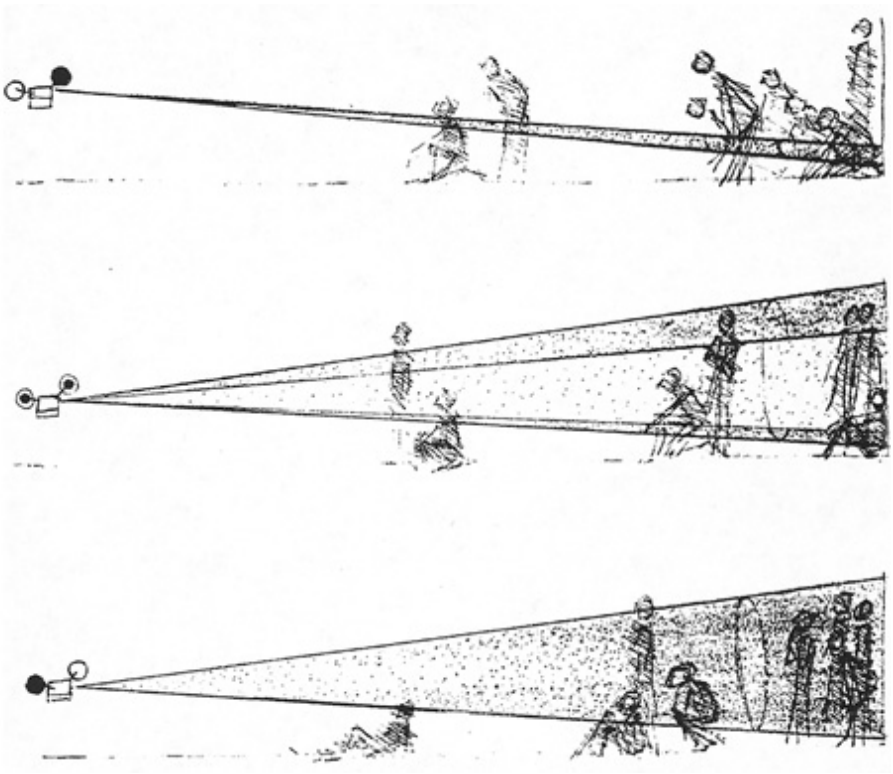

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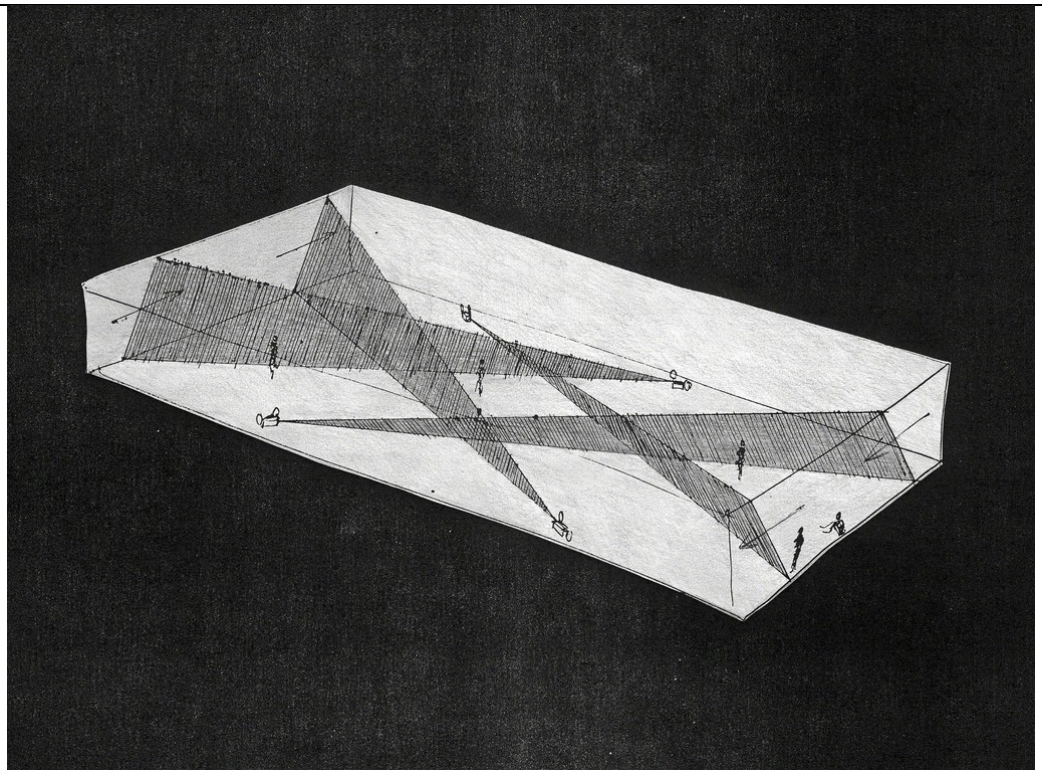

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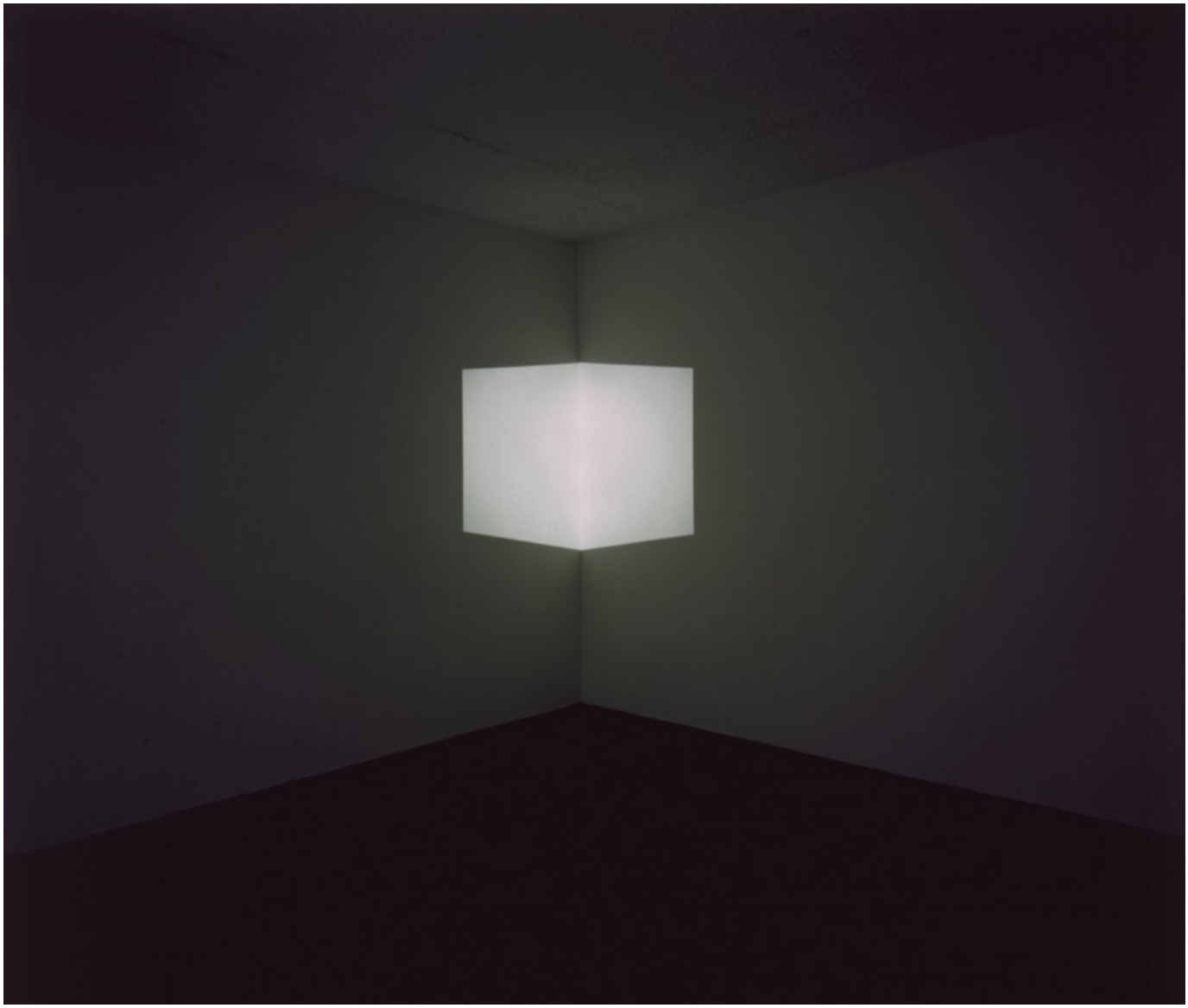

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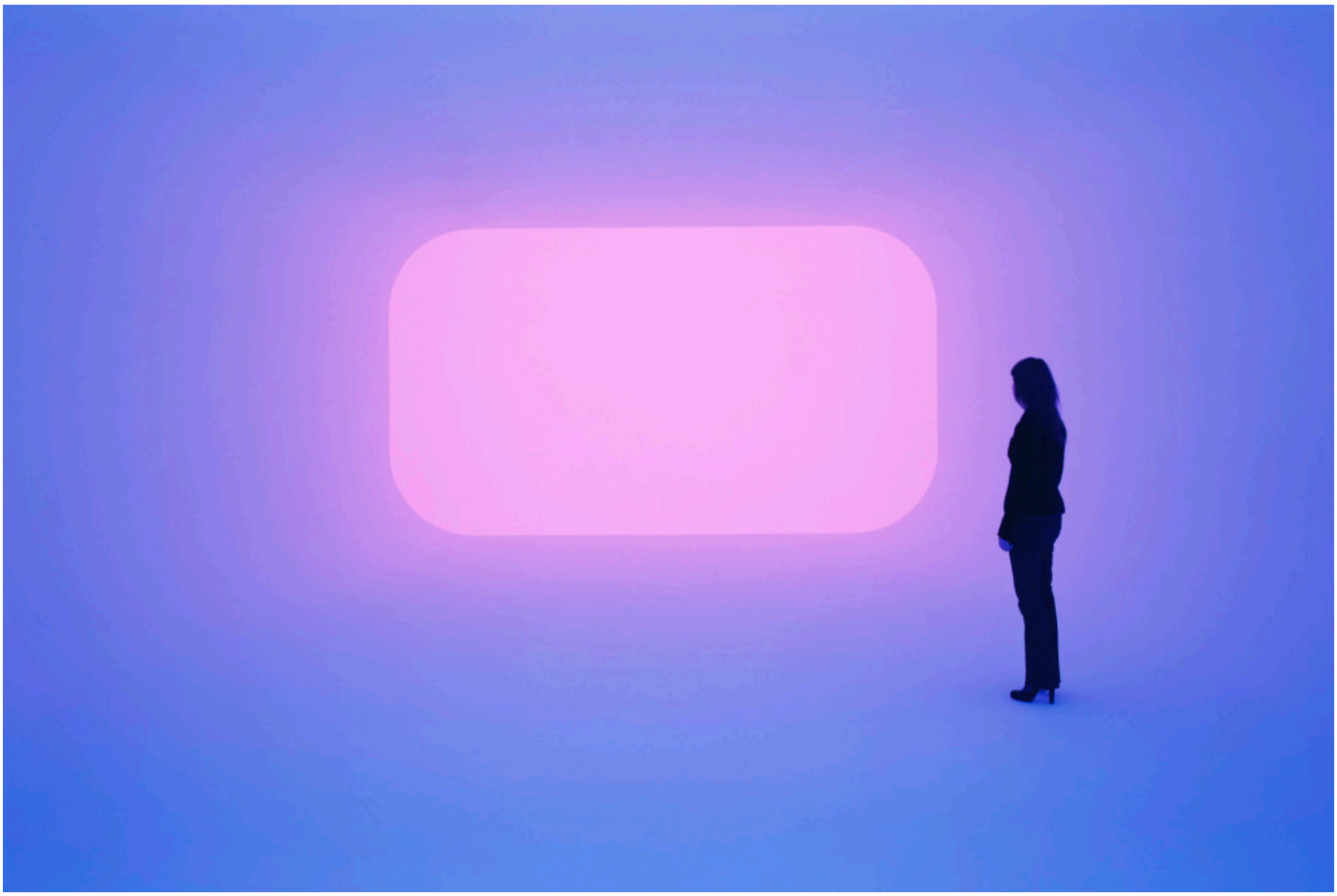

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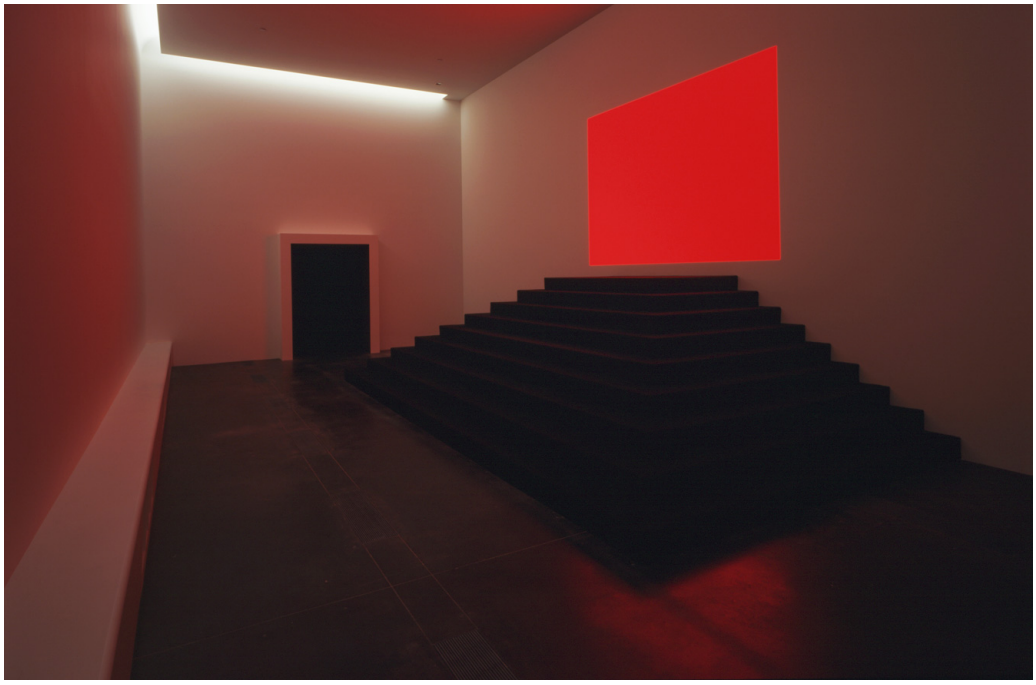

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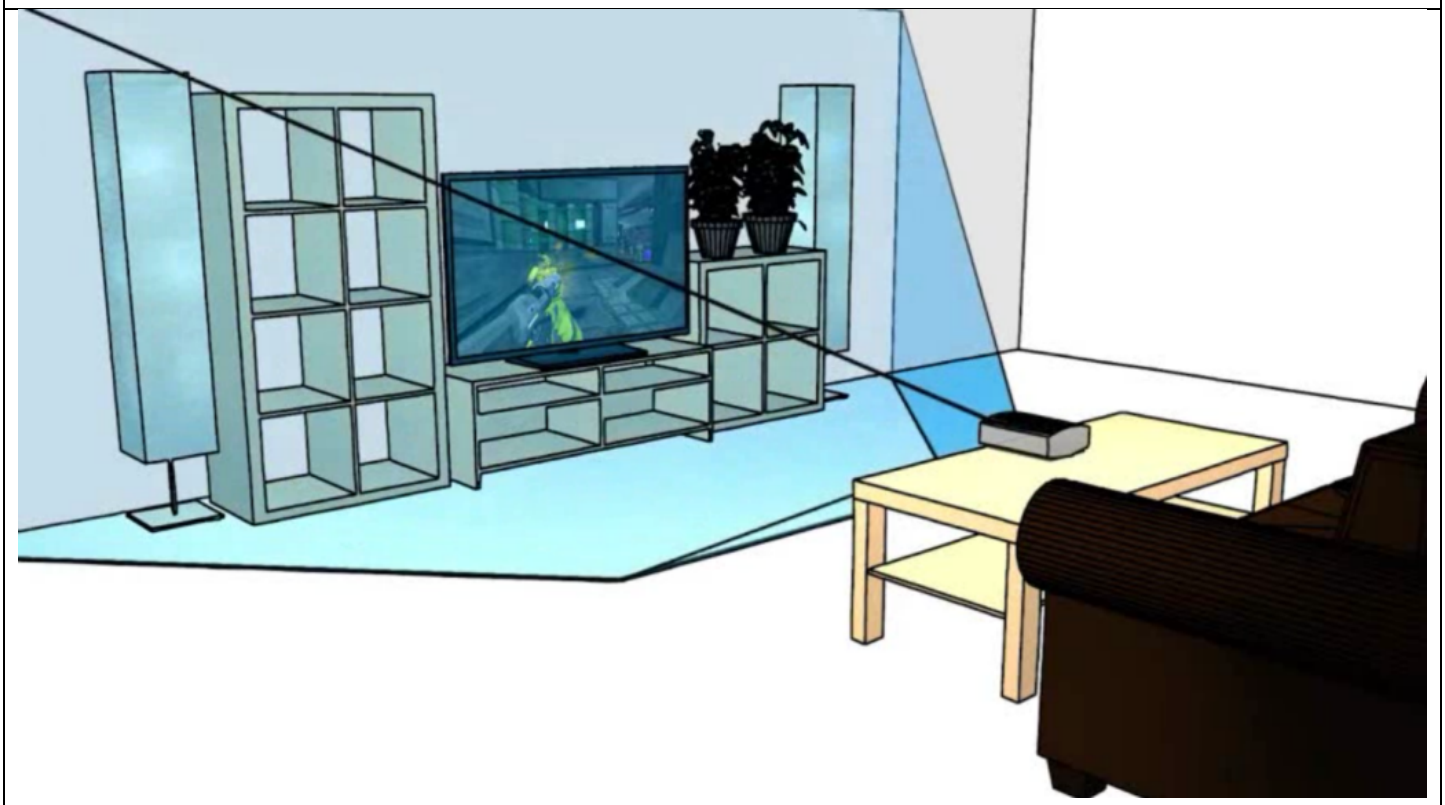

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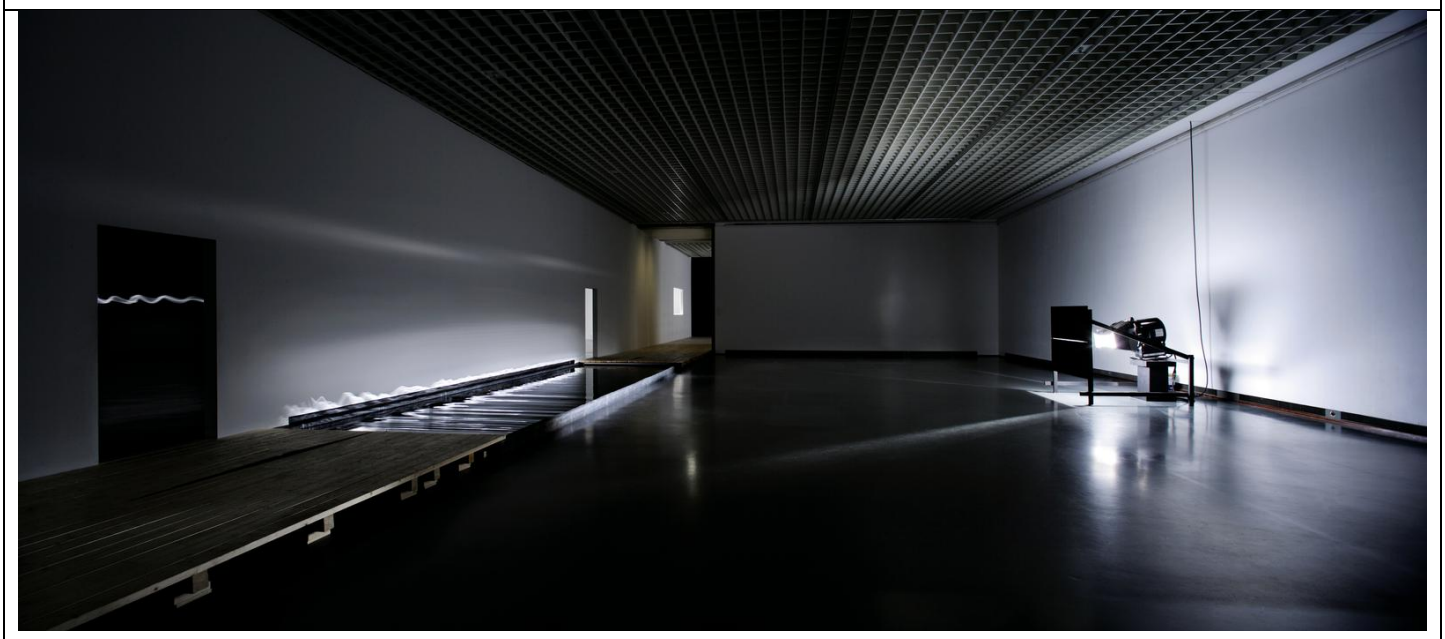

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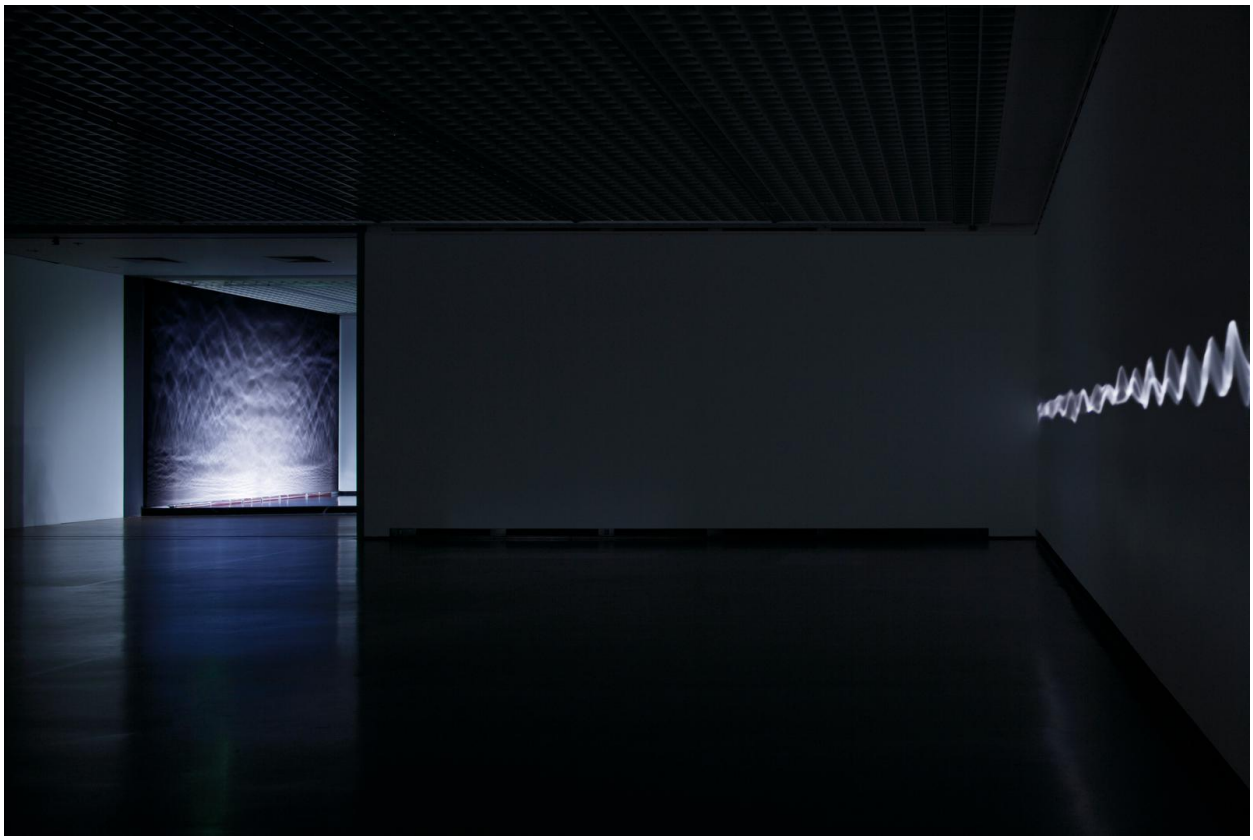

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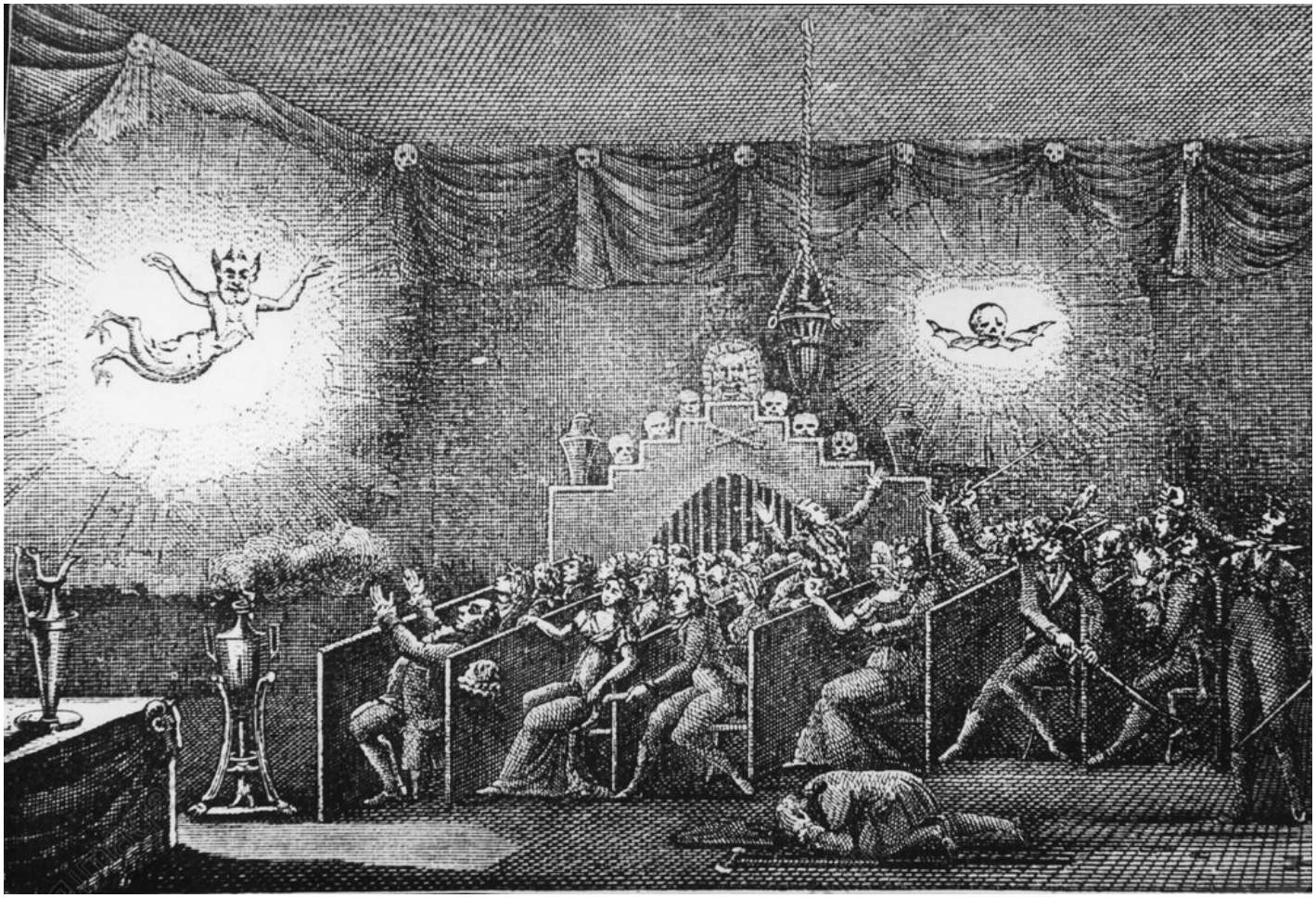

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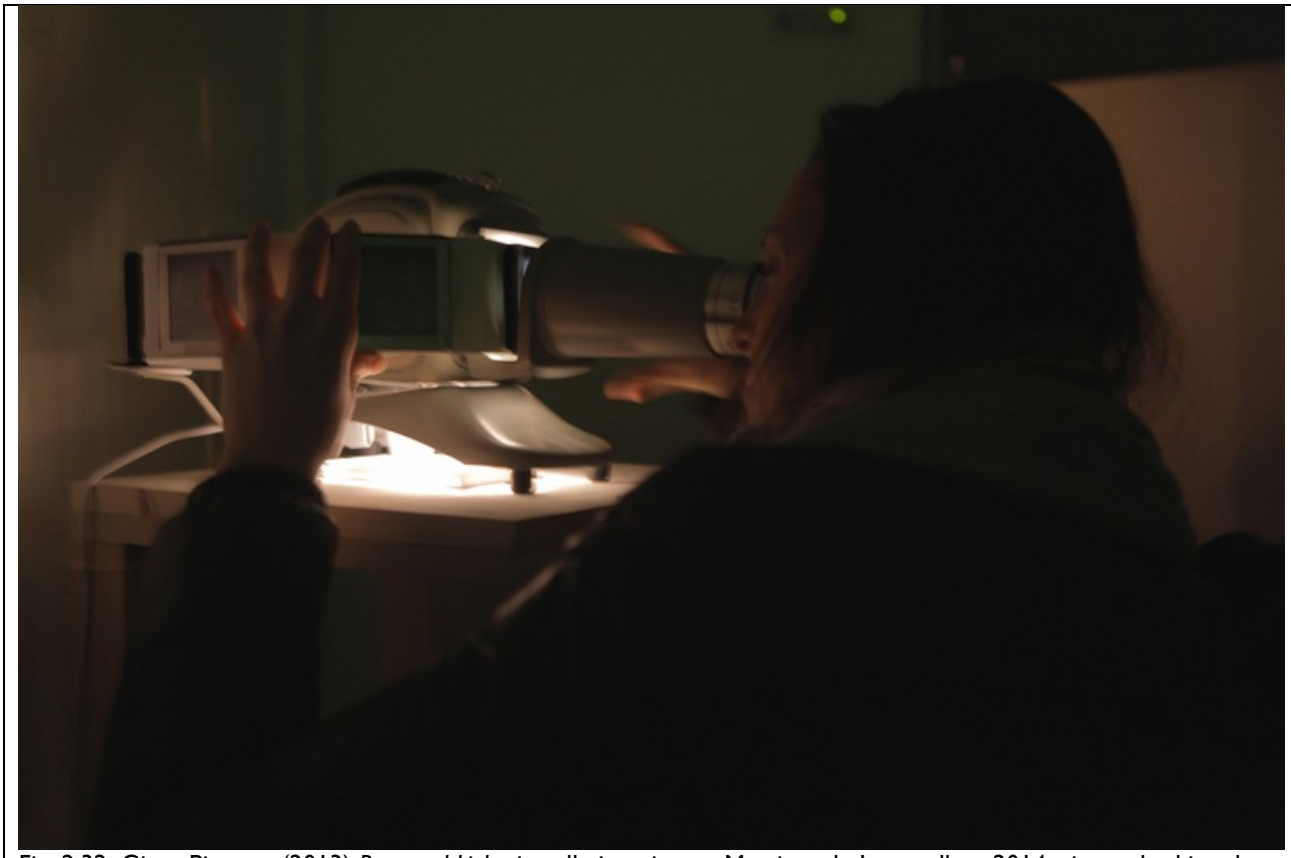

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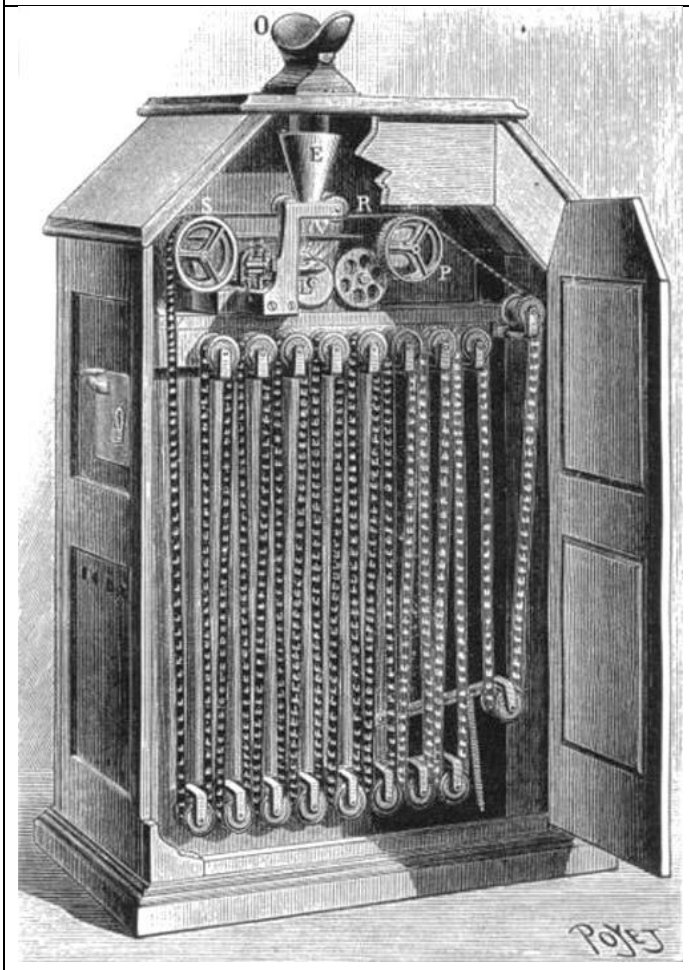

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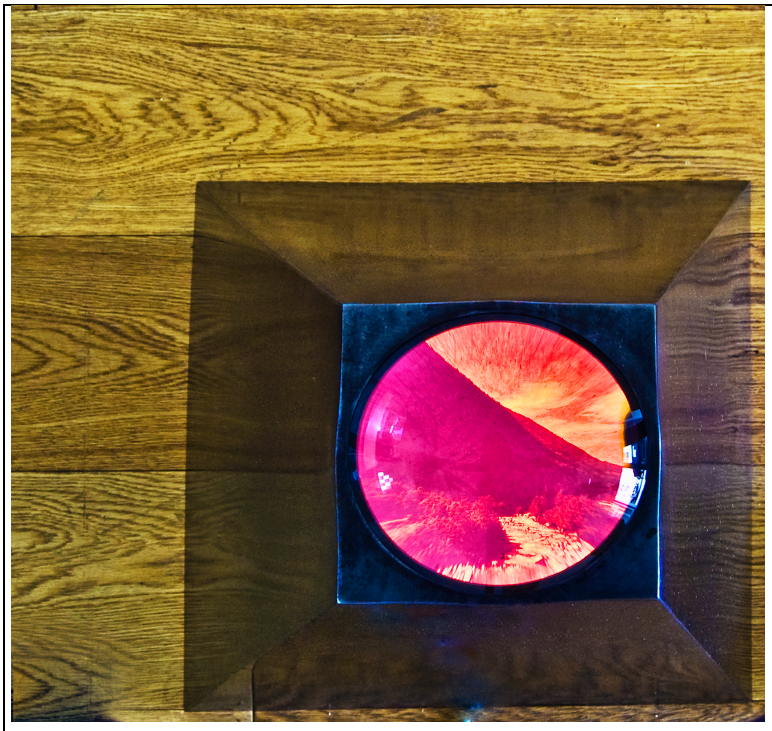

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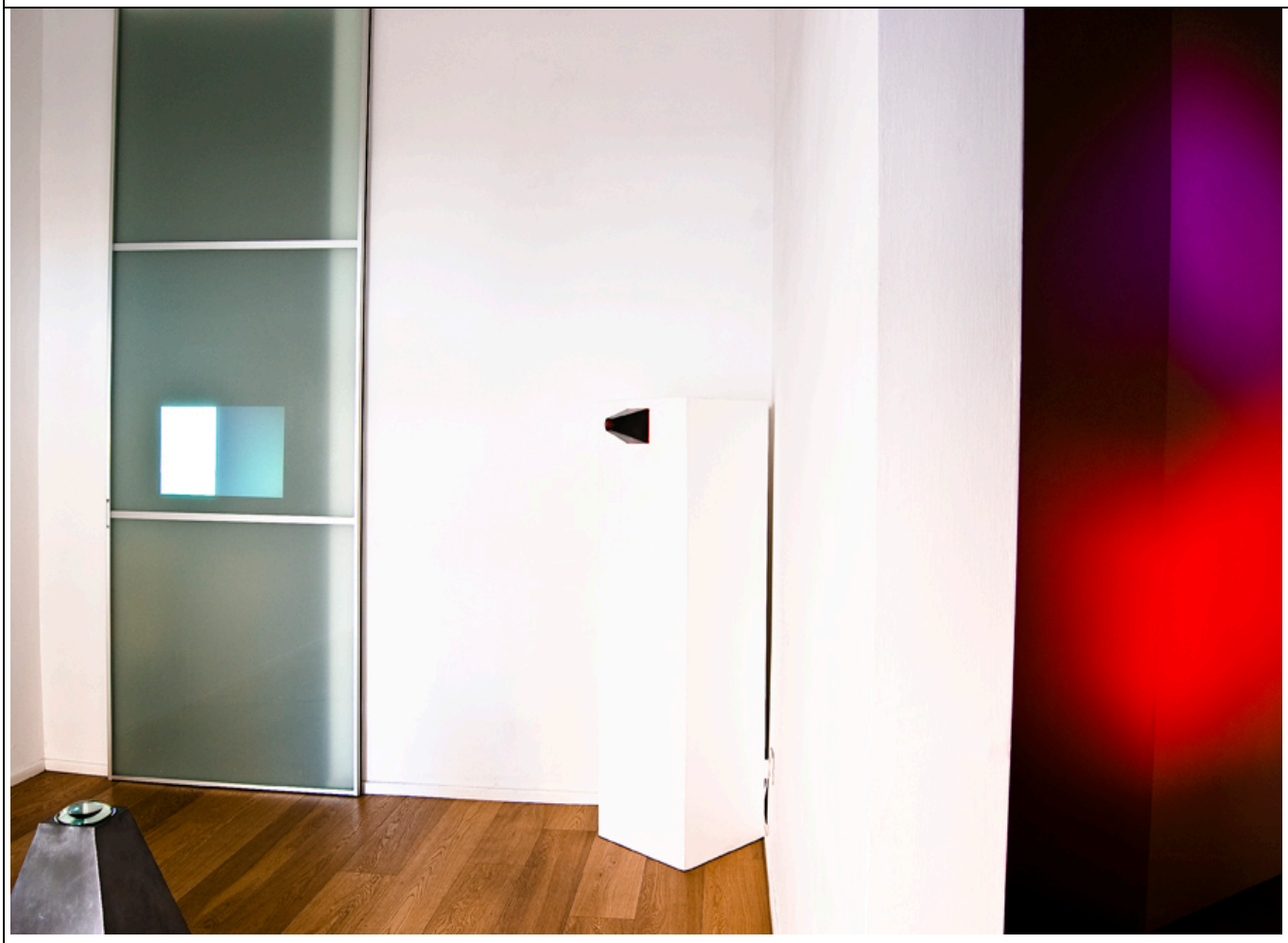

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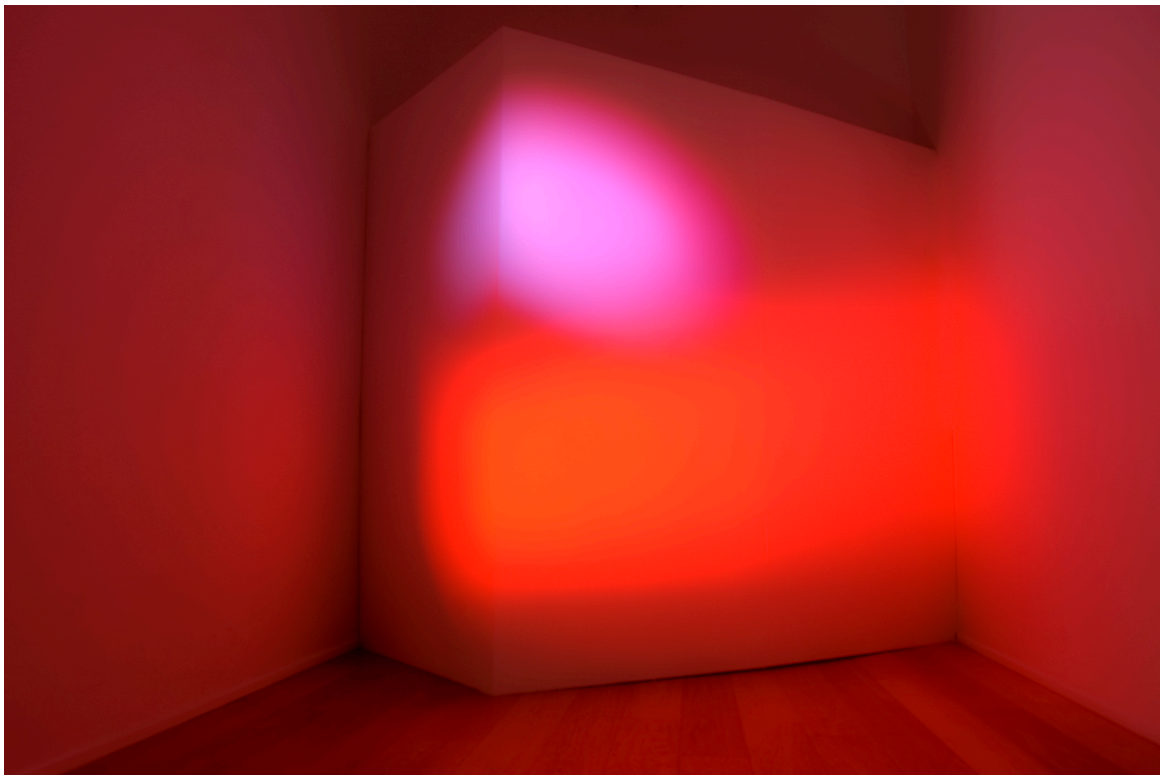

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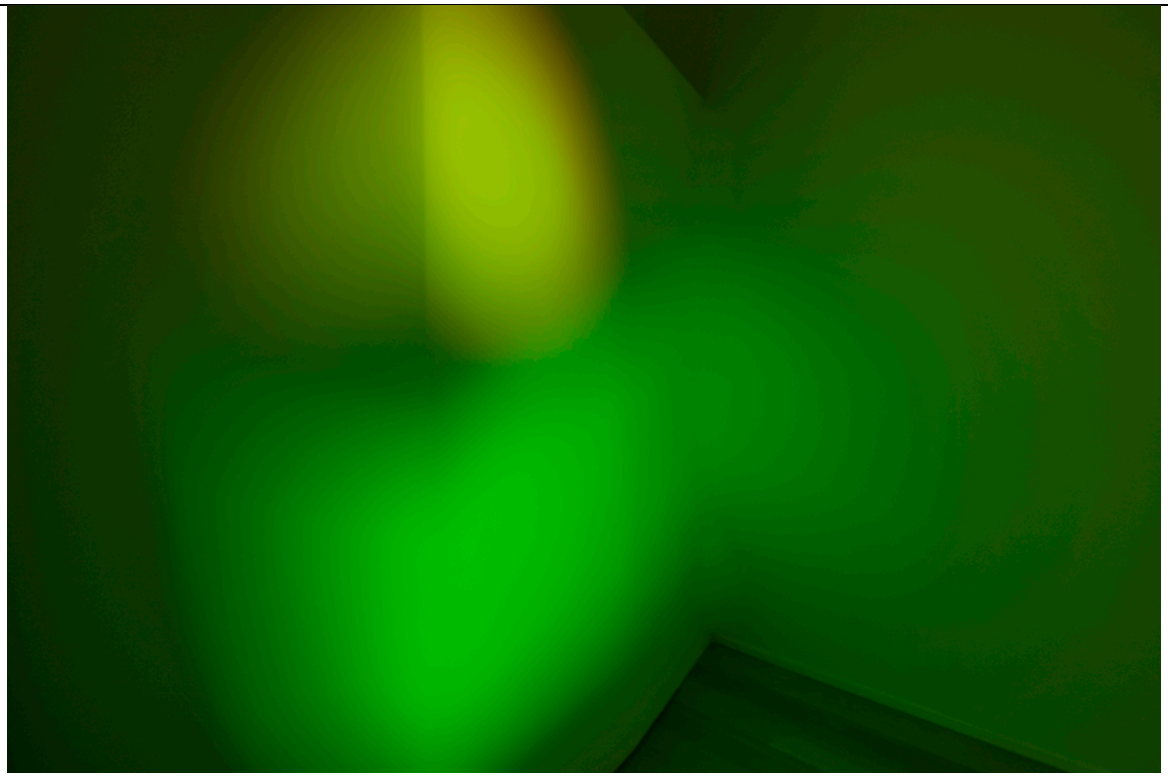

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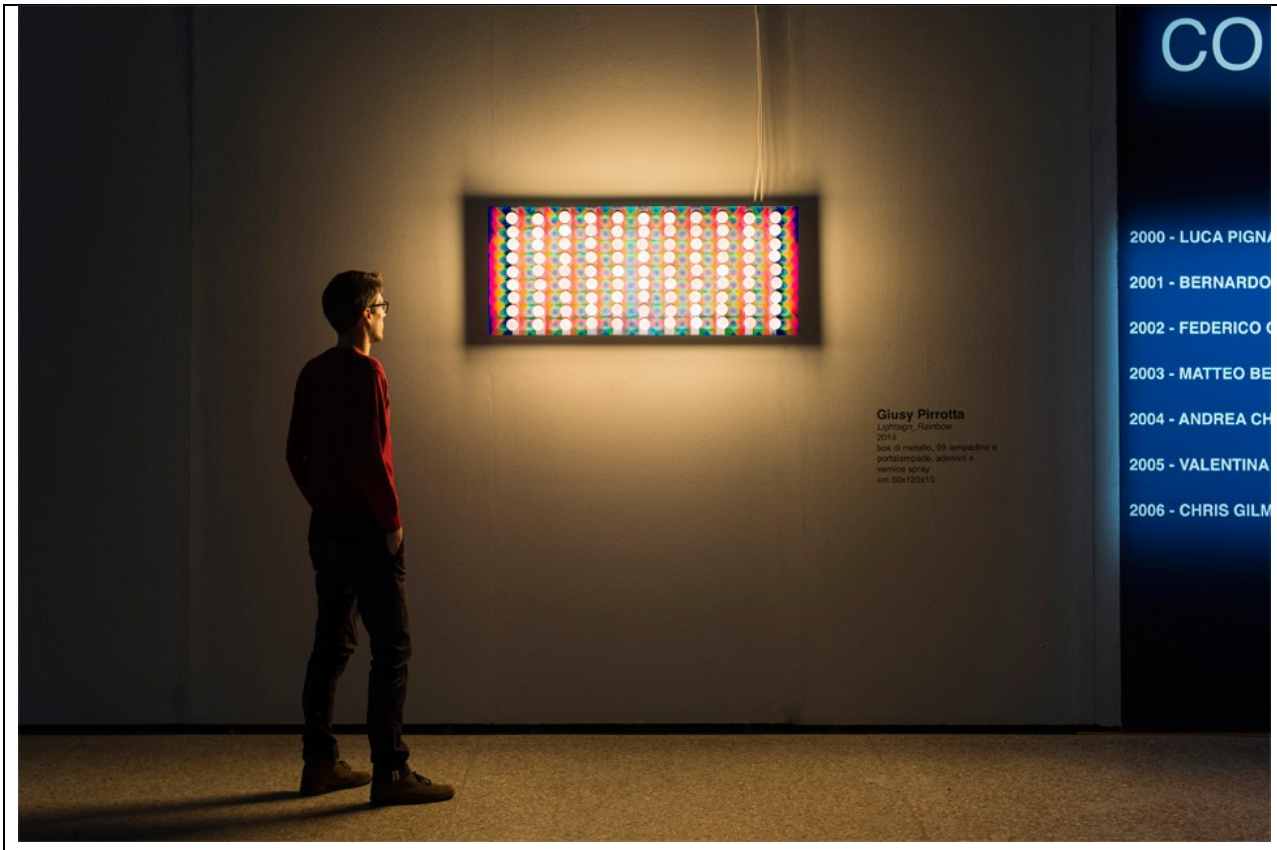

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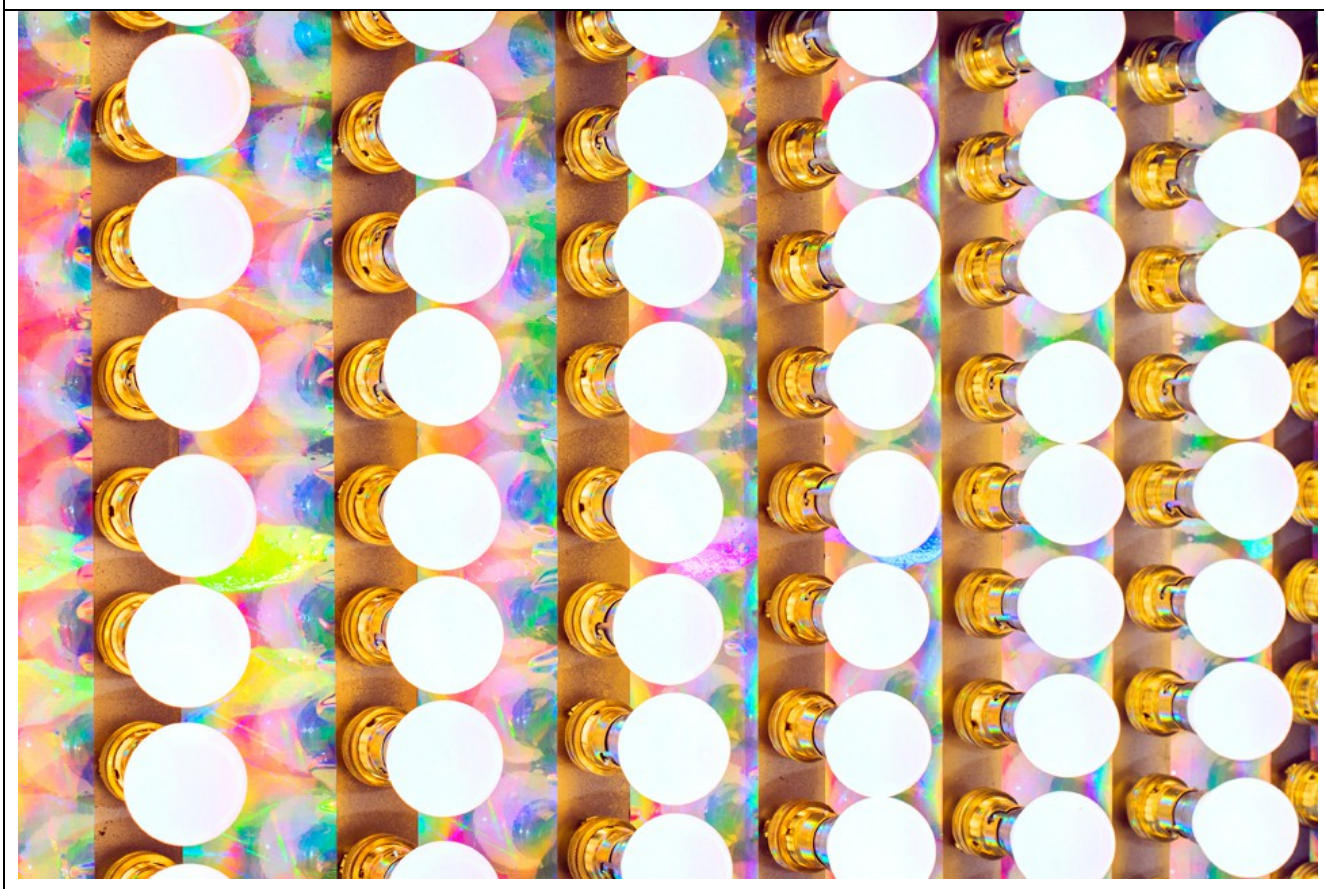

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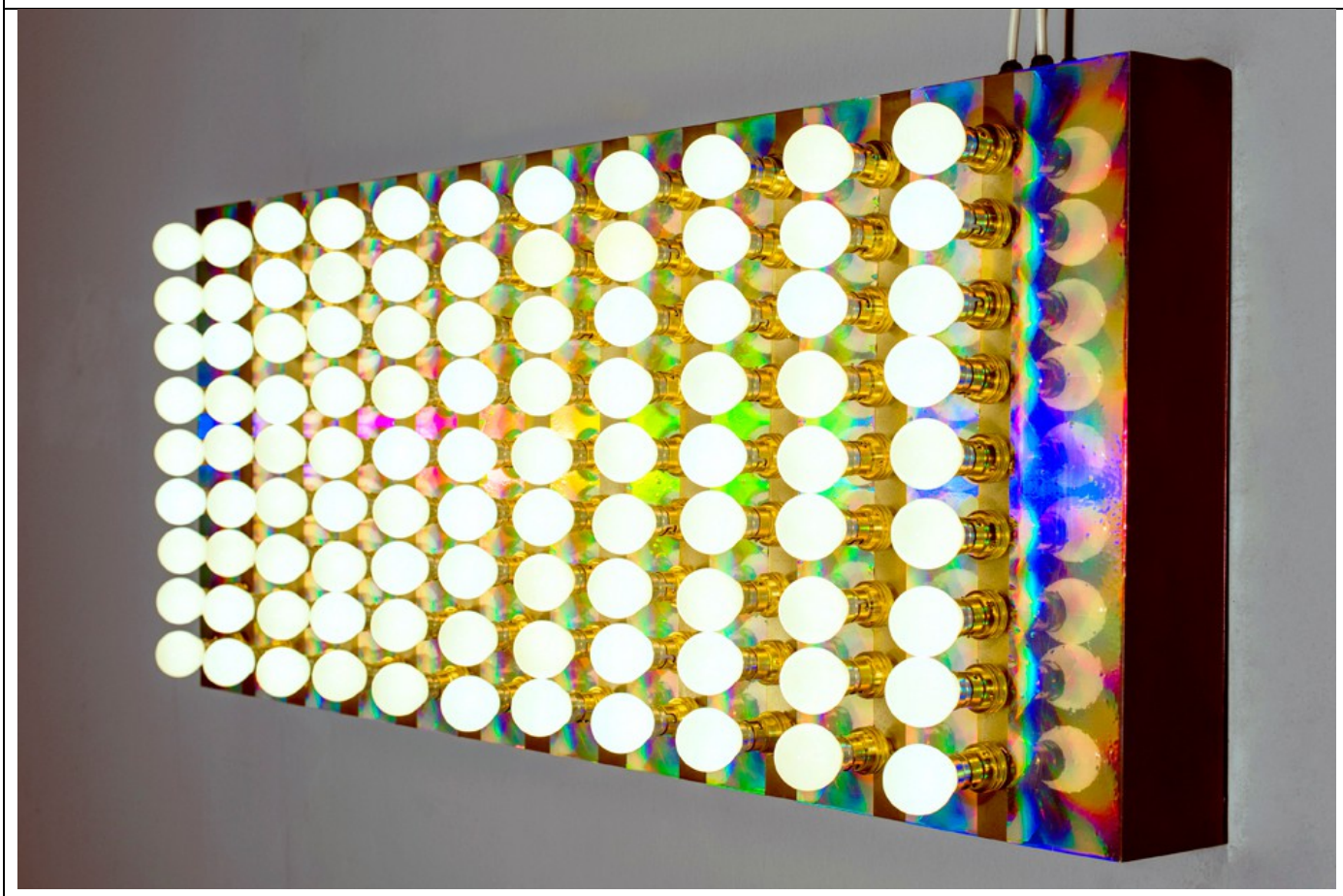

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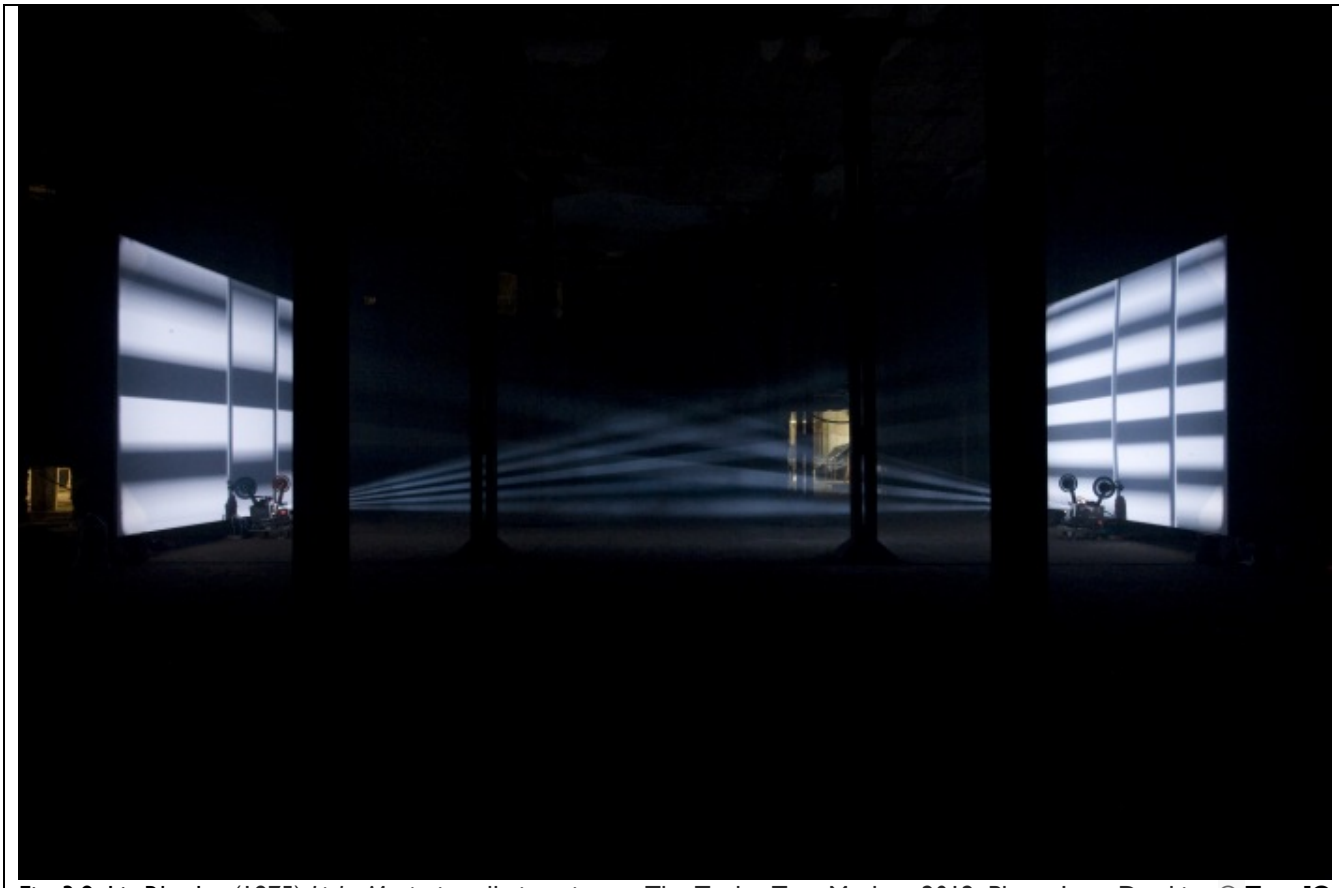

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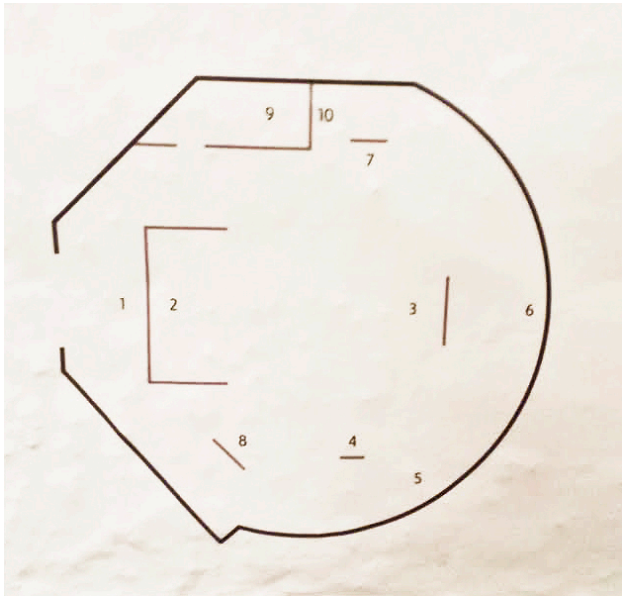

1. *I am still Breathing* (2009), Video Single screen projection, colour and sound, Running Time: 11min, Music by Modern Dog
2. *Nabua* (2009), Video, single screen projections, colour and sound, Running time: 9min.
3. *Primitive (2009),* Video, two synchronized screen projections, colour and sound, Running time: 29 min 35 sec.
4. *Nabua Song* (2009), Video single screen projection, colour and sound Running Time: 4min 15 sec
5. *An Evening Shoot*, (2009) Video, Single screen projection, colour, Running time: 4min 10 sec
6. *Making of the Spaceship* (2009), Video, single screen projection, colour, Running time: 28min 10 sec
7. *A Dedicated Machine* (2009), Video, Single screen projection, clour, Running time: 1min 35 sec
8. *Phantoms of Nabua* (2009), Video, projection on wall, colour and sound, Running Time: 10min 56 sec
9. *A Letter to Uncle Boonmee* (2009), Video, single screen projection, colour and sound
10. *Cujo, Year II, First Issue*, Apichatpong Weerasethakul, *Primitive* (2009) Publication, Courtesy of Edizioni Zero, Milan

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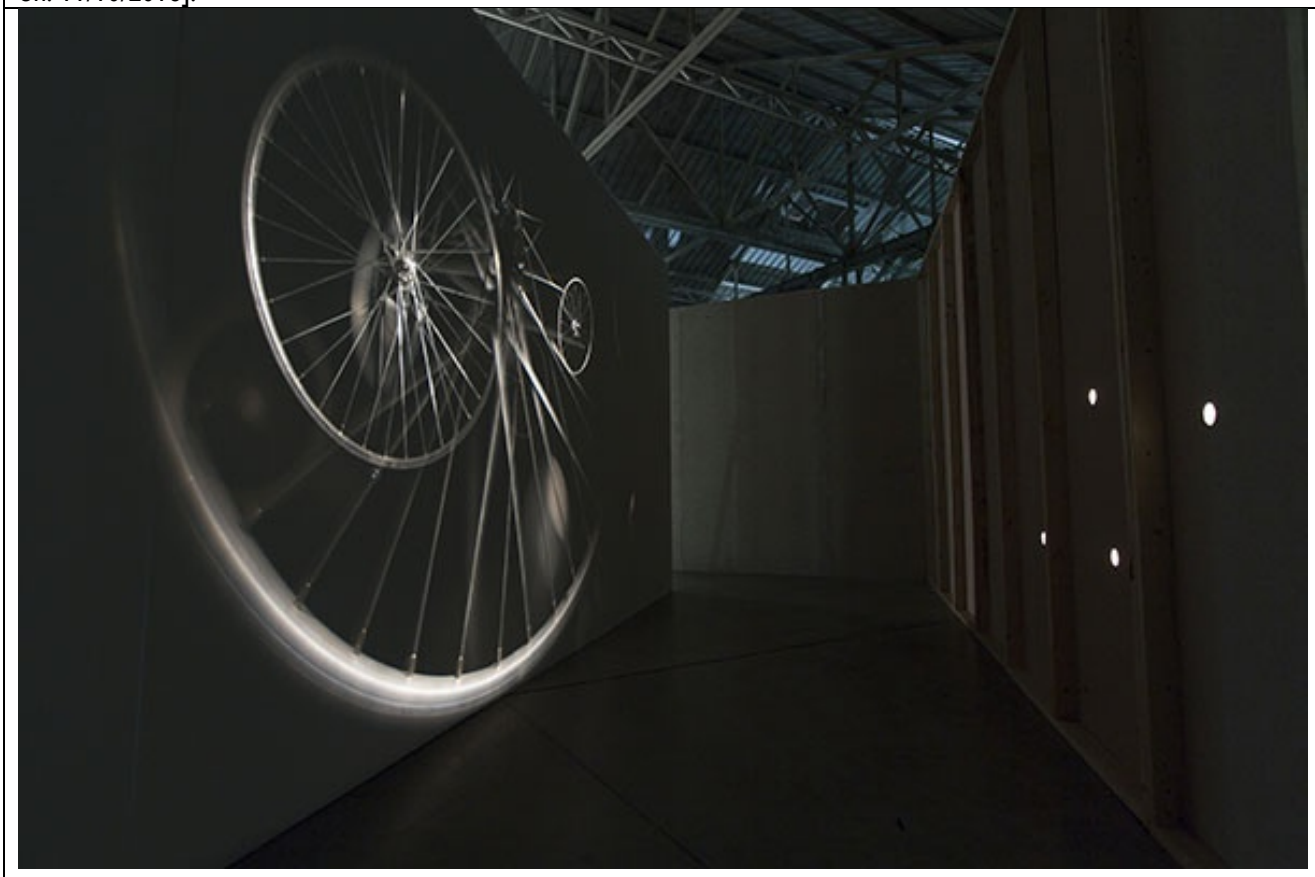

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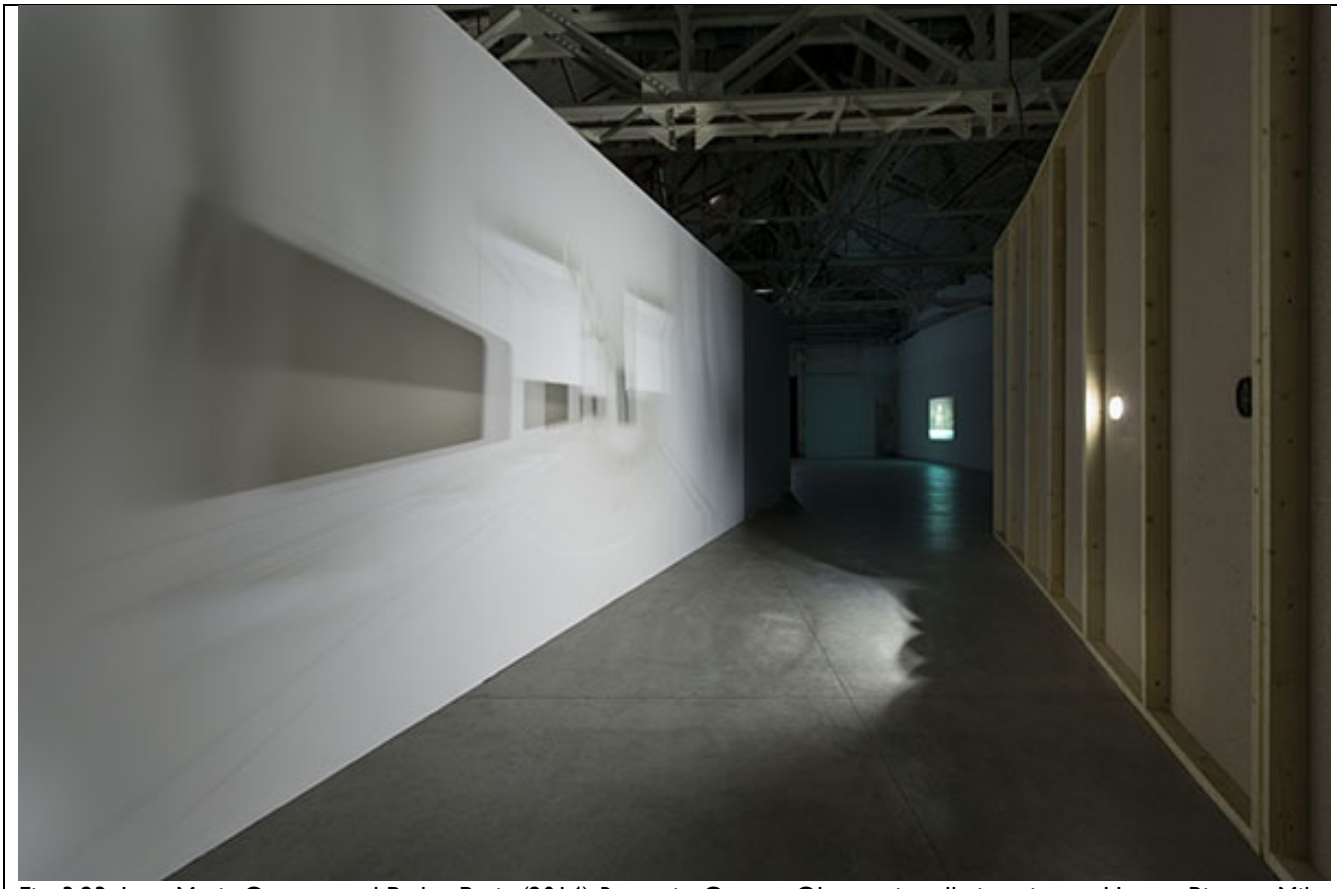

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João Maria Gusmão & Pedro Paiva, *Papagaio*

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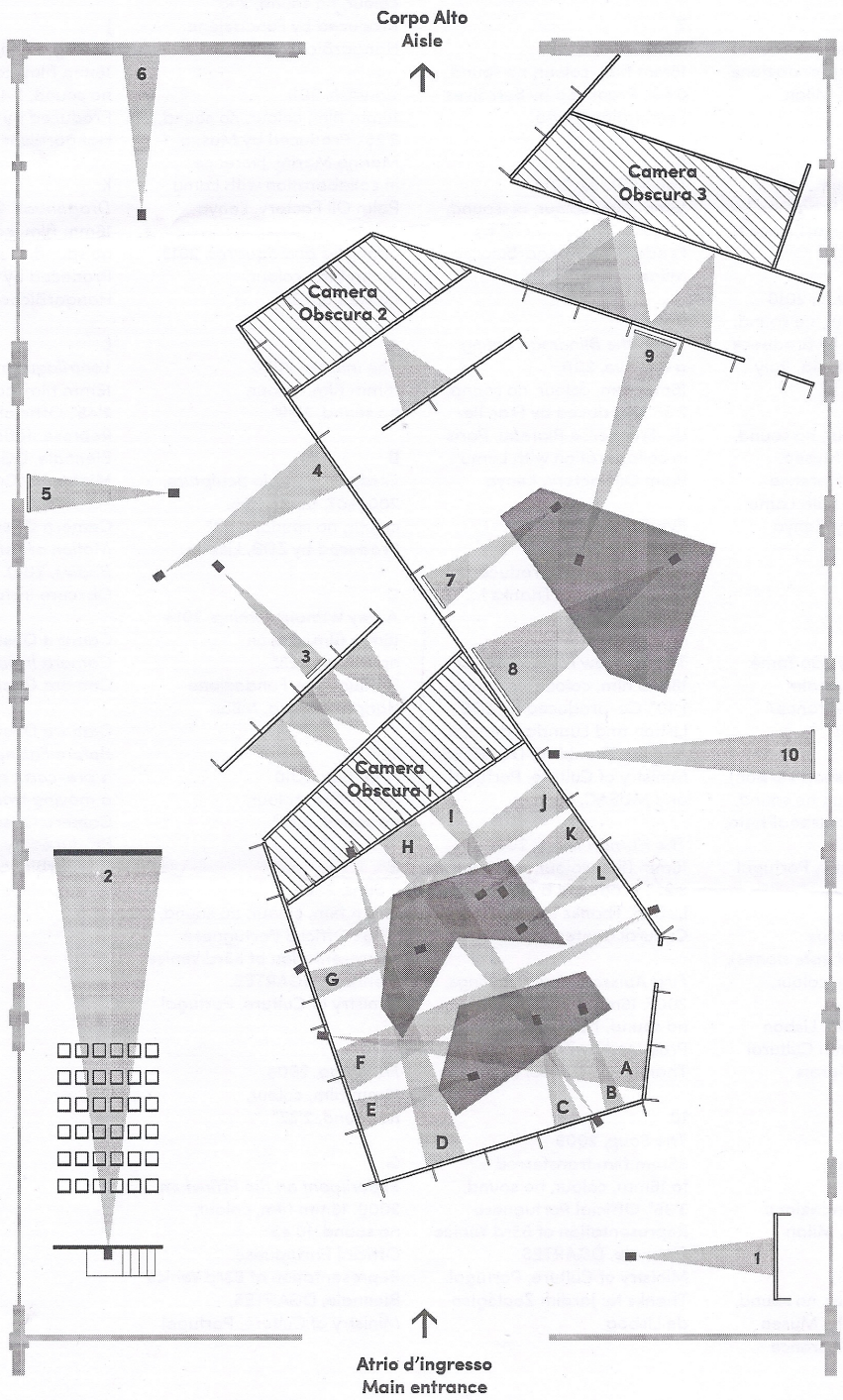

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Elenco delle Opere
List of works

1
Glossolalia ("Good morning"), 2014. 16mm film, colour, no sound, 7'10"
Produced by Fondazione HangarBicocca, Milan

2
Papagaio, 2014
16mm film, colour, no sound, 43'. Produced by Fondazione HangarBicocca, Milan

3
Pipe, 2014
16mm film, colour, no sound, 2'29". Produced by Fondazione HangarBicocca, Milan

Spaghetti Tornado, 2010
16mm film, colour, no sound, 2'47". Produced by Brodbeck Foundation, Catania, Italy

Donkey, 2011
16mm film, colour, no sound, 2'. Produced by Museo Marino Marini, Florence in collaboration with Lamu Palm Oil Factory, Kenya

4
Wheels, 2011
16mm film, colour, no sound, 2'33"
Co-Produced by São Tomé and Príncipe Biennale and Frac Île-de-France/ Le Plateau, Paris

Fulcrum, 2005 (short version)
16mm film, colour, no sound, 0'57". Thanks to: LisboaPhoto, Lisbon, DGARTES, Ministry of Culture, Portugal and ZDB, Lisbon

Hydraulics of Solids (or the man that eats stones), 2007. 16mm film, colour, no sound, 4'13"
Produced by ZDB, Lisbon
Thanks to: Inhotim Cultural Center, Minas Gerais

5
Taxidriver, 2014
16mm film, colour, no sound, 2'38"
Produced by Fondazione HangarBicocca, Milan

Under a car, 2011
16mm film, colour, no sound, 1'48". Produced by Museo Marino Marini, Florence

Placing the fisheye, 2012
16mm film, colour, no sound, 2'30". Produced by Kunsthaus Glarus

6
Cross Eyed Table Tennis, 2014
16mm film, colour, no sound, 4'27". Produced by Fondazione HangarBicocca, Milan

7
Meteoritic, 2008
16mm film, colour, no sound, 6'49". Produced by Serralves Foundation, Porto

8
Falling Trees, 2014
16mm film, colour, no sound, about 8'55". Produced by Fondazione HangarBicocca, Milan

9
Solar, the Blindman Eating a Papaya, 2011
16mm film, colour, no sound, 2'35". Produced by Frac Île-de-France/Le Plateau, Paris in collaboration with Lamu Palm Oil Factory, Kenya

Eye Eclipse, 2007
16mm film, colour, no sound, 2'40". Produced by ZDB, Lisbon. Thanks to: MUSAC, León

The Shadow Man, 2006-07
16mm film, colour, no sound, 1'40". Co-produced by ZDB, Lisbon and Luanda Triennial, Angola. Thanks to: DGARTES, Ministry of Culture, Portugal and MUSAC, León

The Human Torch, 2007
16mm film, colour, no sound, 2'23". Produced by ZDB, Lisbon. Thanks to: Inhotim Cultural Center, Minas Gerais

First Abissological Drawings, 2007. 16mm film, colour, no sound, 1'40"
Produced by ZDB, Lisbon. Thanks to: MUSAC, León

10
The Soup, 2009
35mm film transferred to 16mm, colour, no sound, 3'35". Official Portuguese Representation of 53rd Venice Biennale, DGARTES, Ministry of Culture, Portugal. Thanks to: Jardim Zoológico de Lisboa

Hairy Stone, 2009
35mm film transferred to 16mm, colour, no sound, 1'19". Official Portuguese Representation of 53rd Venice Biennale, DGARTES, Ministry of Culture, Portugal

Motorcycle, Bike and Human Dots, 2014. 16mm film, colour, no sound, 2'18"
Produced by Fondazione HangarBicocca, Milan

Cowfish, 2011
16mm film, colour, no sound, 2'25". Produced by Museo Marino Marini, Florence in collaboration with Lamu Palm Oil Factory, Kenya

Triangles and Squares, 2013
16mm film, colour, no sound, 1'25"

A
The Initiate, 2008
16mm film, colour, no sound, 2'39"

B
Essay on a Liquid Sculpture, 2006-07. 16mm film, colour, no sound, 4'04"
Produced by ZDB, Lisbon

C
A Day Without Filming, 2014
16mm film, colour, no sound, 2'23"
Produced by Fondazione HangarBicocca, Milan

D
Heat Ray, 2010
16mm film, colour, no sound, 2'27"

E
3 Suns, 2009
16mm film, colour, no sound, 0'50". Official Portuguese Representation of 53rd Venice Biennale, DGARTES, Ministry of Culture, Portugal

F
Fried Egg, 2008
16mm film, colour, no sound, 2'37"

G
Experiment on the Effluvium, 2009. 16mm film, colour, no sound, 10'43"
Official Portuguese Representation of 53rd Venice Biennale, DGARTES, Ministry of Culture, Portugal

H
Turtle, 2011
16mm film, colour, no sound, 2'40". Produced by Frac Île-de-France/Le Plateau, Paris

I
Pot smaller than pot, 2010
16mm film, colour, no sound, 2'25"

J
Rolling a Croissant, 2014
16mm film, colour, no sound, 2'45"
Produced by Fondazione HangarBicocca, Milan

K
Dragonball, 2014
16mm film, colour, no sound, 2'31"
Produced by Fondazione HangarBicocca, Milan

L
Ventriloquism, 2009
16mm film, colour, no sound, 2'45". Official Portuguese Representation of 53rd Venice Biennale, DGARTES, Ministry of Culture, Portugal

Camera Obscura 1
Motion of Astronomical Bodies, 2010. Camera Obscura installation

Camera Obscura 2
Camera Inside Camera, 2010
Camera Obscura installation

Camera Obscura 3
Before Falling Asleep, a pre-cortical image inside a moving train, 2014
Camera Obscura installation
Produced by Fondazione HangarBicocca, Milan

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Fig. 3.34: David Adjaye (2015) *Arena*, 56th Venice Biennale Central Pavilion, view of the installation during Joana Hadjithomas & Khalil Joreige, 2009–2015, daily reading of the artists book *Latent Images: Diary of a Photographer* (120'), Photo taken during Research Visit at 56th Venice Biennale, September 2015.

Fig. 3.35: David Adjaye (2015) *Arena*, 56th Venice Biennale Central Pavilion, view of the installation during Joana Hadjithomas & Khalil Joreige, 2009–2015, daily reading of the artists book *Latent Images: Diary of a Photographer* (120'), Photo taken during Research Visit at 56th Venice Biennale, September 2015.

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Fig. 3.39: Tobias Putrih (2007) *Venetian Atmospheric*, view of the Slovenian Pavilion from outside in the dark at the 52nd Venice Biennale [Online Image] available at: http://www.beamcontemporaryart.com/searchart?page=5&field_artwork_artist_nid=185, [Accessed on: 15/01/15].

Fig. 3.40: Tobias Putrih (2007) *Venetian Atmospheric*, view of the Slovenian Pavilion from outside in the daylight at the 52nd Venice Biennale [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185 [Accessed on: 15/01/15].

Fig. 3.41: John Eberson (1929) Paramount Theatre, Indiana USA [Online Image] Available at: http://www.where-we-live.org/2011/04/atmospheric-theaters.html [Accessed on: 15/01/15].

Fig. 3.42: John Eberson (1928) Loew's Akron Theatre, Akron, Ohio [Online Image] Available at: http://ornamentalplaster.blogspot.co.uk/2012/06/john-eberson-architect-of-operatic.html [Accessed on: 15/01/15].

Fig. 3.43: Tobias Putrih (2008) *Cinema Attitudes*, installation view at Attitudes, Geneva [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

Fig. 3.44 Tobias Putrih (2008) *Cinema Attitudes*, installation view at Attitudes, Geneva [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

Fig. 3.45: Tobias Putrih (2009) *Cinema Printemps*, installation view at Musee des Abattoirs, Toulouse [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

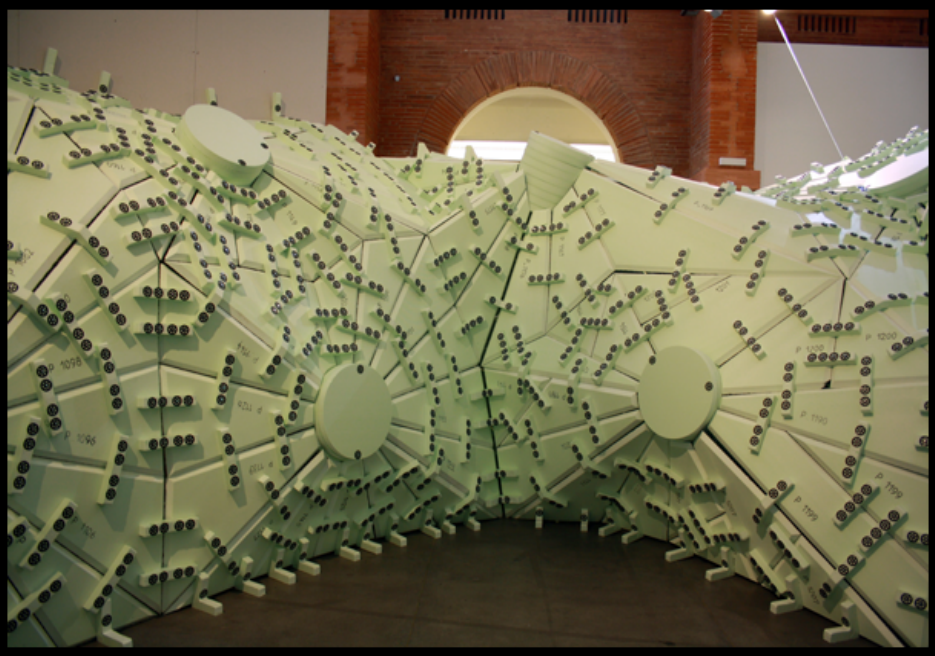

Fig. 3.46: Tobias Putrih (2009) *Cinema Printemps*, installation view at Musee des Abattoirs, Toulouse [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

Fig.3.47: Tobias Putrih (2010) *Siska Internationa*l, installation view, Espace 315, Centre Pompidou, Paris [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

Fig. 3.48: Tobias Putrih (2010) *Siska International*, installation view, Espace 315, Centre Pompidou, Paris. Photo credit: Georges Meguerditchian. Courtesy the artist and Meulensteen Gallery, New York [Online image] Available at: http://blog.art21.org/2011/02/24/tobias-putrih/#.VL45c2SsXJY [Accessed on: 15/01/15].

Fig. 3.49: Tobias Putrih (2010) *Siska Internationa*l, Installation view, Espace 315, Centre Pompidou, Paris [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

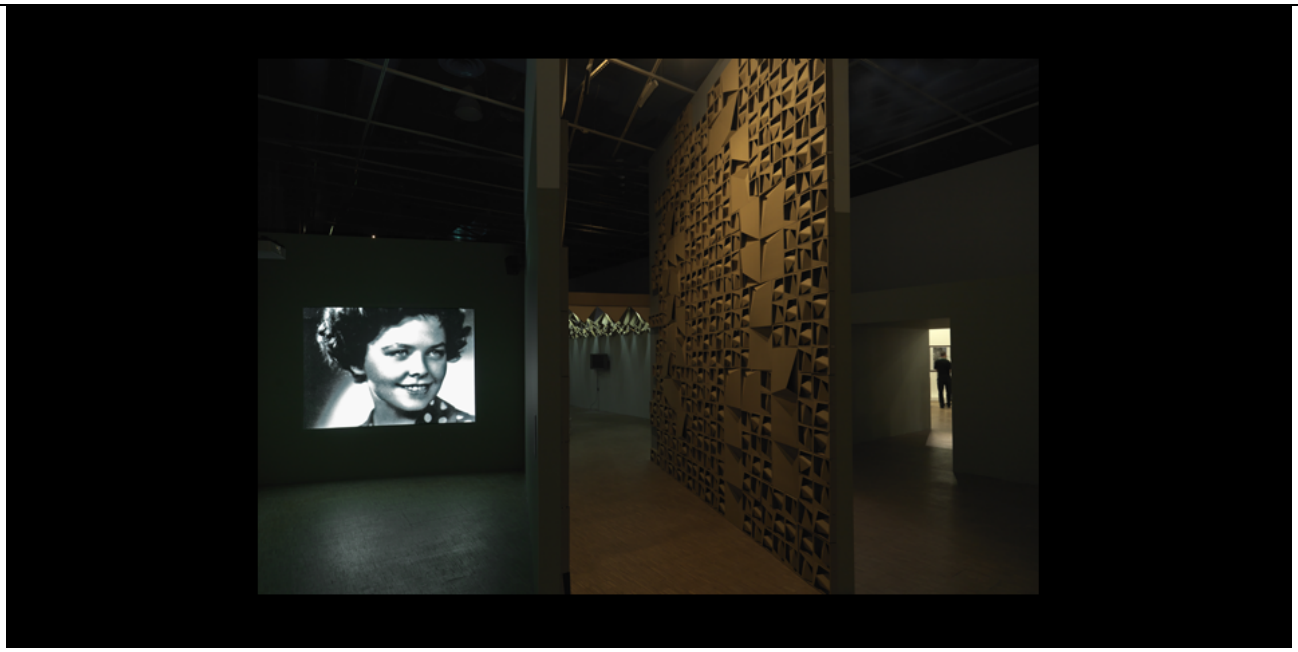

Fig. 3.50: Tobias Putrih (2010) *Siska Internationa*l, installation view, Espace 315, Centre Pompidou, Paris [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185# [Accessed on: 15/01/15].

Fig. 3.51: Tobias Putrih (2008) Screening space of *Empty the pond to get the fish* part of the exhibition *Runa Islam featuring Tobias Putrih* (4 September–3 October 2008 White Cube Gallery London) [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185 [Accessed on: 15/01/15].

Fig. 3.52: Tobias Putrih (2008) Screening space of *Empty the pond to get the fish* part of the exhibition *Runa Islam featuring Tobias Putrih* (4 September–3 October 2008 White Cube Gallery London) [Online Image] Available at: http://www.beamcontemporaryart.com/search-art?page=5&field_artwork_artist_nid=185 [Accessed on: 15/01/15].

Fig. 3.53: Giusy Pirrotta (2015-2016) *Lusterware_Pineapples*, glazed ceramic sculptures, rotating RGB light bulb, plexiglass, steel stands.

Fig. 3.54: Giusy Pirrotta (2015-2016) *Lusterware_Pineapples*, detail, detail of the glazed ceramic sculpture, rotating RGB light bulb, plexiglass, steel stands.

Fig. 3.55: Giusy Pirrotta (2015-2016) *Lusterware_Pineapples*, glazed ceramic sculptures, RGB light bulb, plexiglass, steel stands.

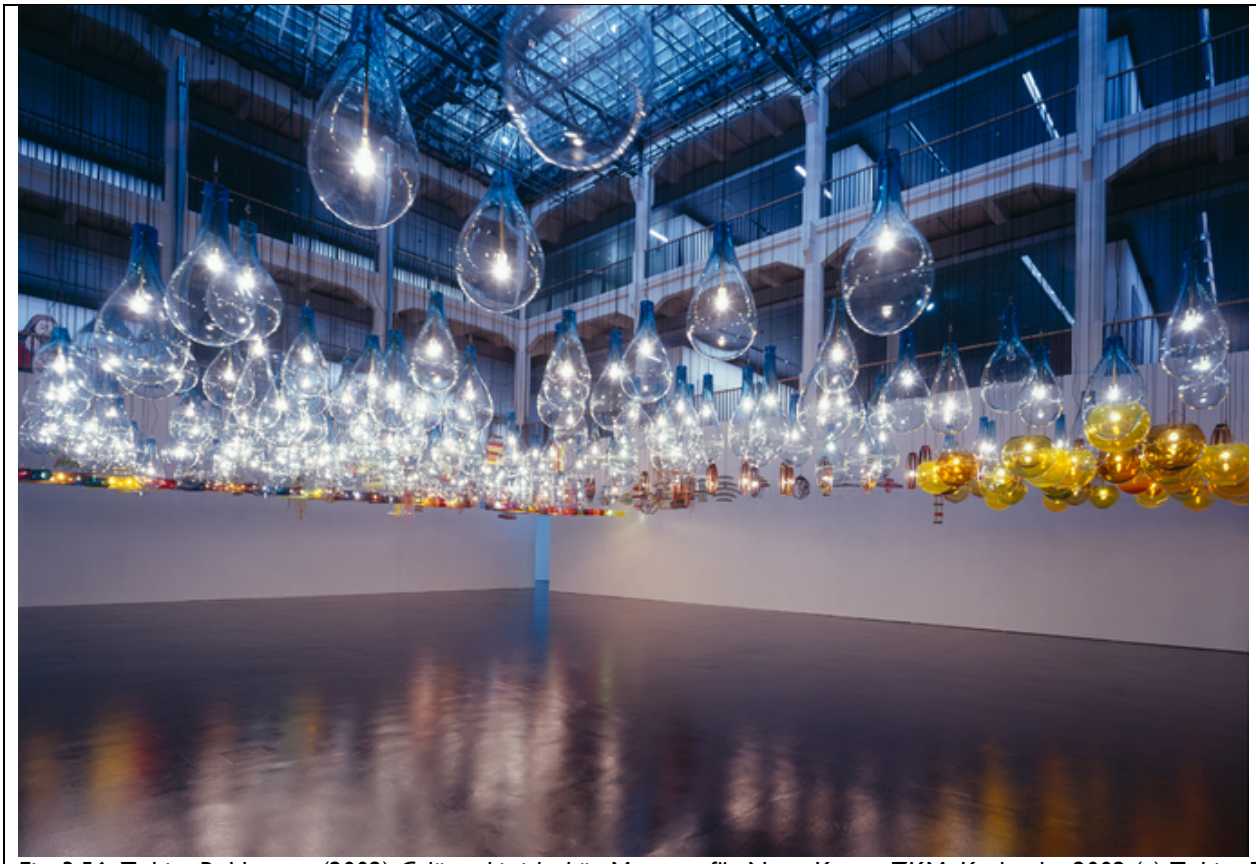

Fig. 3.56: Tobias Rehberger (2002) *Geläut - bis ichs hör*, Museum für Neue Kunst, ZKM, Karlsruhe 2002 (c) Tobias Rehberger, courtesy of Neugerriemschneider, Berlin, Photo Wolfgang Günzel [Online Image] available at: http://www.wochikochi.jp/english/special/2011/09/yokohama-triennale2011.php [Accessed on: 12/10/2016]

Fig. 3.57: Philippe Parreno (2013) *56 Flickering Lights*, installation view at Arsenale 56th Venice Biennale, Photo taken during a Research visit in September 2015, Venice.

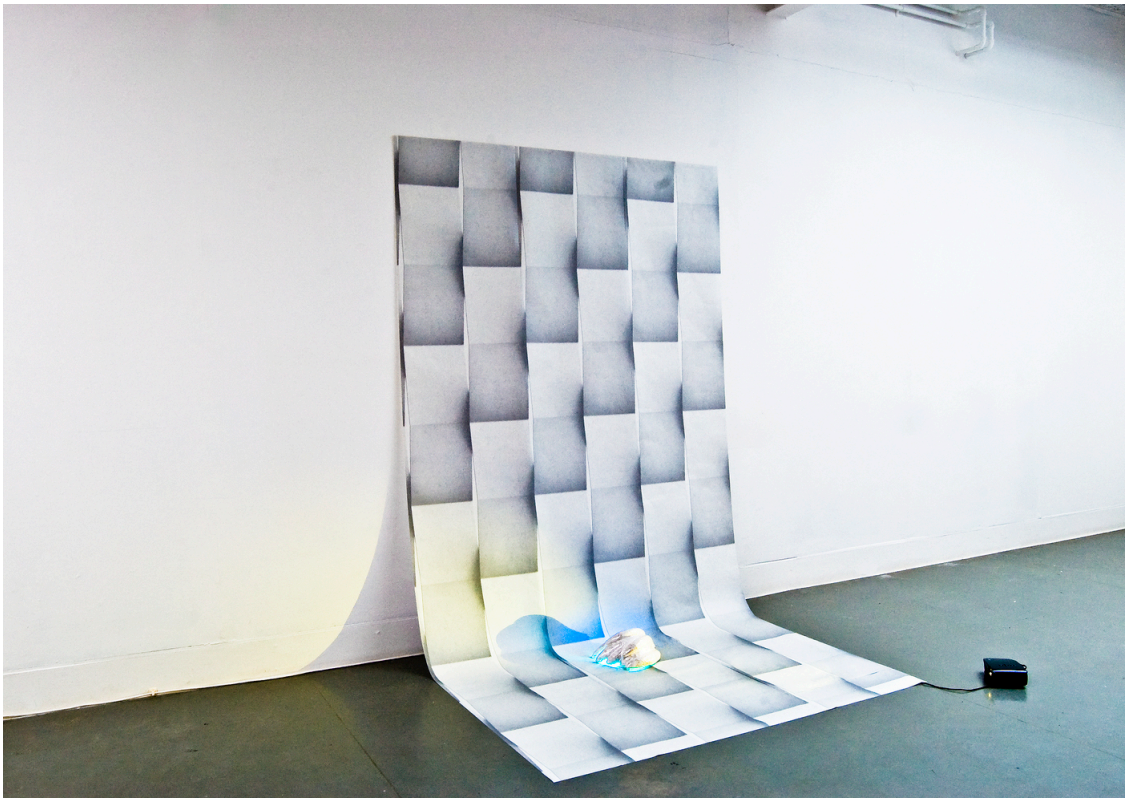

Fig. 3.58: Giusy Pirrotta (2015-2016) *Bananas*, installation view, glazed ceramic sculpture, changing colour LED light, UV light tube light, wallpaper, mini digital projector.

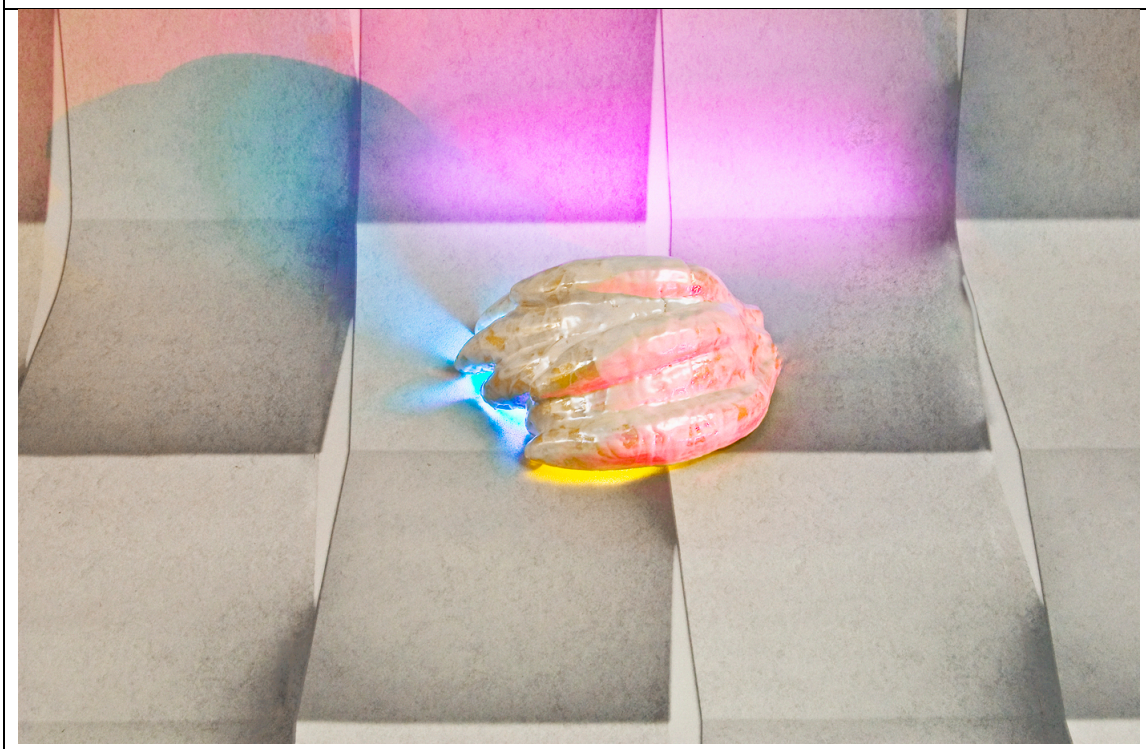

Fig. 3.59: Giusy Pirrotta (2015-2016) *Bananas*, detail, glazed ceramic sculpture, changing colour LED light, UV light tube light, wallpaper.

Fig. 3.60: Giusy Pirrotta (2015–2016) *Botany*, installation view at KN Film studio UCA Farnham, film set for the shooting of *Botany* Film, wallpaper, glazed ceramic sculptures, LED lights, monitor.

Fig. 3.61: Giusy Pirrotta (2015–2016) *Botany*, installation view at KN Film studio UCA Farnham, film set for the shooting of *Botany* Film, wallpaper, glazed ceramic sculptures, LED light, monitor.

Fig. 3.62: Giusy Pirrotta (2015–2016) *Botany*, installation view at KN Film studio UCA Farnham, film set for the shooting of Botany Film, wallpaper, glazed ceramic sculptures, LED light, monitor.

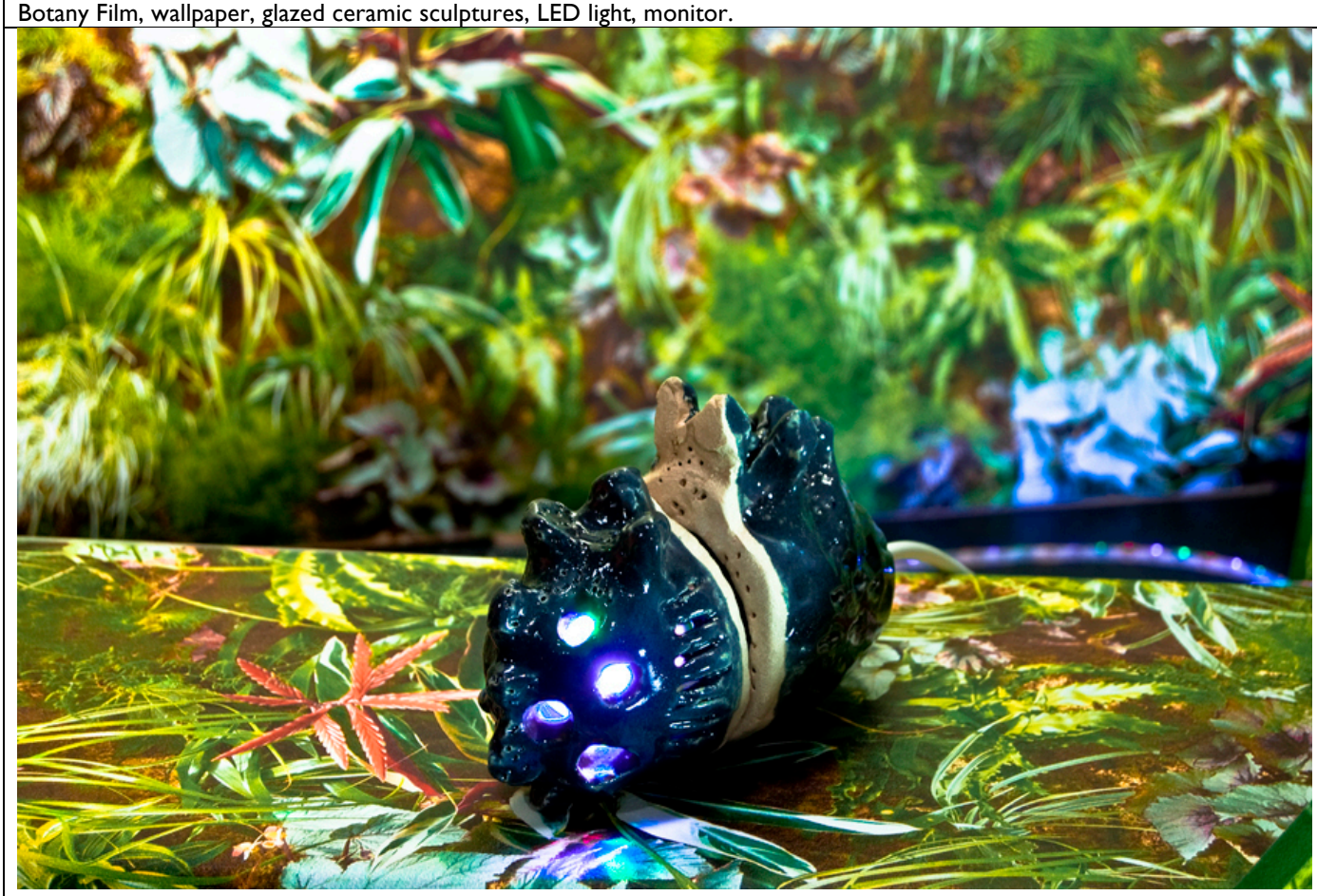

Fig. 3.63: Fig. 3.67 Giusy Pirrotta (2015–2016) *Botany*, detail of the glazed ceramic sculpture, LED light, wallpaper.

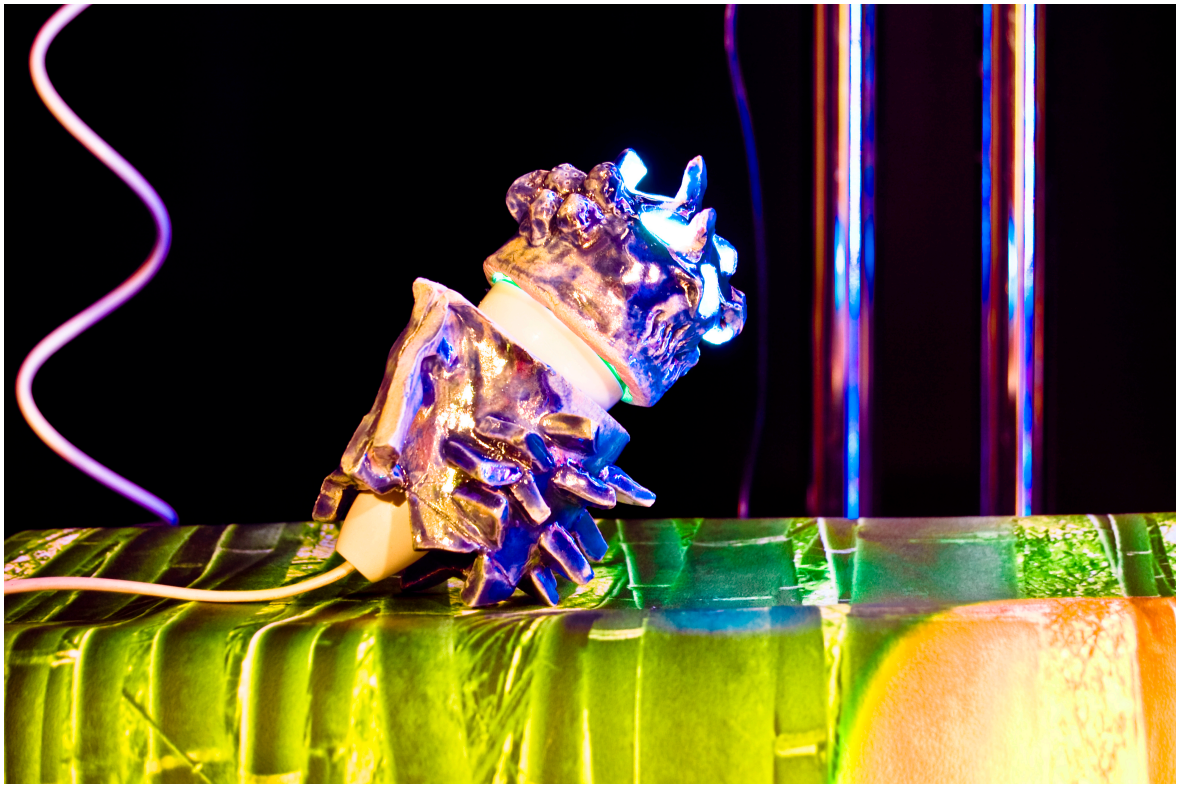

Fig. 3.64: Giusy Pirrotta (2015–2016) *Botany*, detail of the glazed ceramic sculpture, LED light, wallpaper.

Fig. 3.65: Viva Exhibition brochure.

Fig. 3.66: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) installation view, glazed ceramic sculptures, plexiglass and wood banisters, wallpaper, LED changing colour lights, LED mini digital projectors, mirror sheets, monitor, wood structure. Moving image: *Botany* HD video 6'10" on main central screen and *Botany* HD video excerpt on flat screen monitor.

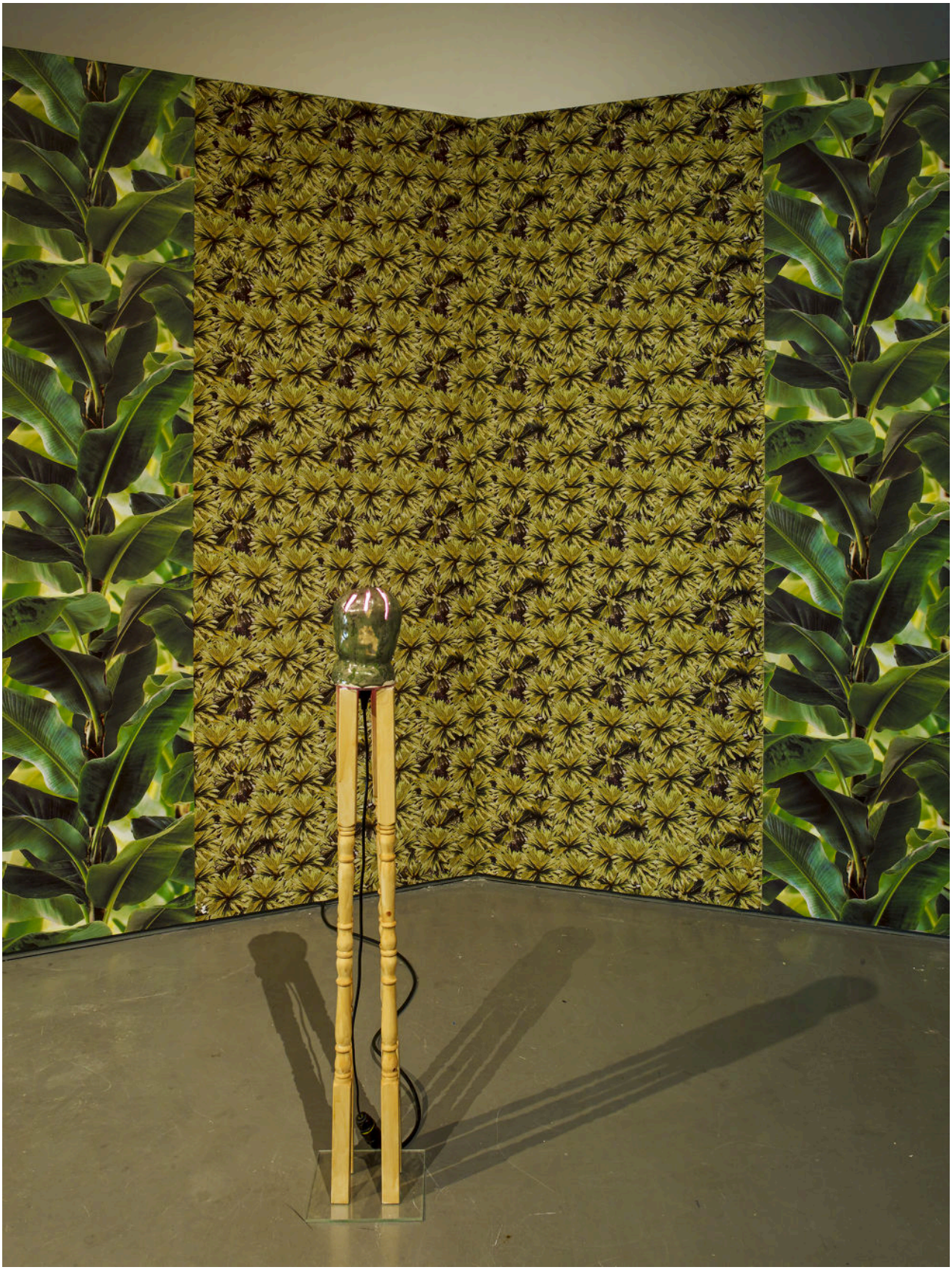

Fig. 3.67: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, glazed ceramic sculpture, plexiglass and wood banisters, wallpaper, LED changing colour light, *Palm dream* (2017) wallpaper view of customized design.

Fig. 3.68: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, glazed ceramic sculptures, plexiglass and wood banisters, wallpaper, LED changing colour lights.

Fig. 3.69: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of glazed ceramic sculpture, wallpaper, LED changing colour light.

Fig. 3.70: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, glazed ceramic sculptures, plexiglass and wood banisters, wallpaper, LED changing colour lights.

Fig. 3.71: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, glazed ceramic sculptures, plexiglass and wood banisters, wallpaper, LED changing colour lights, flat screen monitor, mirror sheets.

Fig. 3.72: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the glazed ceramic sculpture, wallpaper, LED mini video projector projecting lights and colours.

Fig. 3.73: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of glazed ceramic sculpture, wallpaper, LED mini video projector projecting lights and colours.

Fig. 3.74: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, glazed ceramic sculptures, plexiglass and wood banisters, wallpaper, LED changing colour lights, mirror sheets, *Astrid* (16mm colour film transferred to digital) moving image projected on the back of the standalone screen.

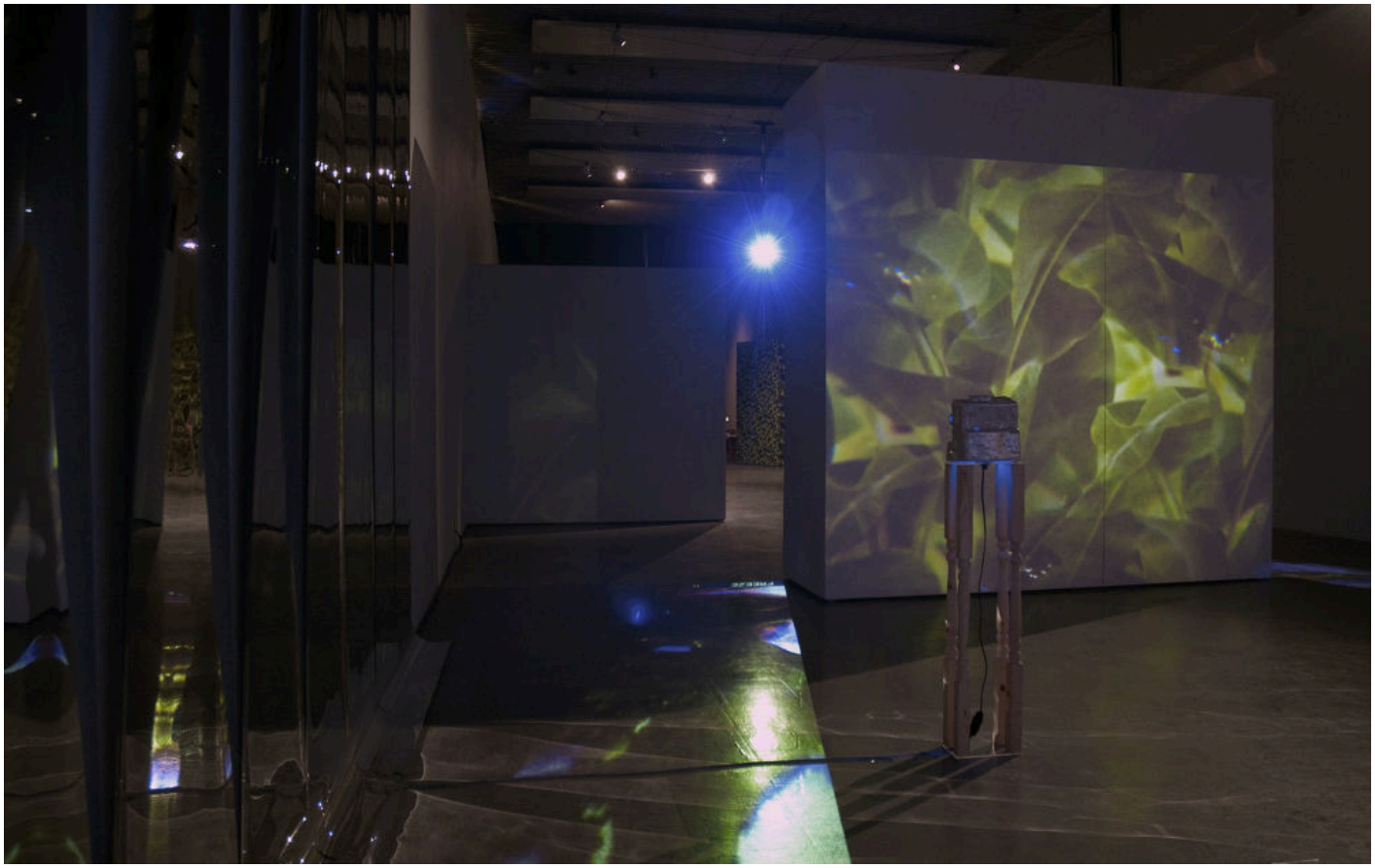

Fig. 3.75: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, ceramics glazed, plexiglass and wood banisters, wallpaper, LED changing colour lights, mirror sheets, *Astrid* (16mm colour film transferred on digital) moving image projected on the back of the standalone screen.

Fig. 3.76: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view, glazed ceramic sculptures, plexiglass and wood banisters, wallpaper, LED changing colour lights, mirror sheets, *Botany* video excerpt projected on the wall.

Fig. 3.77: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the glazed ceramic sculpture.

Fig. 3.78: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the installation view.

Fig. 3.79: Giusy Pirrotta, *Between the Glimpse and the Gaze* (2017) detail of the glazed ceramic sculpture.

END.