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LIBRARY OF LIGHT

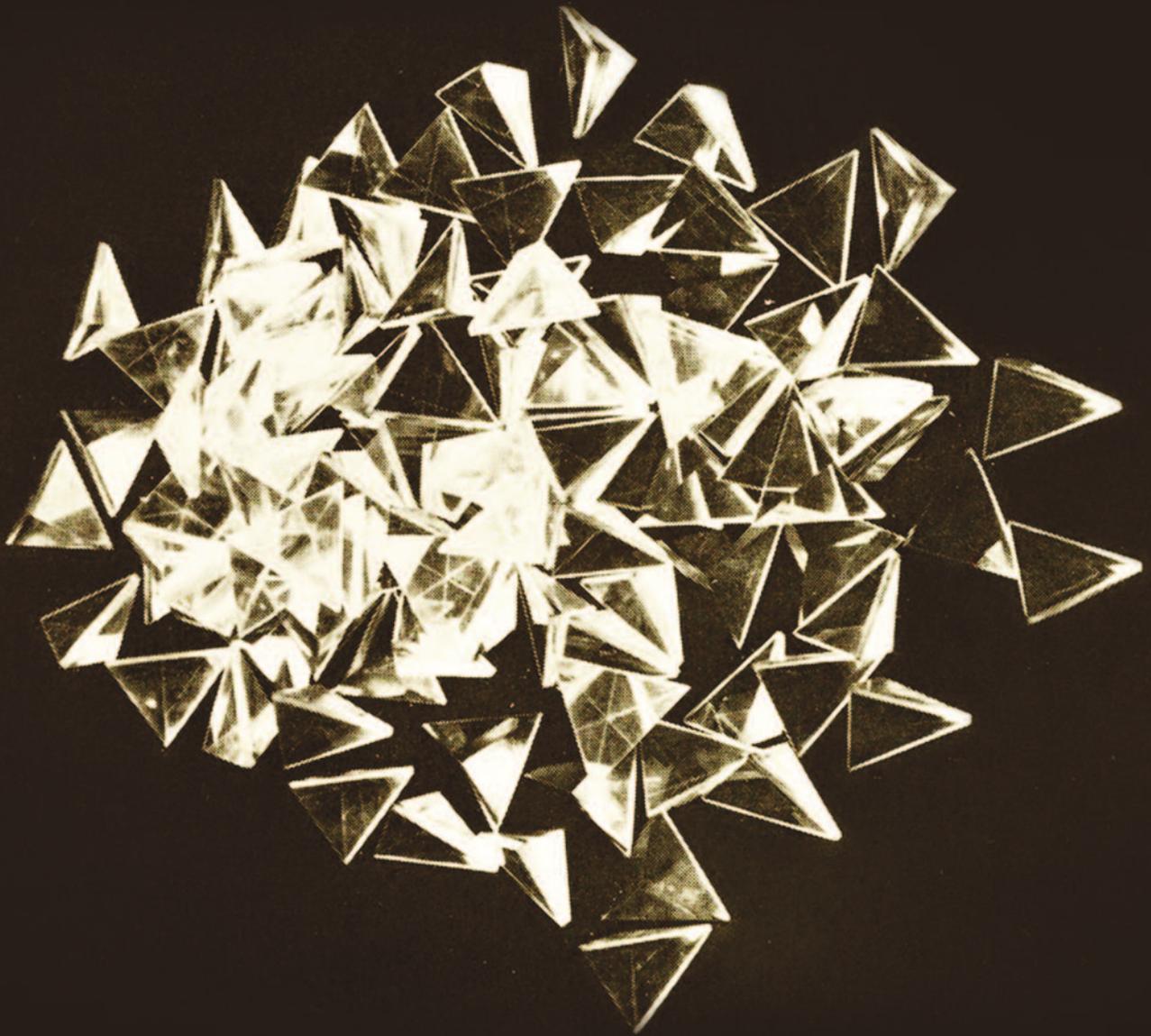
AN ARTISTIC FRAMEWORK TO EXPLORE LIGHT,
MATERIAL CULTURE AND SOCIAL EXPERIENCE

JO JOELSON

PhD 2020

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A thesis submitted in partial fulfilment of the
requirements of the University of Sunderland
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ABSTRACT

Library of Light is a framework, an imaginative construct created for researching light practice in the fields of art and design. The research is intended to contribute to the understanding of light as a medium of art, by examining its cultural history and its role in today's new frontiers of art, design and technology. The work has been conducted through interviews with practitioners, curators, producers and other experts involved in the processes of art and performance-making using light as a central component, from the 1960s onwards. These practices include art in the form of music, theatre, performance, fine art, film, photography, holography, digital media, architecture and the built environment, some of which involve collaboration between a number of these fields and across disciplines. The aesthetics of light based practice has evolved over the past six decades as a result of advances in digital media and technology, the integral role of which present challenges for the collection, preservation and archiving of works produced. Consequently, the project has sought to identify institutions whose roles include supporting, archiving, collecting, maintaining and presenting works involving light in the public domain and to consider the challenges entailed, from production, ownership and long-term commitment, to access and distribution. Central to this research framework is the book, *Library of Light* (authored by the researcher) and which presents encounters with a diverse selection of artists and designers. This undertaking was in parallel with smaller artist-curatorial projects devised to test modes of engagement and spectatorship: from radio broadcasts, artist talks, to writing and filmmaking, which together constitute a response to the experiential, temporal and performative nature of light as a medium of art. The ontological categories of Political Light, Mediating Light, Performance Light and Absent Light examine light-based practice in response to the political, social and ecological landscape, as well as new and evolving technologies and interdisciplinary experimentation. The research findings furthermore reveal the importance of language and the distinctive perspectives required to address light practice through process and materiality.

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I wish to thank all those who participated directly in the research process through interviews, exhibitions, radio broadcasts, films and residencies, and for the generous sharing of ideas, resources and materials that have contributed some of the most significant insights.

Thank you to Professor Beryl Graham and Mike Collier for their incredible support, guidance and encouragement throughout. This research has benefited from being AHRC funded and, with additional support from the University of Sunderland, has enabled me to undertake invaluable periods of overseas research. Thank you to my publisher Lund Humphries and commissioning editor Valerie Rose, who believed in this project from the beginning and afforded the *Library Of Light* book the right sensibility.

Thanks also to past mentors, colleagues, friends and family who have generously given their time and supported me in many projects and without whom this undertaking would have been near impossible.

Special thanks to dear friends who have attended to the layout and copy-editing with absolute commitment, wit and skill. And to my son Jetson.

I dedicate this text to light artists and designers across the globe.

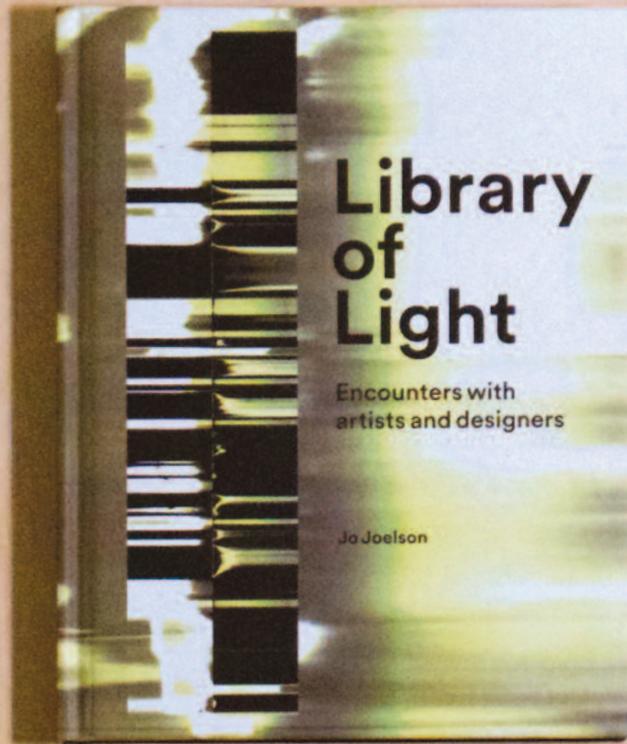


Fig. 2: **Library of Light** book by Jo Joelson (2019)

CHAPTER 1

Introduction

1.1 Beginnings: A Framework for Research

1.2 Questions and Aims

1.3 Methodology

1.4 Scope and Key Terms

1.5 Structure of the Thesis

1.1 BEGINNINGS:

LIBRARY OF LIGHT AS A FRAMEWORK FOR RESEARCH

This PhD practice-based programme is informed by my background specifically working with light as an artist, designer, researcher and writer and as co-director of London Fieldworks, the collaborative, interdisciplinary art practice. London Fieldworks has over two decades produced installation, sculpture, architecture, film and publications, with projects developed from the idea of ecology as a complex interworking of social, natural and technological worlds. The practice has responded to the ways in which we interact with the environment, technology, the narratives of popular culture, the media and the close integration of art and society. In the early part of the PhD one or two of the projects were undertaken as a collaboration with London Fieldworks. Beyond this initial phase the projects were undertaken as a solo artist-curator. A 'Timeline' of the PhD programme and individual projects is included in the Appendices (see Appendix 8.1 and 8.2).

In the early stages of my career as a lighting designer and light artist with experience of working in performance contexts (theatre, fine-art, music) I made the decision to focus on the creative use of light within a fine art context. It was evident that formal disciplinary constraints existed, not only between creative fields such as fine art, theatre and music but also between the disciplines of art and science. Working with light began to stimulate an interest in undertaking research within the field of physics and optics and working with light not only as a medium but as a subject.

I initially studied the complexity of daylight and practically implemented that research; for example, a 5-year study of natural daylight and its artificial re-creation was explored in different contexts – from theatrical environments to gallery installations. This included a commission to transpose or re-create the open-air, natural daylight environment of Shakespeare's Globe, London to the interior setting of the Globe Theatre in Tokyo. This project involved working with Japanese lighting manufacturers to develop technology to mimic daylight that could replace the existing lighting fixtures for the inside staging of performances. Experimentation with technology was often at the forefront of practical projects alongside the adoption of scientific methods and equipment.

Continuing on from personal practice, the investigation of light became a subject within a number of London Fieldworks projects. This involved various approaches such as examining the role of technology and the effect of its development on the ways that both artists and scientists observe, perceive and represent natural phenomena. Projects also explored the geographical specificity of light, investigated through fieldwork and methodologies borrowed from other disciplines, involving data collection or ethnographic research. For example: collection of light data over a month-long period in the field (North east Greenland) using a spectro-radiometer which led to the development of a database and the interactive light installation *Polaria* (2001-2). This involved the development of a virtual daylight system and computer interface to facilitate public interaction. The project *Little Earth: a solar planetary investigation* (2005) involved research conducted at the Space Sciences Lab at UC Berkeley and the Space Plasma Physics Group in the Dept. of Physics and Astronomy at the University of Leicester. This research was conducted during an

18-month Art/Science fellowship and resulted in the creation of a film installation that focused on the work of two scientists, instrumental in the technological developments of capturing and recording light – a fascinating journey which fundamentally changed visualization techniques in both science and art. This research was published as a paper in a special ‘Art Science’ section of Leonardo, the Journal of the International Society for the Arts, Sciences and Technology, (2006) and in the book *Little Earth*, published by Black Dog (2005).

Recent research has employed film as a research tool, a medium that has been used in ethnographic research since the inception of anthropology as a discipline in the late 19th century and early 20th century (the first ascent of Everest in 1922 and a few years later Robert Flaherty’s *Nanook of the North* shot in Canada). It is only relatively recently that visual anthropologists have begun to use the camera not as an objective recording device but as an instrument of discovery and exploration within ethnographic research. The use of cameras has evolved through London Fieldworks practice and whilst early on the camera was often used to document projects or fieldwork, capturing day to day activities – it has also been used as participatory film-making, videographic publication, exploring relationships between text and film, ethnographies of place in film and video.

An example of film employed as a research methodology was *The Darkest Day*, a film developed as part of the PhD programme during a residency in the small and remote community of Seydisfjörður, East Iceland. Through the process of making the film, the extremes of light and dark and the personal, social and cultural ways in which they are experienced was investigated and represented in a visual context (see Chapter 3). This was a spontaneous approach to film-making which followed a period of research involving interviews and dialogue with local residents. It was this process which initiated an interest in researching light as a language (see Chapter 4).

As an artist and educator with a history of working with light as both subject and material, I became interested in developing a resource that would be able to capture light practice in all its diversity, so as to examine the role it plays in the new frontiers of art, design and technology and to broaden our understanding of light as a medium of art. This was a response to a growing body of ideas, expertise, skills, knowledge and techniques lying dispersed and distributed across a range of disciplines and fields.

The potential to create a scholarly resource and ‘active archive’, became a real possibility following *The Future of Collecting Light*, an event curated by Joelson and hosted by the Victoria and Albert Museum, London in 2015. This event invited 14 artists, designers and curators involved in light based practice to come together to discuss their practice through live interviews. This event aimed to extend the possibility for studying and curating cross-disciplinary design and fine-art practices engaged with the principles and applications of light. It proved to be a valuable opportunity for participants and seeded the start of a broader scholarly contribution to the field and practice of light across contemporary art and design.

A ‘Library of Light’ was thus conceived as an imaginative construct and conceptual framework for this ongoing research – a material space to house an investigation of light as both material and non-material. The aesthetics of light-based practices have evolved substantially over the past six decades and are continuing to evolve in line

with developments in technology. The integral role of technologies and media present challenges for the collector in terms of preserving and archiving works which involve light. Consequently collections of light-based work are relatively few. This research considers the distinction between archives, collections and libraries, focusing on examples that challenge the usual definitions. The research also identifies key cultural institutions that are active in supporting, archiving, collecting, maintaining and presenting works involving light in the public domain, and considers the challenges arising from this, from ownership and the long-term commitment to projects and artworks, to access and distribution.

As the research began to form it became clear that I was searching for evidence that light itself may be a kind of language. By making a comparative study of the methodologies, processes and concepts used by various practitioners, the vocabulary of light and its potential role in expanding the dialogue, understanding and appreciation of light across disciplines came to be explored. This comparative study examines and expand the fields and form of archival practice considering the interplay between user and archive, designer and curator, as a way to stimulate new artistic practices and cartographies of knowledge.

1.2 QUESTIONS AND AIMS

Research Question 1: How have the relationships between light, material culture and social experience been explored by contemporary artists?

AIMS:

> To examine light as a creative medium in art and performance since 1960, and trace some of the significant developments in aesthetics, technologies and related social and cultural practices.

> To develop an 'Ontology of Light' in order to differentiate between individual art practices using light, the roles, meanings and functions of light.

One overarching aim that emerged from this question was to attempt to establish and analyse distinctive qualities of practice involving the medium of light that could serve as a resource for other artists, curators and producers as they create, exhibit and present events and artworks involving light. To do this, I set out to conduct a series of recorded interviews and conversations with a number of practitioners to try to understand how they define their practice and exemplify their particular field of expertise. This was also intended to identify new and shared vocabularies that could in turn be developed into an ontology of light practice (a collection of themed categories). As a starting point, I wanted to examine the history of light in art and performative contexts and make links to contemporary practices.

Research Question 2: Regarding archival practices, which curatorial / artist approaches best present dynamic and performative experiences as produced by practitioners working with light and associated media?

AIMS:

- > To investigate a range of existing curatorial models that support light practice and the relationships between the social, cultural and technological factors that influence them.
- > To consider how light practice can be best archived, collected, categorised and experienced to facilitate accessible and comparative study.
- > To respond as an artist-curator to the medium of light through artistic methods and public outputs and to consider how these approaches might offer additional insights into existing models and practices.

There is an evident and long-standing lack of collated information on the evolution of practices involving light, and the relationships between the social, cultural and technological factors that support and influence them. In view of this, another aim of the research was to collate and consider how light practices can best be archived, collected, categorised and experienced to enable accessible and comparative study. It aims to encourage shared knowledge, dialogue and understanding across the disciplines of fine art, performance, design and new media. A range of curatorial approaches and their ability to reach and engage audiences was to be investigated to help determine which media or strategies might be most successful in terms of presenting works involving the medium of light. The aspect of the study would aim to inform those working in similar fields through an accessible body of work presented in a range of media, encompassing literary form, radio, visual art and performance.

1.3 METHODOLOGY

In order to investigate the various relationships between light, material culture and social experience since 1960, I decided to devise a practice-based framework. This stemmed from the research questions and their implied specific goals: the need to uncover a range of artistic and curatorial practices that permit exploration of the subject of light; and to trace significant developments in aesthetics, technologies, creative, social and cultural practices. The object of the research was also to identify vocabulary that might differentiate between the roles, meanings and function of light, which may in turn respond to existing curatorial models, or else suggest new interdisciplinary models that might be used by other artists and curators when considering the medium for art, performance, exhibition or as a theoretical subject.

The approach to the research has involved a methodology that is both *practice-based* and *practice-led*, as defined by Candy and Edmonds (2018) as follows: “if the research leads primarily to new understanding about practice, it is *practice-led*”, whereas “if a creative artifact is the basis of the contribution to knowledge, the

research is practice-based.” Following a precedent set by a past practice-based Ph.D., Dominic Smith’s thesis, *Models of Open-Source Production Compared to Participative Systems in New Media Art* (2011), the structure of this thesis involves an art-curatorial framework for research; however, rather than working through a devised series of projects with a contextual review running alongside, in this case the making of a book publication primarily performs the main role in terms of the contextual review.

In the case of the Library of Light research project, the role of practitioner-researcher is a multifaceted one which involves embedding practice into the research process. This has meant a range of tasks to conduct, including generating the research material, participating in the research process through first-hand experience, fieldwork, the writing and also as art-works, and becoming a self-observer, alongside being an observer of others by way of discussion and contextualising research, all of which being intended to gain new perspectives. Writing and editing a book as the central practice has facilitated greater interaction with the research material, since the book is not only an artifact but also serves as a tool to initiate a reflexive process in which the research is made accessible through documentation, written language, publishing and international distribution.

Research Framework

The research framework was developed with a book publication at the centre, conceived both as an artifact that would contribute to knowledge (practice-based) and as an excavation of a range of practices that would lead to new understanding about the subject of light (practice-led). As such, the methodology became a hybrid of practice-based and practice-led research in which the knowledge was embedded within the various outcomes – from new understanding gained by reflecting on curatorial models, audience engagement and the nature of spectatorship, to taxonomies of light practice and light as a language which might influence existing and new interdisciplinary models. The practice itself was manifested in a number of forms mostly involving encounters of a discursive nature and distributed through the book publication, written texts, radio broadcasts, visual media and short-film work.

The process of making the publication and the activities associated with its promotion provided further opportunities for questioning, exploration, reflection and evaluation. The forms in which the research might be presented were considered at the outset and owing to the performative nature of some of the practice being explored there was an imperative to find live media opportunities for dissemination.

Contextual Review / Published Book – The Contextual Review differs from the standard format in that it was conducted primarily through the curatorial and editorial framework of the published *Library of Light* book. To begin with, a range of practitioners were identified and approached for interview. Semi-structured interviews were chosen for both the focus and flexibility this method offers, with slightly more open-ended questions allowing for a discussion rather than a straightforward series of direct questions and answers. From this process a

number of thematic ‘categories’ and critical ideas emerged, leading to the development of an ontology. This translated into book chapters, each beginning with a critical essay, followed by interviews with the practitioners.

Collections Research – The Collections Research explored the significance of supporting, collecting, preserving and granting access to light based artworks and media in particular in the 21st century, in the context of expanding forms and formats. This focused on the Dia Art Foundation and associated artists and artist projects including: Dan Flavin Art Institute, Dream House (La Monte Young and Marian Zazeela), Roden Crater (James Turrell), Sun Tunnels (Nancy Holt); the Centre for International Light Art, Unna, whose collection includes the artists Mario Merz, Joseph Kosuth, James Turrell, Mischa Kuball, Christina Kubisch, Brigitte Kowanz, Johannes Dinnebier, Keith Sonnier, François Morellet, Christian Boltanski, Jan van Munster and Olafur Eliasson.

Archives / Archival Practices – Archives and Archival Practices are examined for their role as a creative catalyst with a focus on projects in which the archives themselves are used as material for artworks and exhibition. Engagement with the Nýló archive in Iceland and its representation of the Living Art Museum collection provided an alternative artist-curatorial model for consideration as well as a springboard for dialogue. Further examination through interviews with practitioners (including the artists Michael Light and Katie Paterson) identified different ways in which archives can stimulate artistic practice and bring otherwise ‘hidden’ materials into the public domain.

Film as Research, Writing as Research – Two residencies were undertaken in which writing and film as research practice explored the subject of ‘Geographic Light’, whereby in which natural light phenomena coupled with weather and topography mediated through an artistic process contributes to an understanding and experience of a specific place.

Radio Broadcasts – A series of radio programmes were produced on the basis of interviews with a range of artists, designers, writers and performers discussing ‘collaborations between light and sound’ and ‘the site specificity of light and darkness’.

Each of the projects was devised to examine the full diversity of the field and practice, with the ‘interactive encounter’ playing a crucial role, since both participants (researcher and informant) were involved in a conversation producing some sort of common construct focused on key agreed questions. Mostly the investigation methods intuitively developed from previous experience of ‘fieldwork as art practice’ and ‘film as research’ as explored in London Fieldworks’ projects. All of the research methods deliberately engaged active practitioners through dialogue as well as participation, through interviews for publication and for radio broadcast, and in the making of short films.

A substantial proportion of the research was primary and necessarily based on personal experience and interactions with others. As with many practice-based research projects 'auto-ethnography' played a role. Defined by Ellis, Adams and Bochner as "an approach that seeks to describe and analyse personal experience in order to extrapolate understandings about wider cultural experience" and in relation to creative practice "auto-ethnography can help the practitioner-researcher to extrapolate their artistic experiences to those of the wider artistic community" (Ellis, Adams and Bochner, 2011). Aspects of auto-ethnography were incorporated into the practice work of the project, specifically in relation to the construction of critical texts for the book which drew on personal experience, encountering practitioners and their practice, artworks, exhibitions, performances etc., all documented and logged as observations, research notes and in some cases documented on video. Whilst there are limitations to the approaches of self-observation and self-reflection considered in terms of auto-ethnography, it has been widely validated through the opinions of academics and experts in the field and acknowledged as being an important developmental aspect in the reflexivity of practice-based research. For example, in the article 'Creative Practice as Research: Discourse on Methodology', R. Lyle Skains discusses ways in which practice-related researchers observe and analyse themselves as they engage in the act of creation, rather than relying solely on dissection of the art after the fact. "Indeed, reflexivity is key to developing a critical consciousness of how the practitioner-researcher's identity, experiences, position, and interests influence their creative practice" (Pillow, 2010 in Skains, 2018).

The combination of research methods allowed for reflection on multiple definitions of light practice and the ways they have become more differentiated with new materials and media, emerging and evolving technologies and technological platforms. This leads to the question whether intellectual and ethical approaches to uses of light are diminishing as a result, and whether light as a creative medium is falling away as it becomes integrated within technologies and everyday media. The research aims to present some of the cultural implications of this situation for both artists and curators. In a broader sense, the research aims to reveal new perceptual modes that have been shaped by technology. These ideas are explored through engagement with the past histories of practitioners, including art-science pioneers, and by tracing the lines and developments to the current generation of practitioners. Light-based work in the public realm provides opportunities for investigating sensorial and affective environments created for social engagement, such as Artichoke's *Lumiere Durham*, *Lumiere London* and *LightPool Blackpool*, together with networks such as *Configuring Light/Staging the Social* (London School of Economics) which brought artists, designers and social scientists into conversation through a seminar series. Research has been influenced by survey shows and conferences including the Hayward Gallery's *Light Show* (2016) and ZKM's interdisciplinary symposium *The Future of Light Art* (2018), as well as institutional departments engaged in developing design philosophies and innovative technical methods for redefining the understanding of light and darkness and the social meanings of light, such as the Department of Cultural Geography (Manchester Metropolitan University) and the Geography and Tourism Department (University of Iceland).

The research process has resulted in a number of creative acts and artifacts, embodying new knowledge, spread across different forms of media including a published book, a series of written texts for the book, radio programmes, streamed live talks, short films, and an Instagram takeover, all captured through observational notes and film recording and often resulting in unexpected insights and understanding into aspects of the subject relating to history and culture (see Appendices for full list of projects). The findings from this research may help to expose the affective nature of the many creative uses of light, alongside their impact on the individual and wider society. Finally, these methods aim to answer the questions posed by the research, in particular identifying different categories and qualities of light in order to evaluate our current understanding and the changing meanings of light.

1.4 SCOPE AND KEY TERMS

The body of research covers the overlap between practice, archives, collections, libraries and the methods of an art system. It is beyond the scope of the present research to cover a detailed commentary involving media, political, philosophical, commercial or social theory on light practice, and neither is the work a full historical analysis of light practice. For a history of Light Art, Peter Weibel's *Light Art from Artificial Light* (2006), published by ZKM, is an encyclopedic account, while the *Light Show* catalogue (2013), published in conjunction with the Hayward Gallery's *Light Show* exhibition, is a comprehensive survey of artists who create predominantly light-based artworks. *From Light to Dark* (Edensor, 2017) is a detailed exploration of illumination and darkness and the diversity of artistic and cultural interventions in this field from the perspective of a cultural geographer. *Brilliant, The Evolution of Artificial Light* (Brox, 2010) explores the revolutionary aspects of artificial light as a catalyst for industrialisation and consumerism together with its impact on human lives; two volumes in which light is discussed within a theatrical context are: *Light* (Palmer, 2013) and *the Art of Light on Stage* (Abulafia, 2016), both of which have been useful research sources for discussions concerning 'performance light'. Accompanying these sources is the recently published *Library of Light* (Lund Humphries, 2019) which is structured around 25 interviews and four thematic essays and brings together established and emerging practitioners who work with light in the contexts of fine art, music, theatre, performance, film, photography, holography, digital media, architecture and the built environment.

This research is limited to a selected number of curatorial, artist and design practices in which light is medium and / or subject, primarily focused on English-speaking practices in the field, within the last six decades. Whilst the light practices referred to are predominantly in the recognized fields of visual art, public art, theatre or music performance, there are some areas of overlap between practitioners and categories or fields of expertise.

The approach taken is discursive, through direct engagement with practitioners and by reflecting upon and analysing the practices and artworks as experienced and perceived by the spectator. Discussion of the nature of these experiences has been

conducted in relation to key discourses surrounding modes of experience in 20th and 21st century western society and current art theory, with due consideration of the experiential, subjective and speculative, unique to the individual with a particular perspective and set of expectations. Whilst the work of a number of philosophers is mentioned in relation to specific artists there is overall little philosophical discussion throughout. It is in full awareness of this limitation with regard to the scope of analysis that the thesis is written.

KEY TERMS

Language of Light – Vocabulary used to give meaning to the creative uses of light, expressed depending on the context or field in which the work is presented.

Light Art – An applied art-form in which light is the primary medium of expression; this may include sculpture, an environment or an installation producing or manipulating light.

Lighting Design – A profession operating within the fields of theatre, music, architecture, interior design and electrical engineering concerned with the design of lighting systems (most often involving electric light but can involve natural light) and their operation to serve aesthetic as well as functional needs.

Light-based practice – An artist or designer working with light in the contexts of art and design.

Performative Light – As described by theorist J. L. Austin (1955), the word performative is a sentence that is also an action. In the past two decades the word *performative* has advanced from being seen as a theoretical term to a key rubric within contemporary art and aesthetics describing any artwork which in some formal, thematic or structural way alludes to ideas of embodiment, enactment, staging or theatre. Any visual artwork that relates to a here-and-now, and thus in some way or another refers to the idea of performance without being a performance, is called a performative artwork (von Hantelmann, 2014).

Interdisciplinary – Knowledge and methods emerging from activity in more than one discipline.

Multidisciplinary – Activity combining several disciplines.

Ontology of Light – A collection of themed categories of light practice.

Lexicon of Light – A vocabulary of light which additionally explains the meaning and significance of its context.

Cross-Disciplinary – Viewing one discipline from the perspective of another.

Collaboration – Imbuing art with meaning through sharing in the creative process with another or others.

Participation – Physical engagement in which the spectators become participants (in the art).

Experiential – Involving or based on experience or observation.

Site-Specific – A work of art designed for a particular location, and that has an interrelationship with the location.

Spectatorship – Related to the act of spectating; conventionally an act of receiving a finished artistic work and usually therefore outside the realm of participatory arts practice, however spectatorship is used more expansively here to embrace a spectator who might be involved in co-creation or enhanced engagement.

Social Experience – Shared experiences which lead to the forming of customs, traditions, shared values, social roles, symbols and languages.

Immersion – A spectatorial architecture that operates through a mode of exchange which allows a spectator to be thrown into a fictive world, giving this spectator the impression of being a member of that world and allowing heightened levels of perceived agency (Bourriaud, 2002).

Immersive Art – An immersive exhibition or installation that uses the language of the multi-sensory, as opposed to the language of vision, and involves appearing to be surrounded by your environment (Wigley n.d.).

Media Architecture – A field that comprises physical structures that utilise digital media to broadcast information to their immediate vicinity (for example, a media wall on the facade of a building).

1.5 STRUCTURE OF THE THESIS

Following the Introduction, the thesis is structured with the Contextual Review in Chapter 2, then the practical projects are described and analysed in Chapters 3 and 4 with findings and conclusions in Chapter 5.

Chapter 1 introduces my background as an artist and researcher with former training and experience as a lighting designer and transition to working with light in a multidisciplinary and fine-art context. These personal starting points are followed by questions and aims that frame the research. The methodology describes the ways in which the research was carried out, focusing on a series of practical projects centred on the publication of a book running alongside a contextual review. The section outlining the scope of the thesis establishes the study boundaries for the areas covered and not covered. Key terms and vocabularies of light are defined as they are used throughout the subsequent chapters.

Chapter 2 encompasses a review of literature, exhibitions, projects in the public realm and festivals, collections and archival approaches and practices – all of which provide a broader context for the relationship between artists, designers and the use of light as a medium for art, design and hybrid practices as discussed in later chapters. The section ‘Light in Public (Exhibitions and Festivals)’ references a selection of notable gallery exhibitions from the 1960s to the present day that were organised thematically around light. It considers space-specific lighting and events such as ‘festivals of light’ where works by artists and designers that have been deployed to transform the habitual experience of a given place. The section titled ‘Collections, Archives, Libraries’ looks at research into the collecting of light-based practices by institutions and museums, exploring the significance of collecting and preserving light-based artworks and media in the 21st century as forms and formats expand. It includes archives and archival practices and examines how these function and operate as a creative catalyst, when used as material for artworks and exhibition. A final section examines libraries as physical, imaginative and conceptual spaces. The chapter ends with a summary of each section.

Chapter 3 describes practice-led and practice-based projects undertaken as part of the research, including: a series of radio broadcasts (Collaborations in Light and Sound on Resonance 104.4fm); an International Fellowship which enabled artist residencies in Iceland, to examine archives and collections; film as research and a writing residency to explore Geographic Light which considered how natural light phenomena coupled with weather and topography contributes to an understanding and experience of a specific place. These projects also made it possible to test various approaches and formats for the distribution of research material.

Chapter 4 is an ontology of practices with light and begins with an introduction to the *Library of Light* book as a practice-based project. The extracted sections come from the following chapters of the book: Political Light, Mediating Light, Performance Light, Absent Light. Following this is an introduction to the ‘Language of Light’, a vocabulary derived from the research process and which spans a number of disciplines and practices. This is translated into a ‘light typographic’ to map the etymology in visual terms.

Chapter 5 assembles the conclusions from summary and analysis from each of the preceding chapters. This entails reflecting on the methods and elements of the research that present the most useful findings in each of the various fields of light practice, while areas for future research are also summarised. These suggest that further research and analysis of light practices in non-western cultures could be undertaken to explore a wider representation of the language of light.

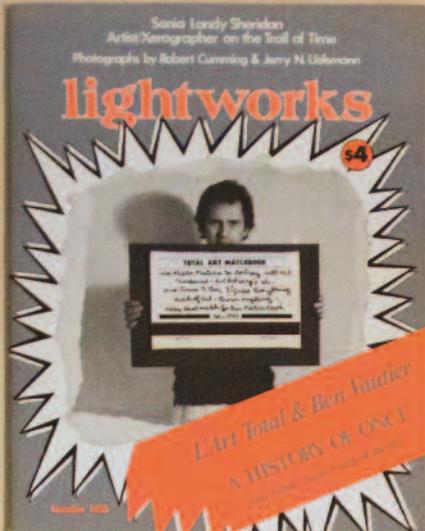
APPENDICES

The Appendices included in the thesis contain additional materials for reference and comprises:

8.1 Timeline

8.2 Practice Portfolio

Fig. 3: Publications, Catalogues & Leaflets



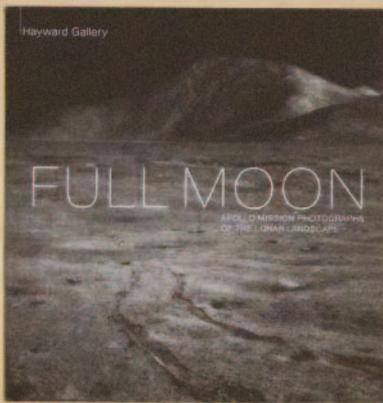
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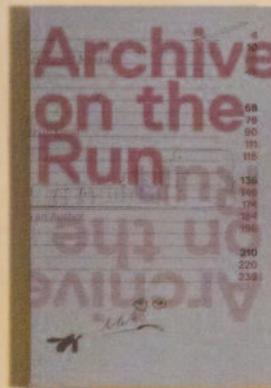
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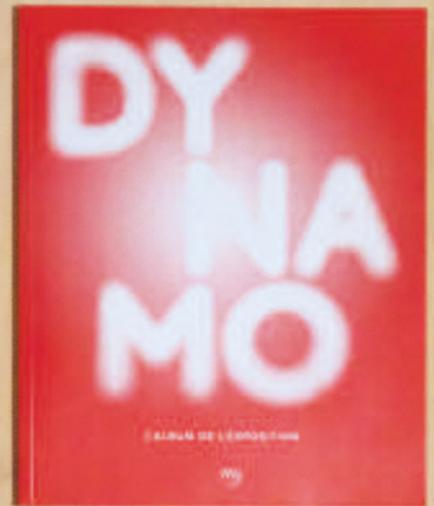
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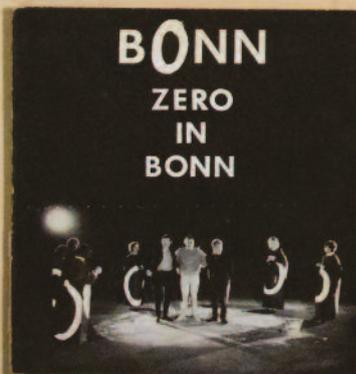
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CHAPTER 2

Contextual Review

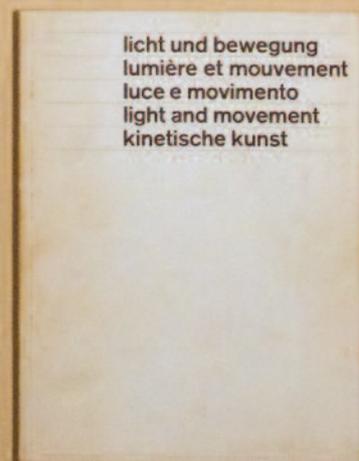
- 2.1 Introduction
 - 2.2 Light in Public (Exhibitions and Festivals)
 - 2.2.1 Exhibitions
 - 2.2.2 Festivals
 - 2.3 Collections, Archives, Libraries
 - 2.3.1 Collections
 - 2.3.2 Archives and Archival Practices
 - 2.3.3 Libraries
 - 2.4 Contextual Review Summary
1. Lightworks: No. 14/15 Winter 1981/82
 2. The Future of Light Art: ZKM Karlsruhe 2018
 3. Lights in Orbit: Howard Wise Gallery 1967
 4. Full Moon: Hayward Gallery 1999
 5. Archive on the Run: The Living Art Museum 2013
 6. Dynamo: Grand Palais 2013
 7. Zero in Bonn: Stadtische Kunstmuseen Bonn 1966
 8. Light Fantastic 2: Royal Academy of Arts 1978
 9. Dan Flavin: Hayward Gallery 2006
 10. Light and Movement: Kunsthalle Bern 1965



8



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2.1 INTRODUCTION

The somewhat unusual structure employed for collating the research has meant that the **Contextual Review** was largely conducted through the curatorial and editorial framework of a book, written and published as a practice-based project, an exploratory and interrogative investigation into the cultural history of light as an artistic medium within creative practice. The **framework of a book** then created a structure for the research and as such contains a significant part of the investigation's results. The semi-structured interviews performed a crucial role in the Contextual Review, with dialogue between the researcher and multiple practitioners leading to areas for further investigation and material to explore. Various topics coalesced in the process including archival practices, inspirations, methods as well as the importance and challenges of light as a creative medium, technological innovation, the language of light, working with light in relation to other media, and making a transition from one field to another during the course of a career. In following a participative approach, the book was used as a device to capture the diversity of the subject.

An initial range of sources was identified in order to locate practitioners representing a range of light practices across generations, from 1960 to the present. Categories of light practice were informed through dialogue with individual practitioners alongside practical engagement with organisations, light festivals, seminars, symposia, collections, museums, exhibitions and design agencies. Without any particular individual preference playing a part (although the field of contemporary art is predominant), it was nevertheless important to locate practitioners who might operate in various fields or geographical locations, in order to represent a broad overview of practice. This involved not only using direct sources to identify practitioners but also exploring approaches to writing and publication, form and formats. Over the course of two years more than 30 practitioners were interviewed or corresponded with. From these conversations a vocabulary of light was extracted, with attention placed especially on how certain words, terms or phrases might help define individual practices and also how the practice might translate across disciplinary boundaries. In each interview contributors were asked to identify their field of practice or expertise, or else how they might categorise, or otherwise describe their practice. This process helped trace contexts which then informed the section headings in the book as well as themes around which to construct the writing. Four main categories emerged and four essays were written for each section, making reference to a wider range of practitioners and publications, and putting the interviewees into wider context. Extracts from these essays are included in the Ontology in Chapter 4. The shape of the book as a whole began to find form from this method (see Appendix 8.1 for complete essays / [link to book](#)).

To enable the study of such a broad topic it has been crucial to consider a manageable but diverse range of practices and practitioners, namely artist, designer, filmmaker, curator, architect, photographer, many of whom are innovators in their field and who extend the language of light beyond their disciplinary categories. Some practices deliberately overlap between different fields and disciplines, in specific works or throughout their oeuvre. Light fulfils many functions within a work, sometimes

acting as the subject, at other times as a material, as information spread throughout digital technologies, or in its extensive metaphorical reach. It has been necessary to consider the changes brought about by technological developments since the 1960s when light in art became a recognised medium and subject.

This chapter functions as a general contextual review and the following chapter covers the artist and curatorial projects. It was important to consider the challenges of supporting, commissioning, collecting, archiving, representing and displaying artworks relating to light-based practice and therefore within this following chapter a range of curatorial approaches was studied. These include exhibitions organised around the theme of light from the last six decades (1960-2019) and covering some of the categories used in the ontology; practices presented as an active archive or within the context of a library; artworks presented as publicly accessible collections within a museum or site-specific context; and through the more temporal context of festivals of light. By casting the net wide across these scattered approaches the research has exposed a broad range of perspectives on the subject.

2.2 LIGHT IN PUBLIC (EXHIBITIONS AND FESTIVALS)

2.2.1 EXHIBITIONS

From coast to coast, no major exhibit of contemporary art these days is complete without the zap of neon, the wink of a wiggle bulb, the spiral shadows of a lumia or the ghostly glare of minimal fluorescence (Ryan, 2014).

The research into exhibitions organised around the theme of light begins in 1960 when a new generation of artists and designers embraced light as a medium in art, and focuses on its potential rather than on the science of light and the new technologies they employed, including neon, fluorescent, ultraviolet, stroboscopic light, projection and lasers (Henderson, 2019). This trend followed in the wake of Moholy-Nagy's recognition of light as an important medium for art, as discussed in texts such as *Vision in Motion* (1947). Later, in 1964, electric light was described as "a medium without a message" by Marshall McLuhan, and in 1967 one of the European pioneers of Light Art, Otto Piene, articulated in *Arts* magazine the three major qualities of light in art as being: "1. Its energy; 2. Its expansiveness; 3. Its immateriality" (Henderson, 2019, p.154). Controlling this transitory medium has been a significant challenge for artists, designers and architects who have had to bring imaginative and technical solutions to sculpting and shaping light and space in different ways, from the conceptual, perceptual and phenomenological to the performative, interactive and virtual.

The following small selection of exhibitions staged in US and European museums have been canonised within light art literature and represents some of the key categories explored in the ontology, as well as key themes such as Mediated Light; Kinetic Light; Performance Light; Geographic Light; Perceptual Light and Spectacular Light: *Light and Movement* (Kunststalle, Bern, 1965), *Kunst Licht Kunst* (Stedelijk Van Abbemuseum, Eindhoven 1966), *Zero in Bonn* (Dusseldorf, 1966), *Light, Motion and Space* (Walker Art Center, Minneapolis MN, 1967), *Lights in Orbit* (The Howard Wise

Gallery, New York, 1967), *Light: Object and Image* (Whitney Museum of America Art, New York, 1968), *Light Fantastic* (Royal Academy, London, 1977 & 1978), *James Turrell Survey* (Hayward Gallery, London, 1993), *Tatsuo Miyajima* (Hayward Gallery, London, 1997), *A Quality of Light* (St Ives International, 1997), *Light Art From Artificial Light* (ZKM, Karlsruhe, 2005), *Dan Flavin Retrospective* (Hayward Gallery, London, 2006), *Light Show* (Hayward Gallery, London, 2013), *Dynamo: A Century of Light and Motion in Art, 1913-2013* (Grand Palais, Paris, 2013), *A Certain Kind of Light*, (Towner Art Gallery, Eastbourne, 2017) *Mary Corse* (Lisson Gallery, London, 2018), *Anthony McCall* (The Hepworth, Wakefield, 2018), *Nancy Holt* (Dia Foundation, New York, 2019), *Olafur Eliasson* (Tate Modern, 2019).

Five of the exhibitions listed above are explored in greater detail in order to examine issues and challenges related to the curation of light-themed shows including: the dominance of technology and the challenges new technologies bring to the field; to the site-specific nature of light and how it can be mediated through artistic process to contribute to an understanding and experience of a specific place; questions of accessibility, maintenance, meaning and the need to concentrate the focus within a wide field to tell a specific story.

LIGHTS IN ORBIT The Howard Wise Gallery, New York (1967)

Lights in Orbit is an early example of a show which displayed works by artists exploring perceptual, kinetic and optical art, and which serves as a pre-cursor to artists discussed in the 'Mediating Light' section of the ontology (Chapter 4). This landmark show, which opened 4th February 1967 was billed in the accompanying pamphlet (see Fig. 4) as "An exhibition of works composed of light in motion created by leading exponents of the art." "For a month, the show filled the two rooms of the

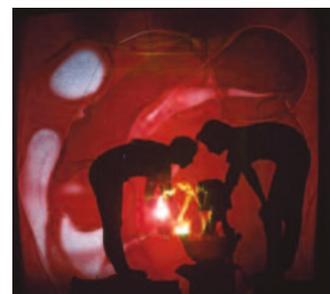
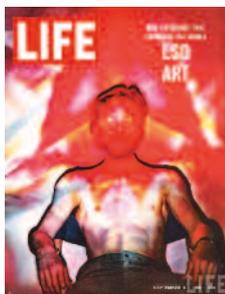


Fig. 4: Top: **Lights in Orbit** Exhibition Catalogue. The Howard Wise Gallery, New York (1967)

Fig. 5: Above Left: **Richard Aldcroft** 'Infinity Machine' Featured on cover of *Life* magazine (1966)

Fig. 6: Above Centre: **Frank-Joseph Malina** 'Peinture cinétique' (1966)

Fig. 7: Above Right: **Rudi Stern & Jackie Cassen** 'Kinetic Projector' Featured in *Life* magazine (1966)

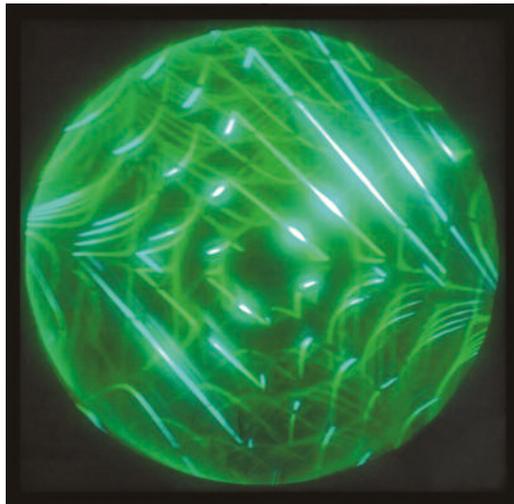
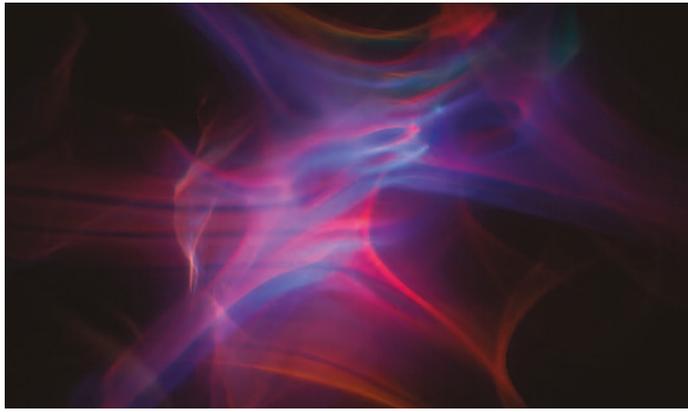


Fig. 8: *Top Left*: **Thomas Wilfred** 'Study In Depth Opus 152' (1959) Courtesy Yale University Art Gallery

Fig. 9: *Top Right*: **Otto Piene** 'Electric Rose' (1965)

MIT List Visual Arts Center, Cambridge, Massachusetts. Photo LWL/Neander ©VG Bild-Kunst, Bonn (2015)

Fig. 10: *Above Left*: **David Boriani** 'PH Scope' (1964)

Fig. 11: *Above Right*: **Julio Le Parc** 'Continuel-lumière mobile' (1960/2013) Photo Julio Le Parc ©2016 Artists Rights Society, New York/ADAGP-Paris, Photo André Morin, Courtesy the artist and Perez Art Museum, Miami

gallery with glowing sculptures, flashing installations and moving-image projections accompanied by the sounds of whirring mechanics” (Ryan, 2014). It was the first comprehensive survey in the US of art using moving light and featured Julio Le Parc, Heinz Mack, Frank-Joseph Malina, Bruno Munari, Nam June Paik, Abraham Palatnik, Takis, Thomas Wilfred, Group Zero’s Otto Piene and the countercultural collective USCO. The group show made national headlines about ‘kinetic art’, also referred to as ‘luminism’, a term devised by the artist and curator Willoughby Sharp. It is interesting to note that this was an unusual grouping of artists not usually associated with one another or with the light-art movement of the 1960s. The show was reviewed in papers including the *New York Times* and art publications like *Arts* magazine, with a full-colour eight-page article in *Time*, a one-page review in *Newsweek* and a full-colour three-page spread in the July 1967 issue of *Popular Photography*. Gallerist Howard Wise estimated that more than 20,000 people came to see the show, and observed that “light in movement gratifies a newly developed sensitivity within ourselves engendered by modern life” (Ryan, 2014). *Lights in Orbit* included work by 36 artist-scientists who used various tools and technologies to create the works in the exhibition. Some of those included were scientists turned artist, others were artists

with technical training, but all those represented worked with light in movement over an extended period of time. The involvement of Frank Malina, who would become the founder of the influential electronic arts journal *Leonardo* suggests this exhibition might represent a turning point in the relationship between the mainstream and new-media art worlds (Ryan, 2014). The list of unusually scientific technologies employed by the artists was named in the show's catalogue as: "high intensity quartz-iodide lights; electronic circuitry; laser beams; magnetic distortion of electron beams; polarized light; plastics irradiated by gamma rays; polyester films coated with a mono-molecular layer of aluminum; new phosphors having varying controlled rates of decay" (Wise Gallery, 1967). As a result of the artists' knowledge of the physical sciences, several new technologies were successfully applied and utilised. "Howard Wise Gallery's popularization of light art not only introduced international trends and new technologies but also heralded the artistic application of what we now term 'new media.' It is now considered that because of his show 'TV as a Creative Medium' (1969), which dealt with many new media issues of today such as hacking and surveillance, Wise anticipated not only the ascendancy of certain technological media but also their political ramifications" (Ryan, 2014). Decades on and more recent exhibitions such as *Dynamo: A Century of Light and Motion in Art, 1913-2013* (Grand Palais, Paris, 2013), which featured artists working with notions of space, vision, light and vibration, resonate with the optical, kinetic and perceptual art of the past, recalling not only *Lights in Orbit* but the *Movement* exhibition (Denise Rene Gallery, Paris, 1955) *The Responsive Eye* (Museum of Modern Art, New York, 1965).

LIGHT FANTASTIC Royal Academy of Arts, London (1977 & 1978)

The two *Light Fantastic* exhibitions staged in 1977 and 1978 at the Royal Academy are pivotal in considering ways in which new technologies are adopted into mainstream culture and how this affects the ways artists and designers embrace or reject these new techniques. The *Light Fantastic* exhibitions represented a major survey of holography in art, a venture conceived by Nick Phillips (physicist), John Wolff

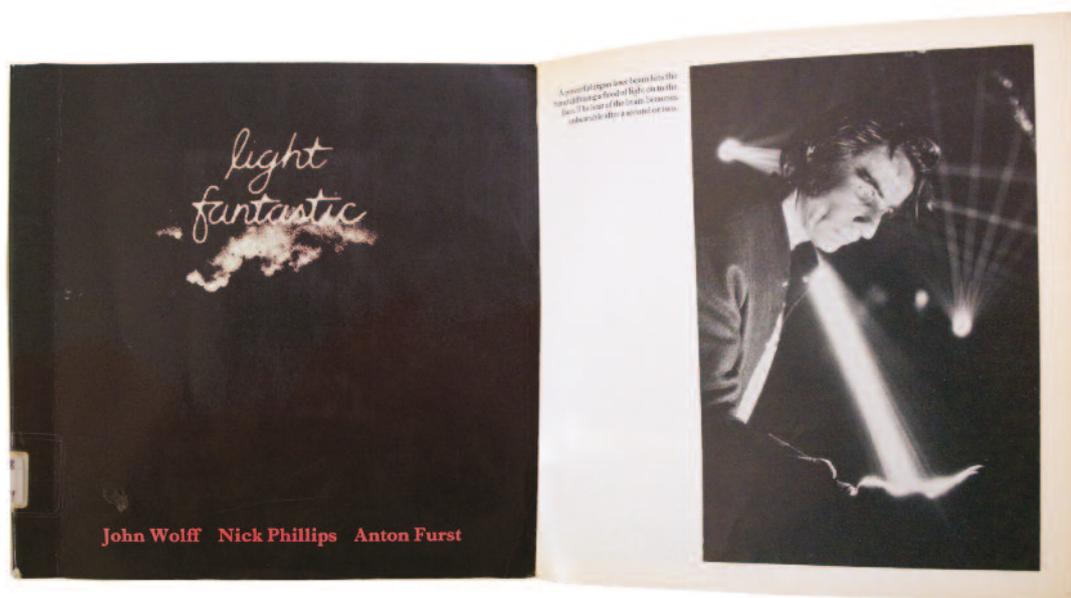


Fig. 12: *Light Fantastic* Exhibition Catalogue, Royal Academy of Arts, London (1977)

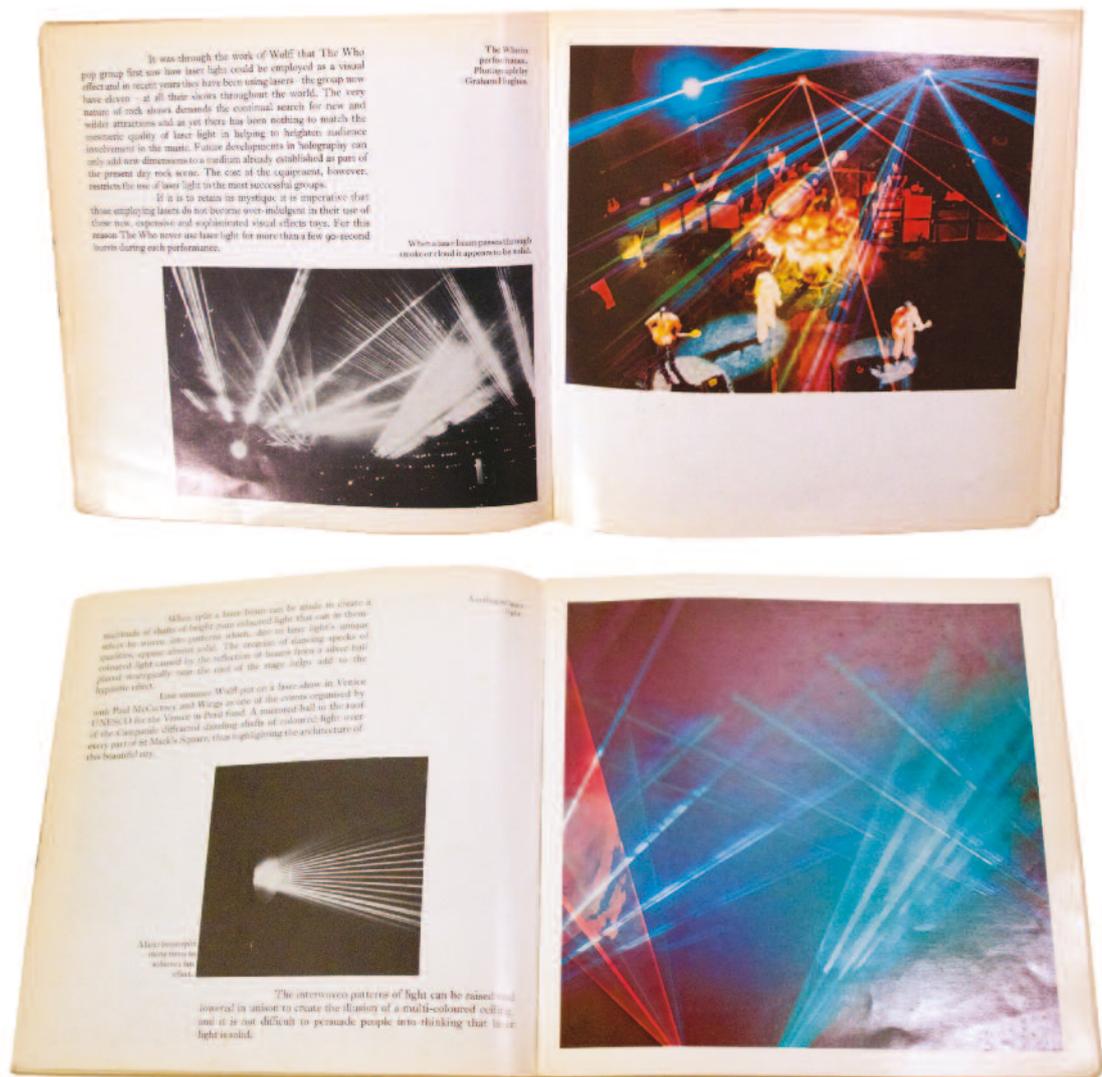


Fig. 13: Light Fantastic Exhibition Catalogue, Royal Academy of Arts, London (1977)

(specialist in the optical effects of laser beam technology) and Anton Furst (film art director). In the catalogue for the first exhibition Sir Hugh Casson, the President of the Royal Academy at the time, reasoned that “the exhibition has been devised to demonstrate, virtually for the first time, the aesthetic opportunities of the image-forming techniques made possible by the development of Holography – invented in 1947 by Professor Dennis Gabor at the British Laboratories at Rugby – and of the laser beam”. In referring to the visual vocabulary and its development at the service of art and science, Casson quoted the English architect and theorist William Lethaby (1857-1931), who stated that “Science” is what you know. Art is what you do”. Casson went on to say that “Science can test, codify and inform. It cannot choose. Hence the contribution of the artist is crucial and the partnership of knowing and doing truly indivisible” (Casson, 1977). In the 10-month gap between the two Light Fantastic exhibitions, advances in the processing technology meant that Light Fantastic 2 was able to feature holograms of living subjects, advancing holography techniques beyond the capturing of objects ‘frozen’ in three dimensions. Also shown in Light Fantastic 2 was the white light reflection hologram, a development that brought holograms closer to being available to the non-laser-owning public, since

they could be re-constructed and seen under a simple white light. This development was a significant step towards the achievement of full-colour holography. Whilst there is no definitive list of works or artists, scientists and designers listed in either of the catalogues, there are references including images of performances by The Who in which lasers were employed by John Wolff and images of holograms recorded and constructed at Loughborough University, as well as images of lasers sign-writing in the film studios at Shepperton. The team that conceived the exhibition formed the company Holoco and although their ideas were experimental and in the technique's infancy, they aimed to convince the public that holograms had a valid future (Boyle, 1978).

Since the Light Fantastic exhibitions of the late 1970s, a number of curators have attempted to build on its success with efforts to establish holography as an art medium, making the case for it to be part of the multimedia discourse and to have its own visual language, developed by artists rather than being simply a medium driven by technology. In tackling the various aesthetic challenges of holography, a key debate has been the importance for artists to "reach into the medium identifying, exploring, and creating out of its unique properties, placing it in dialogue with the other arts and issues of the day and making that work a compelling presence in our culture" (Hanhardt, 1990). Dr. Peter Zec (President, German Holographic Society and General Secretary, German Association of Industrial Designers) summarised the position of holography in the 1990s when he explained that "it has so far failed to satisfy the high expectations connected with it" or "establish itself as an acknowledged form of artistic expression in the world of museums or even in the art market, that is in galleries or private collections" (Zec, 1990). Zec drew these conclusions from his own experiences as an organiser and curator attempting to establish holography in the world of art through his exhibitions, *More Light - Artists' Holograms and Light Objects*, (Kunsthalle, Hamburg 1985), and *The Reality of Images*, curated with Stefan Graupner (Kunsthalle Nurnberg, 1986). He viewed these exhibitions as the first attempts to present holography in relation to the history of art in the context of other artistic, modern modes of expression. He was interested in how expanded areas of reality could be discovered and presented artistically by means of holography.

The premise of his third exhibition *In a Different Light - Holography and Environs* (All Artforum, Munich, 1989 and Karl-Ernst-Osthaus-Museum, Hagen, 1990), was to present the specific quality of holographic space in relation to its surroundings. Zec was regretful that in presenting these exhibitions he was not able to establish it permanently as an art medium and concluded that it was not yet desirable or feasible to establish holography in the art world. He stressed that holography would only gain meaning from a future-orientated perspective and introduced the term "mediawork" to describe new modes of production, "liberating man from his/her active participation in the production process and conceding to him/her at most the status of an observer" (Zec, 1990). This future-orientated perspective was taken up in *Pictures from the Moon: Artists' Holograms 1969-2008* (New Museum, New York, 2012), a show which presented an especially productive period in contemporary art and featured holograms by some of the best known artists

of the past 50 years (see Fig. 14). The exhibition considered how profound recent advances in holographic techniques were not only redefining holography, but also presenting newer possibilities for the medium capable of expanding our perceptual reality (Moynahan, 2012).

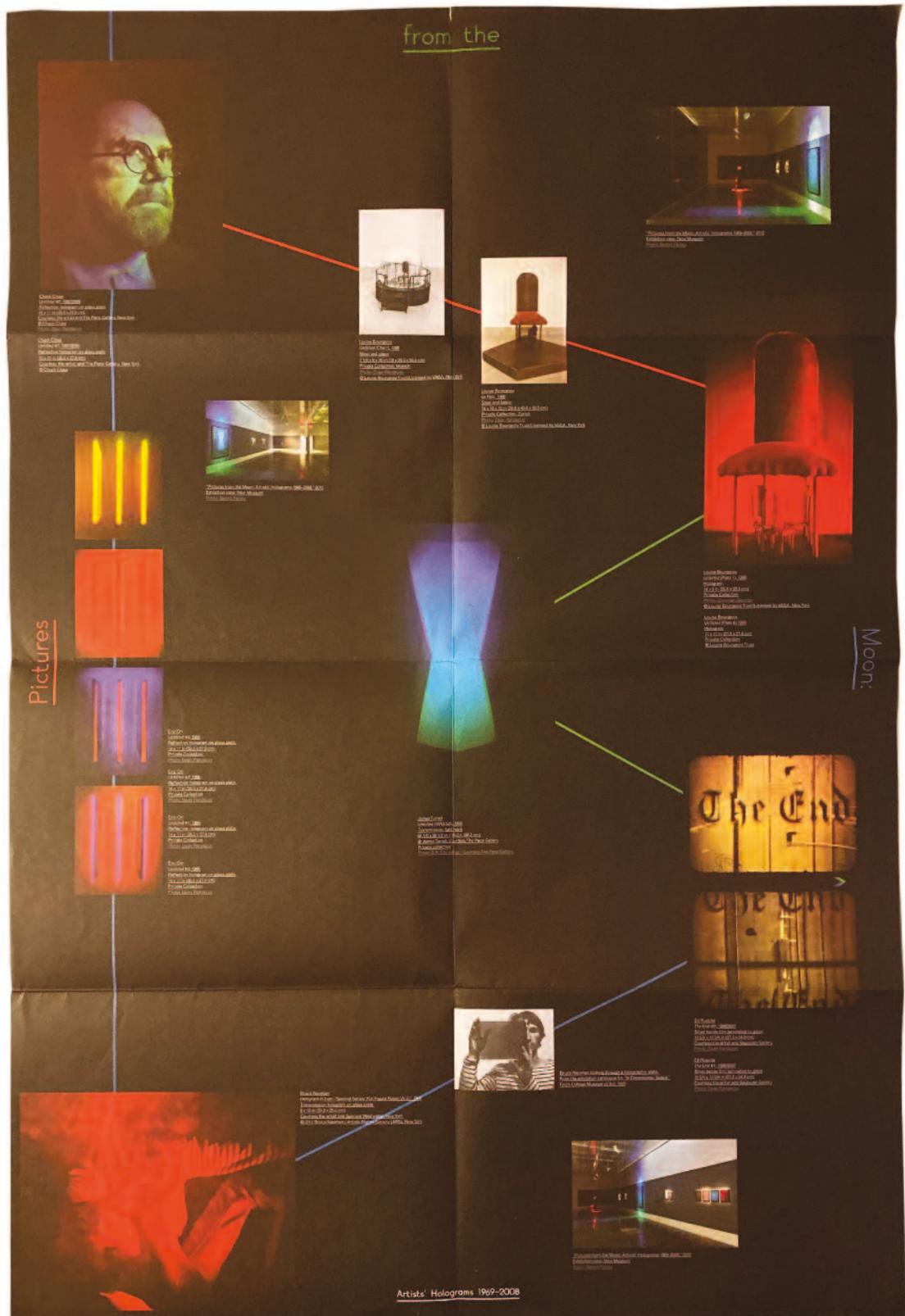


Fig. 14: Pictures From The Moon: Artists' Holograms (1969-2008) Exhibition Broadsheet, New Museum, New York (2012)

A QUALITY OF LIGHT St Ives International, West Cornwall (1997)

A Quality of Light was an international visual arts event showing new work on the theme of light. It was a collaboration between Tate Gallery St Ives, the Institute of International Visual Arts, South West Arts, Newlyn Art Gallery and Falmouth College of Arts. The exhibition developed from a discussion between Falmouth College of Arts and Tate Gallery St Ives which focused on the tendency to look back at the region's past artistic history, including the work of locally based contemporary art practitioners. Drawing on the importance of the quality of light in Cornwall and its attraction to artists for more than a century, the leading question posed by the exhibition was "What will some of today's leading international artists make of West Cornwall and the theme: A Quality of Light?"

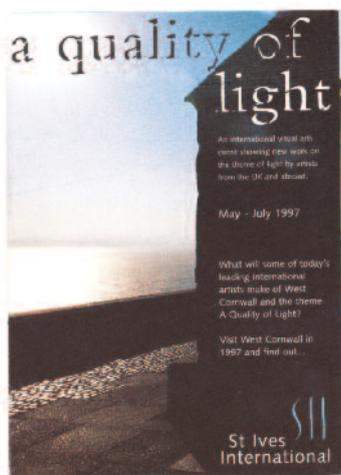


Fig. 15: Left: A Quality of Light Exhibition Leaflet

Fig. 16: Right: Mona Hartoum 'Current Disturbance' Installation as part of Quality of Light, Newlyn Art Gallery (1997)

Fourteen artists with diverse backgrounds and from all over the globe, including USA, Argentina, Croatia and the Philippines, as well as the UK, were commissioned to make work for specific sites in and around St Ives in response to the locally specific theme 'the quality of light' – a notion that underpins some of the more mythic constructions of Cornwall as an artist's colony. The artists were selected by curators from the various organisations collaborating on the Quality of Light project and the resulting show included a range of contemporary practices, from painting to installation to works involving new technology, by artists whose backgrounds were equally diverse and coming from different cultures alongside those connected with Cornwall. Significantly the exhibition included site-specific elements, utilising a range of locations and spaces for exhibition, such as Tate St Ives and Newlyn Art Gallery as well as more remote sites such as Porthcurno, Land's End, Botallack Moor and Geevor Mine. Reviewing the event for the *Independent*, Richard Ingleby questioned how relevant the artists' responses were to the area:

A Quality of Light is neither concerned with local artists nor with the regions art-historical past, nor (confusingly) is it really anything to do with the clear and even light that makes this bit of coastline so distinctive. Instead, 14 artists have been invited

from as far afield as Croatia and the Philippines to respond to the theme of light [in its broadest sense] through painting, sculpture, installations, new technologies and the medium of light itself... For travellers by train, the experience begins at Penzance station where Peter Freeman, one of just two local artists involved in the project, has installed Light at the End of the Tunnel – a giant neon in the shape of a blue light bulb hung high up the station wall. It's a cheerful opening but, on the evidence here, his work has little or nothing to do with where he lives... Nor, it seems, has the locality had much effect on Mona Hatoum, one of the visitors whose work is on show a few miles down the road at Newlyn. Current Disturbance, as she calls her cage of electrical wire and flickering bulbs, was commissioned especially for A Quality of Light, but it looks exactly as it would if she'd made it for London, New York or Berlin. It's an impressive piece, disorientating and a little unsettling, by an artist with a growing international reputation, but it's hard to see anything in it that relates to this part of the world (Ingleby, 1997).

Ingleby recognises it as an ambitious project, but claimed it was “too disparate and too far from the track of its intended theme to be entirely convincing”. Instead he highlighted three small installations (works by Carol Robertson, Roger Ackling and James Hugonin) placed in sites around St Ives that he considered lent themselves to the sort of “quiet contemplation” that each piece demands. Despite Ingleby's apparent lack of enthusiasm overall, he recognised these as the most inspiring, even though at a glance, they might seem the least significant. This exhibition is an interesting reference in relation to Geographic Light (discussed in Chapter 3) concerned with ways in which light phenomena contribute to an understanding and experience of a specific place. Ingleby's criticism of the event and the commissioned artworks suggests, in this case at least, that the mediation of light through an artistic practice did not translate into anything recognisably associated with the location. The subjective experience of the event as described by the reviewer highlights a problematic of the theme of the event as an already well recognized topic for artists – perhaps the commissions needed to factor in residencies for the artists so that they would have longer term engagement with the place which might therefore lead to more considered responses.

LIGHT SHOW Hayward Gallery, London (2013)

Light Show, a survey exhibition that drew together artists spanning five decades. All of the selected artists used artificial light as the basis of their installations and sculptures, in many cases “provoking us to reflect on the qualities and limits of our perception” (Rugoff, 2013). Light Show was notably influential in the development of some of the ideas contained within the Library of Light concept. It inspired thinking concerned with the categorisation of practice and the challenges of curating a show about the subject of ‘light as a sculptural medium’ and light's ‘immaterial properties’, both central ideas to curator Cliff Lauson's concept for the exhibition.

The idea of artists using light as a sculptural medium and all of the paradoxical problems that ensue from that idea became the interest of the show. It was about how artists wrestle with light, a material that doesn't behave like any other material that you might sculpt with. Light is a highly unique medium, so it was both of those things you refer to that were the premise of the exhibition (Lauson, 2017).

I asked Lauson whether he considered Light Art to be categorisable and whether during the research for the show he organised artists into categories as a method of selection and narrative development. He responded:

I wouldn't say that Light Art is formally categorisable, nor is 'Light Art' its own category. In the course of organizing the exhibition I made myself informal thematic categories: artists who were more interested in architecture, science, writing or poetry, antiquated lighting technologies, and also up-to-date or forward-looking lighting technologies. The categories were a shorthand for describing and thinking about the show, but I didn't use them to formally organize the layout of the exhibition or attempt to try and pigeon-hole those artists (Lauson, 2017).

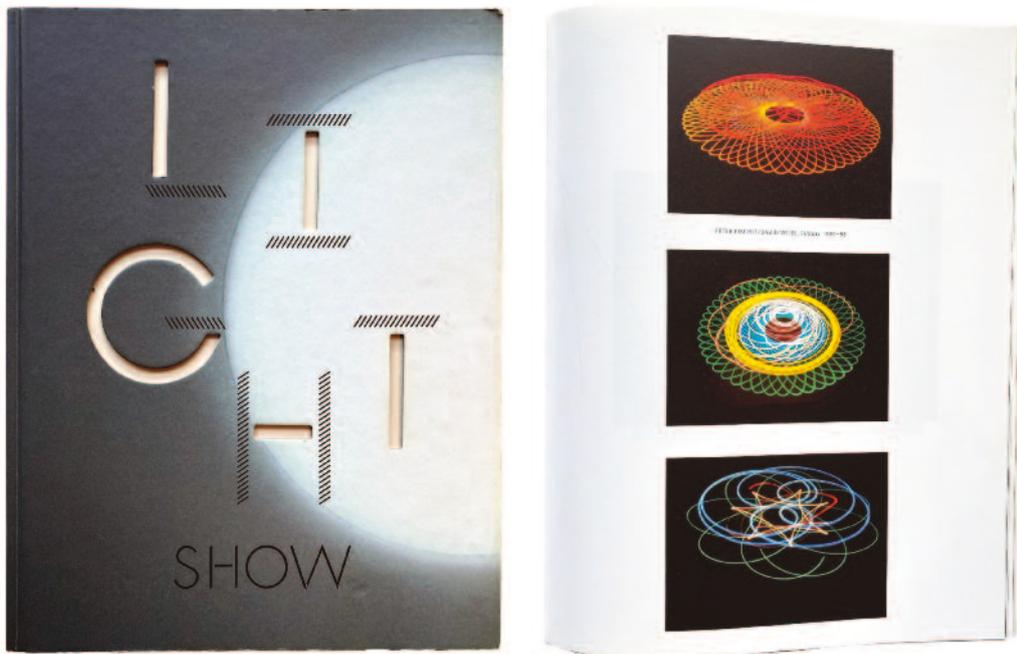


Fig. 17: Left: **Light Show** Exhibition Publication, Hayward Gallery, London (2013)

Fig. 18: Right: **Peter Fischli / David Weiss** 'Surri' (1986-98)

Within Light Show, psychological, conceptual and political concerns were explored through the medium of light. Chilean artist Iván Navarro's politically charged work with light demonstrated how light (as a language) can be transformed according to social and political contexts. This is reflected in works such as 'Reality Show - Silver', 2010, which uses light to reinterpret the formal language of Minimalism, celebrating its aesthetics while critiquing its underlying issues of power and authority, a direct reference to Navarro's experience growing up under the dictatorship in Chile and how Minimalism was used to communicate political ideas in Latin America. Navarro's work is perhaps less well known than that of the major Latin American artists Carlos Cruz-Diez and Julio le Parc, both of whom played a key role in the development of installation art, using light and colour to activate space and who paralleled developments in the Light and Space movement associated with California in the 60s and 70s.

Responding to my question about artists using light in socially productive ways, Lauson reflected on the work of Navarro and Philippe Parreno:

I think the interesting thing about Navarro and Parreno in comparison to say Holzer is that Holzer's message is out there, and you look and you read and the light transmits the message to you. I think Parreno and Navarro work in subtler ways, so you might experience the piece first and then find out more about the politics of it. Navarro made this installation, a box-like structure with four doors that you stand in and the space appears infinite. But it also has a layer of politics growing up in Chile under a dictatorship. So you might go and experience it again after learning about his history and think that, in addition to being a fun and reflective work, it can also seem claustrophobic and possibly oppressive (Lauson, 2017).



Fig. 19: Left: Iván Navarro 'Reality Show' – Silver (2010) In: **Light Show** Exhibition Publication, Hayward Gallery, London (2013)

Fig. 20: Right: Jenny Holzer 'Monument' (2008) In: **Light Show** Exhibition Publication, Hayward Gallery, London (2013)

Within such a large-scale show it is perhaps more challenging to afford individual works the amount of time they deserve to be experienced fully, and it might go unnoticed for example that works such as those by Iván Navarro and Jenny Holzer are both political works that put optics to moral effect. Instead the experience of a survey show might be surmised to be theatrical, as a pleasure trip for all, “because everything has the instant appeal or advantage of luminosity” (Cumming, 2013). Laura Cumming does extol the virtues of representing this considerable history of light art but also criticises the expansive scope of the exhibition, and how the eye begins to resist all the artifice after viewing the volume of works on show:

*The show has one of everything, in terms of technology. It has flashlights, theatre lights and cinema projectors. It has good old 40 watt bulbs. Fischli and Weiss's bathetic *Son et Lumière* (1990) – a clear plastic glass revolving on a motorised cake stand illuminated by a torch – satirises the grand effects around it. But even this DIY contraption generates its own rainbow of refracted light. What this show cannot help becoming is an inventory of light art, one instance after another. For all that some artists are exploring the spectrum, while others are exploiting shadows or time, you could not say that this show actually deepens or develops (Cumming, 2013).*

The catalogue, *Light Show*, published by the Hayward Gallery (2013) includes three essays from leading curators and writers, followed by an introduction to the work of each artist included in the show. As Philip Ball suggests in his essay ‘From Symbol to Substance: The Technologies of Light’, “artists have embraced the possibilities on offer, so that light art is, among other things, always a conversation with technology.” Ball’s essay charts the way theology pervaded the early scientific study of light, from 13th-century proto-scientist Robert Grosseteste and his disciple Roger Bacon to the scientists of the 17th century, Isaac Newton, Robert Boyle and Robert Hooke. In the essay ‘Light Art: An Immaterial Material’, curator Cliff Lauson introduces the use of electric light in art, referencing historic works such as László Moholy Nagy’s ‘Light Prop for an Electric Stage’ (1928-30) and Lucio Fontana’s series ‘Ambiente Spaziale’ which incorporated large-scale curving neons or UV light, both artists being important examples of early pioneers of light. Lauson references the use of light as a mid-century zeitgeist and shows that examined light in art such as Kunst Licht Kunst staged at the Van Abbemuseum, Eindhoven in 1966.



Fig. 21: Left: **Carlos Cruz-Diez** ‘Chromosaturation’ (2010)
In: **Light Show** Exhibition Publication, Hayward Gallery, London (2013)

Fig. 22: Right: **Jenny Holzer** ‘Survival’ (1985)
In: **Light Show** Exhibition Publication, Hayward Gallery, London (2013)

Lauson then moves on to discuss the selection of artworks and artists in *Light Show*, works all made since the 1960s and to examine light as a medium through overlapping approaches: “as sculptural form, as perceptual phenomenon and as a medium invested with specific social and cultural meanings.” He concludes that “these are not entirely separable categories, especially considering that the artists themselves have rarely adhered to a single aspect of light throughout their careers; they are instead points of entry in understanding how these diverse artworks share medium-based concerns.” In ‘Vision Made Visible’, Anne Wagner’s essay aims “to characterize the nature and intentions of light art over the course of the 100 years or so this genre has been in existence.” Her essay also charts some of the differences between early and contemporary light art. She argues that most recent light works share the recognition that audiences possessed with vision have the capacity to experience the works bodily and yet can also interpret them through situational, historical and cultural perspectives. Wagner questions whether a new set of principles concerning light and vision have come to govern light art in recent times.

A CERTAIN KIND OF LIGHT Light in Art Over Six Decades Towner Art Gallery, Eastbourne (2017)

A Certain Kind of Light drew on artists within the Arts Council Collection whose work responded to light, its materiality, transience and effect. This was an interesting exhibition to consider as it could be perceived as an archival show, its purpose engaging with the opening of the Arts Council Collection to the public and with a focus on works sharing an interest in light as a medium in art. The exhibition brought together artworks that reflected the relationship between light and a wide range of themes from brightness, colour and perception to transformation, energy and the passage of time. Encompassing paintings, sculpture, video, photography, drawing and immersive installations, it featured artworks created from the 1960s to the present day by almost 30 leading artists, including David Batchelor, Ceal Floyer, Raphael Hefti, Runa Islam, Anish Kapoor, Mark Titchner, L. S. Lowry, Katie Paterson, Peter Sedgley, Rachel Whiteread and Cerith Wyn Evans. The exhibition considered the different ways in which artists have explored the various aspects of light, including its importance as a source of illumination, as a pure sculptural material, as a mysterious force and as a source of energy that can be conceptually converted into other forms.

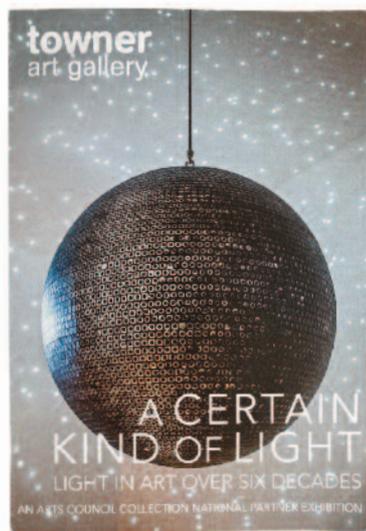


Fig. 23: Left: **A Certain Kind of Light**: Exhibition Leaflet (2017)



Fig. 24: Right: **David Batchelor 'Candella 15'** (2016) Arts Council Collection. Photo Jo Joelson



Having experienced personally two of the light-themed group shows described above, I feel it is worth locating and discussing some of the key benefits and also the challenges of the themed approach to curating a show about the medium of light. One of the benefits with presenting a survey of such a field is that the sheer scope of artist approaches is exhibited and a comparative study can be made which may then make explicit the many topics or themes contained within the work. One of the perceived problems revolves around how the audience relates to the relationship between artworks and how the selected artworks contribute to the overall curatorial vision of the show. With such a large number and range of works it becomes more difficult to develop a coherent narrative for the show to follow. In Laura Cumming's review for the *Guardian*, this issue is specifically highlighted:

This is the besetting sin of theme shows: they can put viewers into questioning mode, pondering what is and isn't relevant, how strong or weak the connections, what the entrance qualifications ought to be. This is no real way to look at art. Many shows rise high above this problem, but it is a test for viewer and curator alike, and particularly aggravated in this case (Cumming, 2017).

Another problematic aspect is the way this particular show was conceived, driven by funding allocated on the basis that the exhibition comprised artworks in the Arts Council Collection. The curatorial vision was therefore limited by this constraint and by the available selection of light-related artworks in the collection. Again this was highlighted in Cumming's criticism of themed shows:

A year ago, the Arts Council announced that it had chosen four national partners to mount 24 "must-see" shows over three years, all derived from its massive collection. The partners were Yorkshire Sculpture Park, Birmingham Museums Trust, Liverpool's Walker Art Gallery and the Towner. The galleries get art and cash, the collection gets an England-wide airing and the public gets a glut of theme shows (Cumming, 2017).

What *A Certain Kind of Light* does seem to provoke in curatorial terms is questions relating to the collection, the importance of bringing works out of storage and into the present through reprocessing and re-staging and the creation of new narratives that resonate in contemporary discourse. What seemed to be lacking from the exhibition narrative was any reason for these particular works being collected and whether there had always been an interest in collecting light-based art at the Arts Council. These questions remain unanswered but perhaps indicate future areas of research for the curating and presenting of collections and archives.



Fig. 25: **Katie Paterson** 'Totality' In: *A Certain Kind of Light*, Towner Art Gallery, Eastbourne (2016) Photo Jo Joelson

Fig. 26: **Peter Lanyon** 'Colour Construction' In: *A Certain Kind of Light*, Towner Art Gallery, Eastbourne (1960) Arts Council Collection. Photo Jo Joelson

2.2.2 LIGHT FESTIVALS

The proliferation of events in which illumination is deployed for the purposes of pleasure and fantasy is expressed through a growing number of contemporary light festivals around the globe, such as Lyon's Festival of Lights (one of the largest) and those staged by Sydney, Prague, Montreal, Singapore and Berlin, as well as the smaller light festivals of Lumiere Durham and Eindhoven (Edensor, 2017). This section examines the different light festival models and their curatorial strategies, in order to reveal some of the reasons why a city adopts a light festival – whether rooted in religiously motivated processions (such as Lyon); or the focus on technical history through connections with lighting manufacturers and the lighting industry (Eindhoven); as an ambitious fine art event (Lumiere Durham and Lüdenscheid, Germany); as community educational programme (Lights in Alingsås, Sweden); or economically driven tourist initiatives (Scheilke, 2013). It also identifies some of the challenges for future light festivals such as the need to justify the excesses of light production against the economic benefits, and while addressing the rising awareness of the need for energy conservation.

The English seaside resort of Blackpool was the first to initiate “illuminations” as an attraction, and as lighting became controllable through the use of electricity so the ceremony of turning lights on at once and as a public event was introduced. This happened in 1912 when the switch from gas lighting and by lamplighters to electricity and automation took place (Henderson, 2019, p.147). The light ceremony and illuminations of Blackpool have over time developed into a professionally organised festival, known as LightPool with large-scale installations containing coloured and dynamic lighting which attracts vast numbers of tourists (annual visitors to the illuminations is estimated at 4 million). Being an artist curated into the context of a light festival presents a significant challenge for conceiving a work in a lux-heavy environment, with several other light works also competing for attention. Artist Mark Titchner discussed his experience of being commissioned for the LightPool Festival in 2016 as part of the Blackpool Illuminations art programme. Titchner created two light projections and described the surrounding illuminations as overwhelming, with any art trying to function within that being faced with extreme challenges: “it's not even beauty – it's just a mad, overwhelming sensation of flashing lights. I tried to make a brutal piece, but even that becomes overwhelmed by fairy lights – but it is an interesting and challenging context” (Titchner, 2018).

In the article ‘Light Matters’ for *ArchDaily*, Thomas Schielke discusses Europe's leading light festivals and acknowledges that whilst the overall impression is that light events and festivals have a positive effect on their host city by attracting additional visitors and generating publicity, there is a different aesthetic experience and quality depending on whether the tourism board, a technical team, or a curator selects the artists and designers (Schielke, 2013). Where the tourism division looks for spectacular, colourful and dynamic projections on buildings to gain attention and media coverage, a curator might take a more selective and sophisticated approach to present a range of works by world-renowned artists that cohere around a central narrative, while being less motivated by commercial gain. This approach is evident in the LichtRouten forum in the German town Lüdenscheid which, with its tradition of



Fig. 27: **Mark Titchner** 'What Use is Life Without Progress' (2016) Lightpool, Blackpool. Photo courtesy of Mark Titchner

lighting manufacturing, has employed two curators since 2002 to select high-quality, artistic light-based installations and interventions. By including historical light installations, large-scale projects for public spaces and smaller interventions in private spaces, the forum has also started to present and document the development of light art over time (Schielke, 2013). Bettina Pelz, the curator of LichtRouten, describes the festival as being part of a cultural mission: “People walking the LichtRouten here, many of them wouldn’t go into a normal museum. And if they go here and if they spend time with the artworks they start to deepen their visual understanding of things” (Schielke, 2013).

Pelz also explains that it is necessary to have partners in each city who are prepared to switch off their lighting so that the festivals have a dark canvas and backdrop to work with. Managing Director for the Professional Lighting Designers’ Association, Thomas Braedikow, explains how technological transformation from analogue to digital (from incandescent light bulb to reflector halogen to LED lighting) has had an impact on the aesthetic quality of light festivals and how content has evolved from a focus on architectural lighting to light that follows a narrative arc (Braedikow, 2013). There has also been recent criticism by the lighting designer Roger Narboni, amongst others, who claims that too much light “may distort the image and sense of places”. Narboni believes lighting is a multidisciplinary field that requires teamwork and that globalisation is creating uniformity – he insists that “We need to collect, if it is still possible, the lighting cultures that we are losing. It’s why when I work on a project I always work with a local partner. I want to learn from them, their culture, their story” (Donoff, 2016).

LUZBOA, Portugal (2006)

Luzboa 2006 is an example of a time-based spectacle for a mass audience that transformed certain areas of a city into a space of performance through interventions involving light. It was promoted as the International Biennale on the theme of Light, in Lisbon and conceived as a city light-walk divided into three circuits. The main objective of this RGB (Red, Green, Blue) project was to create a new intervention in the city by reflecting on the role of light art in planning urban space. In talking to the Portuguese curator, Mário Caeiro, about the concept of the light festival, he explained how Lisbon's Biennale of Light became a laboratory for the role of light in the city, becoming an urban museum without walls: "We wondered how Lisbon, a place that has one of the most intense experiences of light, does not have a vision for it" (Cáeiro, 2017). So, along with curator Marc Pottier, Caeiro created a festival to bring the issue of light into the discourse, inviting artists as well as citizens to bring their contribution to the public sphere of light so as to update Lisbon just as other European cities have a vision for light. In 2004, Caeiro started working towards the 1st Biennale with a view to urging Portugal's capital city to revise its public lighting and improve the quality of life in the city after dark. The development began with a map and visitors were able to complete the 6km route independently, with each tour being named after specific historical and urban characteristics:

- RED tour** – Aristocratic Lisbon
- GREEN tour** – Pombaline Lisbon
- BLUE tour** – Ancient Lisbon

A detailed description of the tours is included in the comprehensive catalogue Luzboa: Lisbon Invented by Light

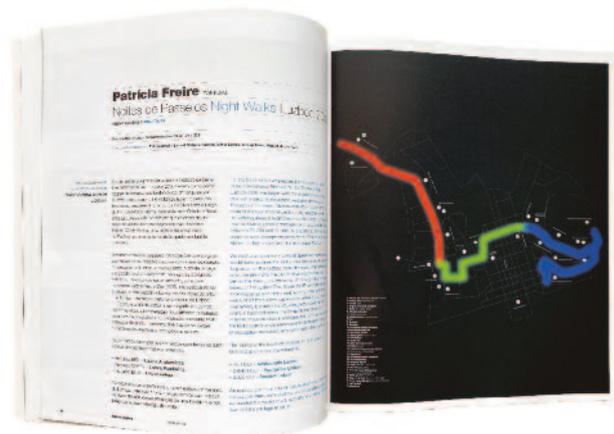


Fig. 28: Patrícia Freire 'Night Walks Luzboa' (2006)

The alteration of the general atmosphere was accomplished by the application of coloured filters on the street luminaires, with each of the three circuits corresponding to one of the primary colours. During an interview with Cáeiro in 2017, he gave insights into the conceptual development of the Luzboa light festival:

We changed the lights of more than 4km in the city of Lisbon, managing to colour a sequence of streets (the circuit started in red, then went green, and finally blue). What we created was an urban museum, we called it a sort of museum without walls. Again people felt they were part of the experience of the city by means of the change of the light. The point is that each light would have a narrative behind it, so people became more aware of what a red light could symbolise... what does it mean then, green light in the Pombaline area? And what does it mean, the blue light in Alfama?

But also what kind of emotions does each light bring to you? After we decided to do the project, after we designed it on paper... I went to talk to a major specialist in the history of Lisbon. For I think the job of a curator is also to confirm his/her intuitions. So I approached Professor Luís Alves de Matos and asked him “Please tell me if are we are doing it right?”. And you know, he opened the Luzboa lighting plan and said “Very good job, you just reproduced the path that Fernando Pessoa [our major poet in Lisbon] followed on an everyday basis.” and then he explained it to me, the relation between Pessoa’s steps, the urban fabric and the urban landscape, and how it had been some how translated into what we called the RGB circuit (itself an ironic way to lead people out of their screens and to walk across the city...). You see how light can sometimes work for you? Alves de Matos explained to me that red light is connected to the body, to the sensual world, and that it was in this certain area of Lisbon where there were formerly farms (and today not only a beautiful park but also the most famous gay bars) ... He went on to explain that the green light, which we put unconsciously in the grid, directly corresponded to the orthogonal part of the city’s centre, as if a mental green light is what makes you think clearly. And it all ended up in blue Alfama, which is the soul of Lisbon, the narrative spot where Lisbon was born, you know, its Arabic origin and all that. So what happens here is a lesson for life, it happened many times more in fact. If you work with this subject, sooner than you think it is the subject speaking through you, you become the medium, because it’s pretty obvious that certain experiences of light much more knowledgeable, they are much deeper than what a scientist or curator could imagine” (Cáeiro, 2017).



Fig. 29: 'Extra]muros[Projecto RGB' Lisbon (2006)

A review in the catalogue *Lisbon Invented by Light*, by Kai Becker, highlights another installation project, 'Fada Morgana', designed by the Belgian group Het Pakt and included in the same festival, which combined large-scale photo projections with music. The article concludes that the popularity and success of this installation was partially due to the location which was a popular meeting place for locals, who were also very involved in the concept, through their faces appearing in projected photos and their voices making the sound (Becker, 2006).

LUMIERE DURHAM & LUMIERE LONDON (2009 – ongoing)

In the UK, the largest light festival, Lumiere, first took place in Durham in 2009. It was originally planned as a one-off, with the support of Durham County Council and other sponsors, but the producers, Artichoke, have staged the event in the North East every other year since then. It is a family-friendly festival with specially commissioned site-specific works, and for each iteration international artists are invited to create works that respond to and re-imagine buildings and public spaces, thus encouraging audiences to engage with new experiences of the urban environment during the long, dark, winter nights. In our interview, Marriage explained that there is always a mix of large-scale projections, interactive artworks and smaller more contemplative works that are "always about place; it's sometimes about a story, reflecting on an aspect of social history or something current; and it's always about making a piece of work with the location and setting we have chosen for it." (Marriage, 2017). Marriage (CEO of Artichoke) acknowledges that Lumiere has helped to define Durham in unexpected ways, to the extent that in 2017, Artichoke re-branded the county as 'County Durham, Place of Light', and the festival has become part of the shift in the way Durham represents itself. Attracting 200,000 visitors to a town with a population of 39,000 has a huge impact, lifting the economy in the middle of winter when everything is

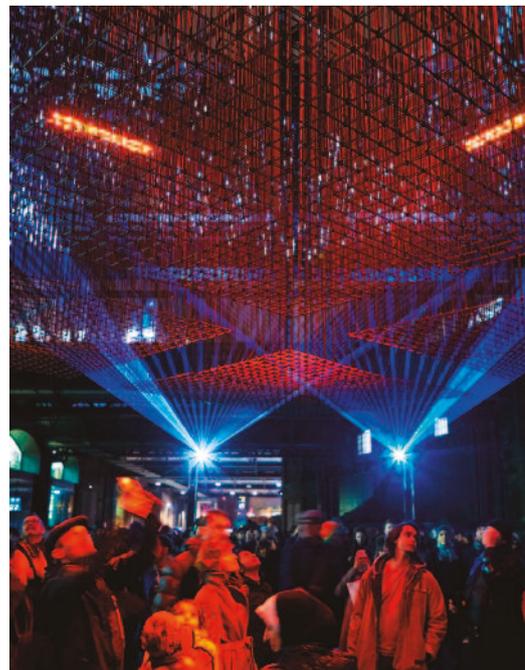
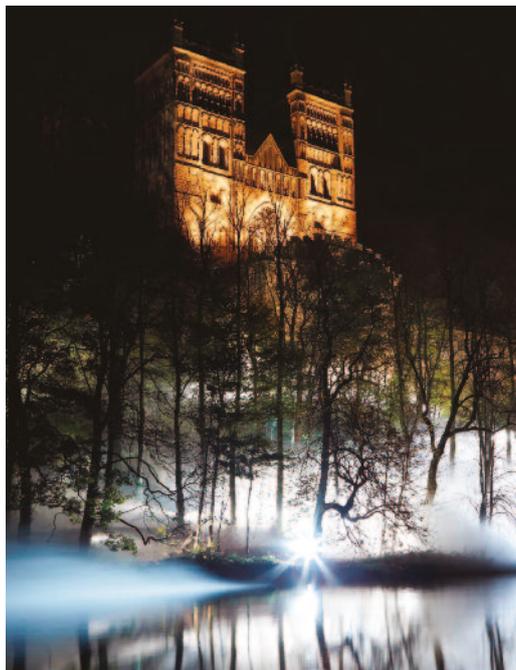


Fig. 30: *Left: Fujiko Nakaya 'Fogscape #03238' Lumiere Durham (2015) Photo by Matthew Andrews, Produced by Artichoke*
Fig. 31: *Right: Aether 'Architecture Social Club' Lumiere London (2018) Photo by Matthew Andrews, Produced by Artichoke*

quietening down. Discussing what makes Lumiere unique as a festival, Marriage explained:

There's a circuit of light festivals, particularly in Europe, but I try to ensure each project is distinctive – not a part of a festival circuit. Organising Lumiere is a different kind of curatorial process, one that involves traffic and crowd management, and largely due to Artichoke's success in attracting large crowds, this takes up about a third of my time. So the question of where something might be installed is not only about the art and the artist, but it's actually tied to the way the crowd might behave (Marriage, 2017).

The Lumiere Festival was brought to London in 2016 for the first time with light works and installations at specific sites across London including King's Cross and the West End where a 'Garden of Light' was created by French artists TILT centred on the statue of William Shakespeare, and the front of Westminster Abbey illuminated by artist Patrice Warrener with coloured light projected on to statues. Because of overcrowding on the Saturday night some installations had to be temporarily switched off and King's Cross station evacuated. In 2018 Lumiere returned to London for the second edition with more than 50 works displayed in public in King's Cross, the West End, Mayfair, Fitzrovia, the South Bank and Waterloo. Lumiere London is now one of the largest and most popular light festivals in the UK, and is considered a kind of civic service because of the support provided by the Mayor of London. It features a host of light installations by international artists that illuminate areas of central London for an estimated audience of 1.3 million people. Helen Marriage, talks about the festival's reimagining of communal space: "Lumiere London is about more than the art: it's about people sharing public space and re-discovering the city." When discussing the challenge of a festival to provide the possibility of intimate light, Marriage acknowledged the need for duality of experience, involving both the importance of engagement on an individual level as well as a shared experience in public spaces. Artichoke is committed to limiting the environmental impact of the light festivals and therefore all installations are produced as energy efficient as possible and some commissions are made using sustainable / recycled materials. Many works use low energy LEDs, while street lighting is switched off or reduced with the aim of saving excess power usage and reducing light pollution so the artworks can be the focus. Furthermore, through its promotional material Artichoke encourages audiences to use public transport to get around during the festival. I raised the issue of light pollution with Marriage and she responded that we have an obsession with lighting at night as a means of ensuring safety, a kind of creation of daylight at night because people are afraid of the dark, something she considers a particularly human trait. She cites Durham as being a particularly dark city as a result of its status as a World Heritage site with a specially approved lighting scheme that lights up the cathedral and the castle – with the desired effect that those buildings should emerge out of the darkness.

FESTIVAL OF LIGHTS, LYON (1989 – ongoing)

The *Fête des Lumières*, or Festival of Lights in Lyon, emerged from a popular tradition dating back to 1852 when the city's residents placed lit candles on their window sills, lighting up entire districts of the city to celebrate the installation of a statue of the



Fig. 32a: Speirs + Major 'The Absence of Light' Fête des Lumières, Lyon (2002) Photo courtesy Speirs + Major

Virgin Mary on Fourvière Hill, a decision that had been made against a backdrop of social unrest, radical urban change and regular flooding. The tradition of city wide illuminations started on 8th December and this continued into the following decades, becoming an event to which the citizens of Lyon feel deeply connected. In 1989, Lyon adopted its first *Plan Lumière*, or Lighting Plan, becoming the first European city to launch such a project. It was designed to enhance the city through the illumination of heritage sites and this pioneering initiative saw the permanent illumination of over 250 sites, having political, technical and artistic impact and giving Lyon a unique identity. In 2004 there was a second master plan which expanded on from the embellishment of monuments to highlight rivers, riverbanks, hills, major roads, squares, streets and bridges and in the process becoming an essential element of the urban environment as it created these nocturnal landscapes. As a result, Lyon has become a centre of excellence in the light field with several light designers, artists and architects sharing their expertise around the world. LUCI (Lighting Urban Community International) was formed in 2002 as an international network of cities using urban lighting, bringing together 65 municipalities on six continents committed to the use of light in sustainable urban development. LUCI provides a forum for knowledge exchange and best practice in the important area of sustainable urban lighting. In the ontology (see Chapter 4) the issue of the quality of light within the context of the Light Festival was raised by Mark Major from Speirs and Major (the architectural lighting design practice), who were commissioned to make a work for the Fête des Lumières, in 2002 and created the work 'The Absence of Light', a politically motivated work that was a direct criticism of the city for becoming over-lit because of certain commercial forces that were more concerned with 'beautification' than focusing on the quality of light in public spaces. "It was largely about prettification of the architecture. It may be admirable that they were in the vanguard of strategic lighting plans, but we just felt we had something to say about it. The rest of the Fête des Lumières was about the 'wow' kind of installation. I suppose ours stood out for being an 'anti-light' piece" (Major, 2018). According to Major, following this work that was moored in the middle of the River Saône and appeared like a black hole drawing attention to the light pollution in Lyon, the city reappraised its lighting strategy in response (Major, 2017).



Fig. 32b: **Speirs + Major** 'The Absence of Light' Fête des Lumières, Lyon (2002) Photo courtesy Speirs + Major

2.3 COLLECTIONS, ARCHIVES, LIBRARIES

Whilst there is an accepted distinction between a collection, an archive and a library (the first is the product of careful selection of artworks and the other two contain a wider variety of information), examples of all these will be discussed, each providing insights into the curation of collected materials. The preoccupation with archives since the early 1990s is frequently described as the “archival turn”, a term coined by the anthropologist Ann Stoler and which is often used to signify the archive’s repositioning as a subject of investigation rather than the site where research takes place. The fact that it was coined by an anthropologist rather than a humanities scholar highlights the archival turn as a multidisciplinary phenomenon (Eichhorn, 2008) and the growing popularity of archives as aspects of artistic process.

Where traditionally a ‘collection’ groups together a number of artworks under a unifying theme, the ‘archive’ might house more paper-based materials, whereas libraries tend to represent a public, democratic space, for housing universal knowledge in the form of books, periodicals, film and music, without giving preference to one kind of knowledge over another. It became important to learn about the distinction between these entities when conceiving the proposed research framework. Libraries are usually housed within a building and are material spaces, and it therefore seemed interesting to propose a library that might contain something that has both material and immaterial qualities, such as light and the practice of light.

2.3.1 COLLECTIONS

Unlike light, which is itself predictable in its behaviour, the various practices of light are less so, being often performative, ephemeral and in flux over time. Perhaps because of this, the documentation and categorisation of creative practices that involve light are inconsistent, with few collections being dedicated to the medium.

Whilst light has featured in western art since the Renaissance, Light Art only really developed in the 1960s with the Light and Space artists, the Land Artists, the Liquid Light Show movement and artists involved in Lumino Kinetic Art, making it a relatively new genre. During this period, the category of sculpture made way for “the transition from “objecthood” to environment, and light’s potential began to be fully realised as a sculptural medium” (Lauson, 2013). In writing about this shift from object to environment, Light Show curator Cliff Lauson adds a footnote to Frank Popper’s suggestion (1966) that its origins lie in 19th-century stage lighting. Since the 1970s light-based art has taken many forms, from performance-based environments to site-specific contexts and being the subject of international exhibitions with a number of artists using light as material and object as central to their practice. Although certain institutions began to support and collect such works, it wasn’t until 2001 that a dedicated museum (the Centre for International Light Art, Unna) came to focus on this art form.

This section looks at research into collections and museums – specifically exploring the significance of archiving and preserving light-based media in the 21st century as forms and formats continue to expand – and the ways in which working with collections can stimulate artistic practice. The research into collecting light-based practice was conducted by engaging with key institutions, including the Dia Art Foundation in New York, which maintains a constellation of sites, from the iconic, permanent, site-specific artworks and installations in New York, the American West and Germany, to an exhibition programme that has commissioned dozens of breakthrough projects, and also including the vast galleries of Dia:Beacon, New York, and the programmes of education and public engagement. It is Dia’s particular support of artists working with light and landscape that provides insights into the preservation, collection and maintenance of site specific works such as Nancy Holt’s ‘Sun Tunnels’, and the Dan Flavin Institute, which houses an off-site permanent collection of Flavin’s light works. This research has built an understanding of Dia’s function and role in the preservation of artworks as part of a larger collection and in the generation of material for exhibition and scholarly study. It sheds light on Dia’s role as a public mediator of recent art using the medium of light and hence audience reception has been of significant interest, notably the role of the spectator and the model of spectatorship in the work. This includes the ‘pilgrim’ making visits to site-specific works, or the audience in an experiential, immersive or passive engagement with artworks. The Centre for International Light Art, Unna, was also selected as a key institution to consider since it was the first museum dedicated to the genre of Light Art. When it opened in 2001 it commissioned an unprecedented number of light-art works specifically for the former brewery building, and which constituted a significant part of the Route of Industrial Culture in the Ruhr. Uwe Ruth developed the concept for the museum in 1998, envisaging the premises as “a continuously growing museum for artistic light-installations with an internationally important light collection – the first of its kind (Ruth, 2012). In reviewing the various forms a collection can take it has been interesting to consider which might encourage or enable the audience to actively participate in the reception of an artwork, and even, in some situations, to become a co-creator or co-author of the experience.

DIA ART FOUNDATION

The Dia Art Foundation, New York, is a unique model, founded in 1974 to support artists working in the context of monumental works of art – of land and light. A personal visit there increased my appreciation of Dia's support and ownership of artists' works, in particular those that challenge conventional modes of engagement, such as artworks produced by practitioners working with light. It has generated deeper understanding of curatorial approaches that present the intention of an “experiential relation to spectatorship.” In an attempt to acquire ‘spectatorial knowledge’, three examples of art works collected, supported and maintained by the Dia Art Foundation are examined in more detail in this section. These are: Nancy Holt’s **Sun Tunnels** in the Utah Desert, La Monte Young and Marian Zazeela’s **Dream House**, and the **Dan Flavin Art Institute**, Bridgehampton, New York city.

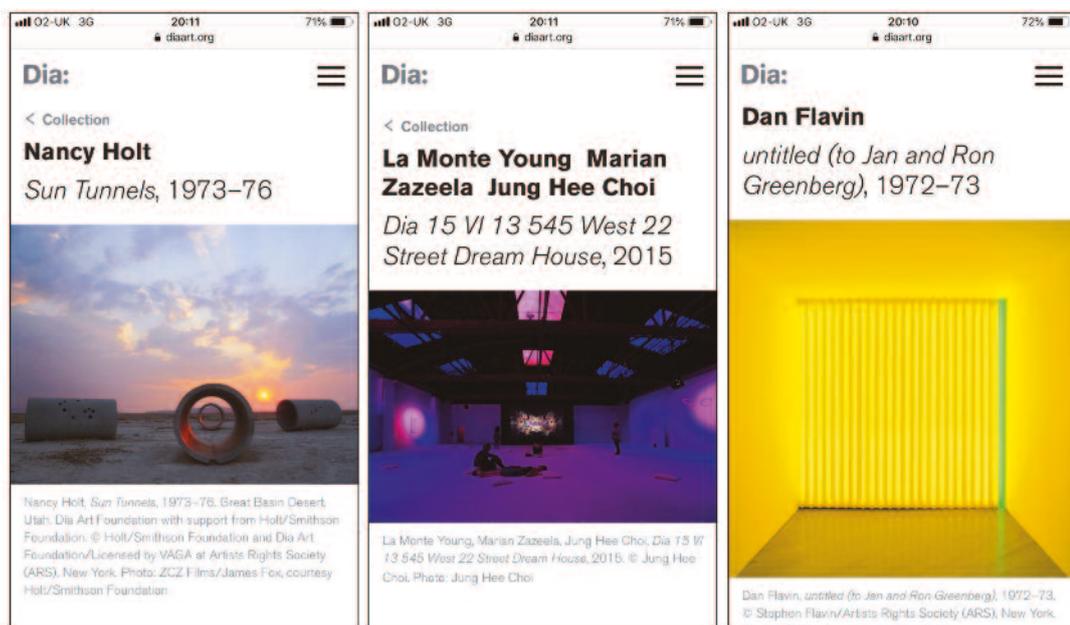


Fig. 33: Screenshot from DIA Art Foundation Website - Collections (2020)

Attending the Nancy Holt Symposium at the Dia Art Foundation (February 2019), brought into focus Dia’s stewardship and facilitation of access to the artist’s ‘Sun Tunnels’, which Dia acquired in 2018 (the first work of Land Art created by a woman to enter the collection of Dia) with support from the Holt/Smithson Foundation (established the same year to serve the legacies of Holt and her husband Robert Smithson). Dia’s intention was for the symposium to be interdisciplinary, to “shed light on all the ways of thinking about how a structure acts on and responds to a site – the geologic, the astronomic, the architectural – alongside the science of climate change” (Rexer, 2019). To this aim, Dia involved three art historians, an astronomer who spoke about Mesolithic structures that track celestial change, an architect working in environmental design and a geologist specialising in the Bonneville region with particular interest in geologic change and why the site’s history is so important to the experience of ‘Sun Tunnels’. The symposium provided context for this artwork, and detailed information about Holt’s approach to the land and how the environment can be appreciated alongside her artwork.

'Sun Tunnels' might once have been considered an "uncollectible" artwork but in recent years it seems that in the US there has been an upswing in the collecting of site-specific artworks that involve excursions or 'pilgrimages' to experience them. This was evidenced recently in the symposium "Collecting the 'Uncollectible': Earth and Site-Specific Sculpture" (May 2019) held at the Frick Collection in New York and which focused on collecting site-specific, large-scale, light-based works by artists including Walter de Maria, Nancy Holt, Robert Smithson, Michelle Stuart and James Turrell. Scholars, curators, collectors, an artist and a conservator explored the challenges of installation, maintenance, preservation and stewardship with the keynote setting the tone in its title: "Collecting Experiences: Owning Environmental Sculpture," by Suzaan Boettger. Further evidence that this topic is gaining ground in mainstream culture is the news that Kanye West, the American rapper and the latest patron of the "uncollectible" recently donated \$10 million to artist James Turrell's Roden Crater, a project that has also received long-term support from the Dia Art Foundation.



Fig. 34: The Alpha East Tunnel of **James Turrell's** Roden Crater (2020) Photo Klaus Oberman, Courtesy James Turrell

During an interview with Rebecca Rabinow (Director of the Menil Collection, which helped to establish Dia) and Jessica Morgan (Director of the Dia Foundation), Andy Battaglia asked how they felt about the future of institutions of the scale and scope that Dia and the Menil Collection represent. Morgan expressed the view that in the culture generally, there is a shift towards a desire for experiences that are more unique, more personal, as against the gradual consumption of our lives through technology.

There is a desire for a different type of museum-going experience clearly not about shopping or just consuming our surroundings, which we can increasingly see in larger institutions. At Dia, most of our spaces require a journey, a pilgrimage to reach an environment that has a different quality to it. I think that will be more important to people rather than less (Battaglia, 2017).

SUN TUNNELS

Artist Nancy Holt abandoned the galleries and museums, leaving them to serve only as reliquaries for her documentation. Holt considered that being of the world means being in the world and that the world cannot be experienced from the interior of a sealed box. By 1973 she had spent five years watching the rituals of the sun and earth and the work 'Sun Tunnels' was derived from her observations of the ascending and receding light in the desert (Burns, 2018). 'Sun Tunnels' is a site-specific work created between 1973 and 1976 in the Great Basin Desert, Utah, which lies between the Rocky Mountains and the Sierra Nevada range and is situated about 8km south of the ghost town of Lucin and 64 km from the nearest active town. The conception of this work is explained in an article written by Holt and published in *Art Forum* magazine in 1977:



Fig. 35: Nancy Holt 'Sun Tunnels' (1973) as reproduced in *Art & Place* by Phaidon

When I was making projected light works in New York, the idea of working with the actual projected light of the sun began to intrigue me. I put cut-outs in my window and models on my roof in New York, so I could watch the light and shadow change hour by hour, day by day. In Utah I made drawings and worked with scale models and large hoops in the desert, trying out different lengths, diameters, and placements, and doing photographic studies of the changes in light and shadow. I consulted with an astrophysicist at the University of Utah about the angles of the solstices at the latitude of my land. Because the land had irregular contours, and the earth was not a perfect sphere, we had to calculate the height of the distant mountains and ridges and, using a

computer, readjust the solstice angles from this date. The angles we arrived at formed an “X,” which worked as a configuration for the tunnels. Using a helioscope set for the latitude of the site, it was possible to study the changes in light and shadow in my model for every hour during every day of the year (Holt, 1977).

Holt’s intention was not the same as that of the other Land Artists, “an instrumentalisation of the environment, expressing some mastery of the earth under the guise of ecological symbiosis, such as the act of structuring natural phenomena as in Walter de Maria’s Lightning Field, ... one distinction of ‘Sun Tunnels’ is that they do not create an event that is not already happening, they simply direct your gaze to one of the most common phenomena, time. For Nancy, repetition is the form she’s most invested in, the circle, always returning, she insists on orienting you in a cyclical matter, the work stages a continuous present” (Burns, 2018). On completing the artwork Holt stayed at the site in a camper van, recording the effects of light on the tunnels over several days.



Fig. 36: Nancy Holt ‘Sun Tunnels’ (1973) Artforum magazine (1977)

I would watch sunrises and sunsets and the stars at night, which were incredible – you could get lost in them. When you’re alone in the desert, you’re ageless, timeless. I became very aware that Sun Tunnels was a way of bringing the universe back to human scale. It was a way of framing the landscape, and orienting one in space and time – of differentiating something vast and undifferentiated (Holt, 1977).

The following account of the experience at ‘Sun Tunnels’ is taken from Phaidon’s *Art and Place: Site Specific Art of the Americas* (2013):

Venturing out on Interstate 80 in Utah, just a few miles east of the Nevada border, visitors turn onto Route 30, and later turn south onto a dirt road. After about 16 km (10 miles) Holt’s work becomes visible in the east. Four large cylinders are arranged on the ground like an open X, in the middle of miles and miles of open desolate terrain with occasional sparse brush. In the distance, majestic snow-capped mountains barely

pierce the horizon; even they seem minuscule in comparison to this expanse of desert and the canopy of sky above. The four tubes are made of concrete highway conduit, normally used in underground drainage systems for road construction. Above ground, however, the tunnels form a frame of reference in a region whose openness is awesome and disorienting. The work is made complete by its interaction with the sun and stars. One axis of the x lines up with the rising and setting of the sun during the summer solstice, the other with the winter solstice. Twice a year, at their respective dawns and twilights, each circular tunnel frames the circle of the sun and becomes ablaze with golden light. The sun seems for a few moments to exist at the viewer's level, sitting on the horizontal plane of the desert as it communes with the viewer through Holt's cosmic conduit. The artist drilled a series of holes into the tunnels so that each lines up with a constellation: Capricorn, Columba, Draco and Perseus. During the day, sunlight casts the stellar patterns on the curved floor of the tunnels' shadowed interiors. Like Neolithic monuments from millennia past, Holt's Sun Tunnels do not exist simply as sculptures in and of themselves, but act as vehicles that connect the viewer to the larger cosmos.



Fig. 37: Nancy Holt 'Sun Tunnels' (1973) Artforum magazine (1977)

Another report from a visit to the 'Sun Tunnels' follows by the journalist Alastair Sooke writing for the *Telegraph* newspaper in 2012:

As we approach, the tunnels retain a shape-shifting quality. One minute, with their curved backs, they resemble wagons huddled on a barren prairie. The next, they look like futuristic farm buildings. At last, we arrive. They are what they are: four concrete tubes, slick and black in the rain like wet tarmac, in the middle of yellowy-green scrub, with grey silhouetted mountains in the distance. Within seconds of getting out of the Jeep we are sodden. The open-ended tunnels offer little protection. Inside, mysterious black lines, like tyre tracks made by a BMX bike, spiral across the surface, giving each tunnel the appearance of a gigantic rifled gun barrel. 'What are the odds?' Lisa, the artist from San Francisco, says. 'You come all this way and get your own British weather. Forget Sun Tunnels – today they're Wind and Rain Tunnels' (Sooke, 2012).

These accounts of visits to ‘Sun Tunnels’ indicate that engaging with sites specifically has the potential for transformative experience and one which must be considered embodied. Perhaps this form of engagement is lasting because of an affective charge induced upon the spectator’s body – a corporeal understanding in which the experiential mode brings the spectator closer to the work. Discussing the notion of ‘the performative’ in relation to art, Dorothea von Hantelmann points to a shift away from what an artwork depicts and represents to the effects and experiences it produces: “In principle, the performative triggers a methodological shift in how we look at any artwork and in the way in which it produces meaning. Understood in this way, it indeed offers a very interesting and challenging change of perspective” (von Hantelmann, 2014). Von Hantelmann discourages the use of ‘the performative’ as a label for categorising a certain group of contemporary artworks, as she states it makes little sense. Instead she suggests the “experiential turn” as a term that might be more appropriate and useful for describing these ongoing tendencies in contemporary art, arguing that the new focus on the perceiving, experiencing subject that comes with it resonates with the economic and cultural transformations of Western bourgeois-industrial societies in the late twentieth and early twenty-first centuries (von Hantelmann, 2014).

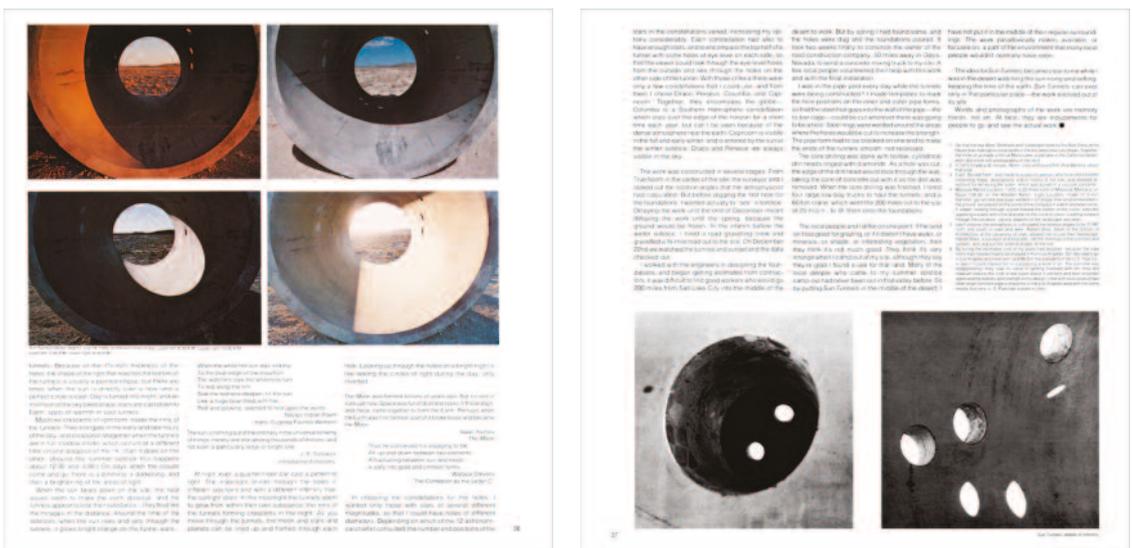


Fig. 38: Nancy Holt 'Sun Tunnels' (1973) Artforum magazine (1977)

That a destination is involved in the act of experiencing an artwork perhaps provides a social purpose, re-defining our relationship with the modern world to become one in which we are increasingly co-opted by mediated sensory moments. Experiences are now sold to society as a way to avoid banality, echoing Giorgio Agamben’s idea that adventure is “the final refuge of experience” for the modern world (1993). The growth in the experience economy demonstrates a shift in consumer culture towards the appeal of a multisensory body and recognition of the value of experience over other consumable objects. In *The Experiential Turn*, (2014) Dorothea von Hantelmann discusses the sociological theories put forward by Gerhard Schulze in *The Experience Society*, and proposes that the artistic shift towards the creation of experiences should be seen in the context of a general re-evaluation of experiences as a central focus of cultural, social and economic activity (von Hantelmann, 2014).

The idea of light as a culturally specific medium also features in Nancy Holt's 'Sun Tunnels', a slow-moving lightshow evolved directly from her experience of the Western landscape, and which physically locates us in time and space – connecting ancient and modern, the material of the universe and the man-made. Holt's mediation of sunlight in that precise location in the Utah desert, combined with the relative inaccessibility and perceived remoteness of the artwork perpetuates the mythic status of the landscape in the imagination and yet, as Holt states (1977) serves to "bring the vast space of the desert back to human scale." I think about how an experience of 'Sun Tunnels' might change the way we act upon the land? How might it contribute to the ways in which we think about, experience and perceive light in the western landscape? And how do such geographies become material for many of the central narratives in American culture? These questions seem apposite when our connections to technology deepen.

In *The Mediated Construction of Reality* (2017), Couldry and Hepp discuss today's social world as one existing in such a paradigm – a process whereby relationships become mediated by a technological paradigm. If we consider that the majority of our encounters with art exist in a paradigm of deep mediatization (Couldry and Hepp, 2017) it is interesting to reflect on the role of documentation for a remotely sited work such as 'Sun Tunnels'. A critical explanation of the value and purpose of its archival documentation was published in *Art Forum* in 1977 suggesting that words and photographs of 'Sun Tunnels' are memory traces, rather than art and, at best, they are inducements for people to go and see the actual work.

Burns also points to the importance of experience – referring to the 'Sun Tunnels' on theatrical terms and the landscape, viewers and tunnels as actors:

The Sun Tunnels provide a long-form live theatrical presentation, a triangulation between concrete forms, environmental elements and your shifting comfort and attention. ... At midday the tunnels become not just viewing devices but cater to a need, shelter. Intentionally drawing you in with unmediated methods, a repetitious shape. She expects you to feel as much as to see (Burns, 2018).

With regard to the given importance of the site, Dia's approach to stewardship of 'Sun Tunnels' affords the work autonomy in which the landscape is the context, the environment itself replaces the museum and curatorial guidance is minimal. This gives the work a certain purity, encouraging visitors to the site to experience the work as it was intended by the artist. Holt is directing the attention towards a landscape and inducing the spectator into acts of perception they might otherwise not have known. The question then, when a work is site specific, is how does the context of the work change over time, according to geologic and other transformations in the landscape and the audience it receives? And conversely, does the siting of an artwork alter perception of the landscape in which it resides?

The idea of a shared spectatorial space and collective art spectatorship is by no means a contemporary invention. Artifacts have been used in ritualistic processions, with large audiences, for thousands of years, becoming symbols of political, social or

cultural power. 'Sun Tunnels' is often described as having a ritualistic presence, in the way that the ancient stone circles have, impressing upon the landscape the poetry and vitality of light and imbuing it with the properties of sculpture. The alignment of 'Sun Tunnels' to the solstice naturally draws a parallel with Stonehenge, visited by Holt in 1969. Stonehenge also has a solstice alignment, north-east to sunrise on the longest day, the summer solstice, south-west in the direction of sunset on the winter solstice, the shortest day of the year. In the 1960s Stonehenge became "a mystical symbol of an idealized past, a garden of Eden where people could live in harmony with nature, free from the constraints of modern society." To the pagan or druid communities Stonehenge is "a living temple, embodying ancient beliefs to which they are the modern heirs and custodians." The summer solstice reputedly attracts more celebrants than the winter solstice, even though according to archaeologists Stonehenge was built and carefully aligned to mark the shortest day, the turning of the year, after which light and life would return to the world (Aries, Deller, Sims, 2019).



Fig. 39: The Changing Effects of Sunlight Through Nancy Holt's Sun Tunnels in Utah
Photo Nancy Holt/DACS, London/VAGA, New York (2012)

As stewards and owners of 'Sun Tunnels', Dia Art Foundation has developed a plan of sustainability with regard to the preservation of the site and the environment around it. Through their commitment to aerially photographing the works they own, on a twice-yearly basis, they are tracing the history of environmental change at their various sites and are already exposing visible changes. Raisa Rexer interviewed Dia

curator Kelly Kivland, inquiring about Dia's stewardship of Sun Tunnels from both practical and philosophical perspectives:

As stewards and owners, Dia's primary responsibility is securing access to the site and understanding how we can be involved in the sustainability of the work and the greater environment. That doesn't just mean the physical site and object, it's also about local community efforts and partnerships. We work with the State of Utah, the road commissioner, the department of natural resources. We're in contact with a lot of people regularly to protect these works. We also have local community partners in Utah who help with the promotion of the cultural and artistic legacy of the work – the Utah Museum of Fine Arts, and CLUI (Center for Land Use Interpretation), which has a complex about an hour from the Sun Tunnels in Wendover. But our primary approach is to avoid over-mediating. The only site with fulltime caretakers is the Lightning Field. Sun Tunnels doesn't have any form of monitoring. We put a lot of the onus on the visitor. A lot of our work as stewards is to promote the idea of protecting these works long term. We make sure that we ensure access to the site and we are mindful of the greater environment and ways that we can protect it (Rexer, 2019).

Dia has recently undertaken a programme of refurbishment for 'Sun Tunnels', to address cracking and erosion caused by exposure to extreme conditions in the American West. Additionally, visitors have taken to firing weapons inside the concrete tunnels and molten metal from bullets grinding against concrete at high speeds leaves lines – a fate to which Holt, during her lifetime was reconciled and said was fine with. Lisa Le Feuvre, executive director of the Holt/Smithson Foundation, said in a statement that, "Nancy Holt's Sun Tunnels is a landmark earthwork that is central to the future of art history. ... This conservation of Sun Tunnels is emblematic of Dia's undertaking to enable long-term and direct experience of artworks that have built the ground of art today" (Selvin, 2019). Jessica Morgan, Dia's director, added:

The conservation work we are now embarking on will secure this work for future generations, demonstrating Dia's strong commitment to the preservation and stewardship of Land Art in our collection. These artworks each present unique and complex conservation issues, requiring vision and a deep understanding of the artists' intentions to see the projects through (Selvin, 2019).

DREAM HOUSE

The "experiential relation to spectatorship" was particularly evident during a visit to La Monte Young's and Marian Zazeela's **Dream House** in New York. 'Dream House' is a sound and light environment created by Young, Zazeela and their artist disciple Jung Hee Choi. Young and Zazeela described the work as "a time installation measured by a setting of continuous frequencies in sound and light" (Mela Foundation, 2019) and both artists are presenting works utilising concepts of structural symmetry. *The Insider's Guide to New York City 2011*, declared the 'Dream House', "one of New York City's greatest treasures," "a Tribeca Landmark" and "one of the coolest long-running sound and light installations in the world."



Fig. 40: Left La Monte Young, Marian Zazeela & Jung Hee Choi 'Dream House' NYC (2019) Photo Jo Joelson

Fig. 41: Top Right La Monte Young and Marian Zazeela 'Dream House'

"Map of 49's Dream The Two Systems of Eleven Sets of Galactic Intervals Ornamental Light Years Tracery" Church Street Studio rehearsal, New York, (1970) Photo Robert Adler. ©La Monte Young and Marian Zazeela 1970

Fig. 42: Bottom Right La Monte Young, Marian Zazeela & Jung Hee Choi

'Dream House' Entrance Plaque NYC (2019) Photo Jo Joelson

The only way to experience this work is by visiting 275 Church Street, New York, the building that houses 'Dream House'. The building still has the loft sensibility once indigenous to the area. Taking photographs is very much discouraged or rather forbidden and it is therefore virtually impossible to access any imagery of the installation online or anywhere else. This adds to the project's sense of mystery of the project. After being buzzed into the building you climb the staircase to the third floor where, after removing shoes, you are admitted into the space of light and sound.

Zazeela presents four light works: the two environments, **Imagic Light** and **Magenta Day, Magenta Night**, are designed specifically for the site; and two sculptural pieces, the neon work **Dream House Variation I** and the wall sculpture **Ruine Window 1992** from Zazeela's series, 'Still Light'. In the environment **Imagic Light**, Zazeela projects pairs of coloured lights on to mobile forms to create seemingly three-dimensional coloured shadows; with the mobile forms arranged in symmetrical patterns with the lights placed in symmetrical positions create symmetrical colored shadows; the wall-mounted light sculpture and neon are both symmetrical forms.

Intense light [is] aimed through [color] filters at quasicalligraphic aluminum shapes hung by ultrafine filaments. The effect is a unique and extraordinary transvaluation of perception: the mobiles seem to hover unanchored, while the shadows they cast in various hues attain an apparent solidity against the light-dissolved walls equal to their literally palpable but apparently disembodied sources. Like Young's music, to which it serves as an almost uncanny complement, Zazeela's work is predicated upon the extended duration necessary to experience the nuances which are its essence (Strickland, 1993).

La Monte Young presents a concurrent sound environment which is composed of frequencies tuned to the harmonic series between 288 and 224, utilising only numbers that are multiples of nine, or those primes or octave transpositions of smaller primes that fall within this range. Young has arranged these 31 frequencies in a unique constellation, symmetrical above and below the 32nd frequency, the centre harmonic 254 (the prime 127 x 2). Young has stated that:

This is my newest and most radical sound environment; the Rayna synthesizer has made it possible to realize intervals that are derived from such high primes that, not only is it unlikely that anyone has ever worked with these intervals before, it is also highly unlikely that anyone has ever heard them or perhaps even imagined the feelings they create (Mela Foundation, 2019).



Fig. 43: La Monte Young, Marian Zazeela & Jung Hee Choi 'Dream House' (2015) 15 VI 13 545 West 22nd St, NYC
© the Artists. Photo Jung Hee Choi

The works invite us not only to become immersed in the sound and light, a kind of 'spectatorial architecture', but also to explore 'the social dimension of perception', that is to say, to experience alongside others who happen to be experiencing the work at the same time. It calls attention to Bourriard's interest in art's shift towards relationality and social interaction and his model of relational aesthetics, underpinned by a "materialism of encounter". The media theorist Kate Mondloch, articulates the idea that hybrid artistic practices such as installation art are "meant to be experienced as activated spaces rather than as discrete objects: they are designed to 'unfold' during the spectator's experience in time rather than to be known visually all at once" (Mondloch, 2010).

After experiencing the 'Dream House' environments alongside artist-curator Jon Hendricks, we are taken downstairs to meet the artists La Monte Young and Marian Zazeela who explain the genesis of the project. The first public manifestation of 'Dream House' was the short-term 'Sound and Light Environment' at Galerie Heiner Friedrich, Munich (July 1969). Between 1979 and 1985, thanks to a commission from the Dia Art Foundation the opportunity came to collaborate on a longer-term 'Dream House' presentation at 6 Harrison Street, New York, set in a six-storey building with a nine-storey tower and featuring multiple inter-related sound and light environments, exhibitions, performances, research facilities and archives. The artists consider this to be perhaps their most creative installation because "for the first time we actually had substantial space available to realize our ideas". The Mela Foundation 'Dream House' Sound and Light Environment at 275 Church Street, New York, now in its 24th year, is the longest incarnation of the installation to date.

The Dream House can inspire sincere self-reflection – of how people physically move, of how little there is of stillness, of how we've become trained to seek and to reward movement and action. To embrace the Dream House is to become entranced and lost in time. And with no permanent closing date established for Young and Zazeela's collaborative installation, this could be the dream that never ends (Stillman, 2003).

Another iteration of 'Dream House' was the 1990 Paris Donguy Gallery 'Dream House' environment now in the permanent collection of the Museum of Contemporary Art (MAC) in Lyon. It was featured in the 2004-05 Sons et Lumières at the Pompidou and the Lyon Biennial 2005. *Artforum* drew connections between the New York and Lyon installations: "At its location in the Tribeca section of New York City, this roomful of infinitely repeating cycles of sound and light frequencies is a veritable wormhole in the urban fabric. Outside it is 2006; inside it seems perpetually 1985, the year Young and Zazeela's Mela Foundation opened its doors."

DAN FLAVIN ART INSTITUTE

The Dan Flavin Institute in Bridgehampton, New York, is an outpost of the Dia Art Foundation and home to a permanent collection of Dan Flavin's light sculptures and a programme of temporary exhibitions curated by Dia. Artist Dan Flavin bought the former church building with the help of Dia and in 1983 completed its conversion into an exhibition space to house a permanent installation of his work, through a collaboration with architect Richard Gluckman and Jim Schaeufele, Dia's director of operations. Flavin's earliest works are set in this architectural environment, conceived by Flavin, in which the building's history is sensitively retained through kept signage, original photographs etc. The site contains nine of Flavin's seminal light works from 1963, the date he decided to work solely with fluorescent tubes, up until 1981 just before the space was completed. Six of the works are in colour and three are in shades of white, dedicated to Jim Schaeufele. The simple effect of precisely configured arrangements of tubes hitting the architectural space, the combination of colours and configuration create complex forms, accentuating each other's characteristics. Reflecting off the walls and into the larger space of the Institute, the totality of the work creates an installation rather than presenting as singular artworks.



Fig. 44: *Left Page: Exterior of the Dan Flavin Art Institute, Bridgehampton, New York*
Right Page: 'untitled (to Robert, Joe and Michael)' (1975-81); and 'red out of a corner (to Annina)' (1963).
 Installation view, Dan Flavin Art Institute, Bridgehampton, New York

Flavin conceived the light sculptures and the architecture as a single, unified installation. He preferred to refer to the works as “situations” through which he was able to transform and redefine the space in which they were shown, and resisted the term ‘environment’ popularised by his near-contemporaries in the Light and Space movement with the reasoning that “It seems to me to imply living conditions and perhaps an invitation to comfortable residence.” Flavin referred to his work as “situational” art that responded directly to architectural spaces, describing his lights as “structural proposals” integrating real materials with real space (Hayward Gallery, 2006). The works suggest themselves as personalities, with many being dedicated to important people in Flavin’s life. It is often quoted that Flavin was an altar boy who later renounced formal religion, and this most likely contributed to his exploration of the idea of icons, according to his son Stephen Flavin, who shared a quote from his father’s first journal: “My icons differ from a Byzantine Christ held in majesty; they are dumb – anonymous and inglorious,” he wrote. “My icons do not raise up the blessed savior in elaborate cathedrals. They are constricted concentrations celebrating barren rooms. They bring a limited light.” He had thus wanted to update the concept of the icon. The permanent installation is “one of the few Dan did himself that still exists,” Stephen Flavin said. “You see his choices, juxtapositions of his own work. I find it revelatory. A huge part of his work is the interplay between his pieces. You can’t do a better job than he did, he knew it inside and out” (Levere, 2015). The fact that Flavin used to live in the surrounding community and chose this building as a place for his work means that he himself is embedded within its walls and the building becomes part of the artwork and presentation. It is a completely controlled curated space and his work is not compromised or forced to co-exist alongside the work of others. Flavin’s radical gesture was to introduce the single fluorescent light bulb into the art scene in the early 1960s, an item that was at the time a commonly used fixture in domestic and industrial environments and could be bought at any

hardware store. Introducing the fluorescent light, such a mundane and easily available element, was a political statement when placed into the wider societal context – when viewed in parallel with challenges to authority and social structures as a result of the student demonstrations and wider social unrest of the 1960s. This shift away from the mark-making of more traditional painting and sculpture was also defined by Flavin's use of fluorescent over neon as his chosen medium. Fluorescent is standardised whereas neon can be customised to any design, shape, colour etc. Flavin took the simple fluorescent tube and transformed these essentially characterless, functional, everyday objects into works of surprising intensity and beauty. Using what appear to be very limited materials – mainly two-, four-, six- and eight-foot lamps in only ten colours – he created an extraordinarily rich and varied body of work.

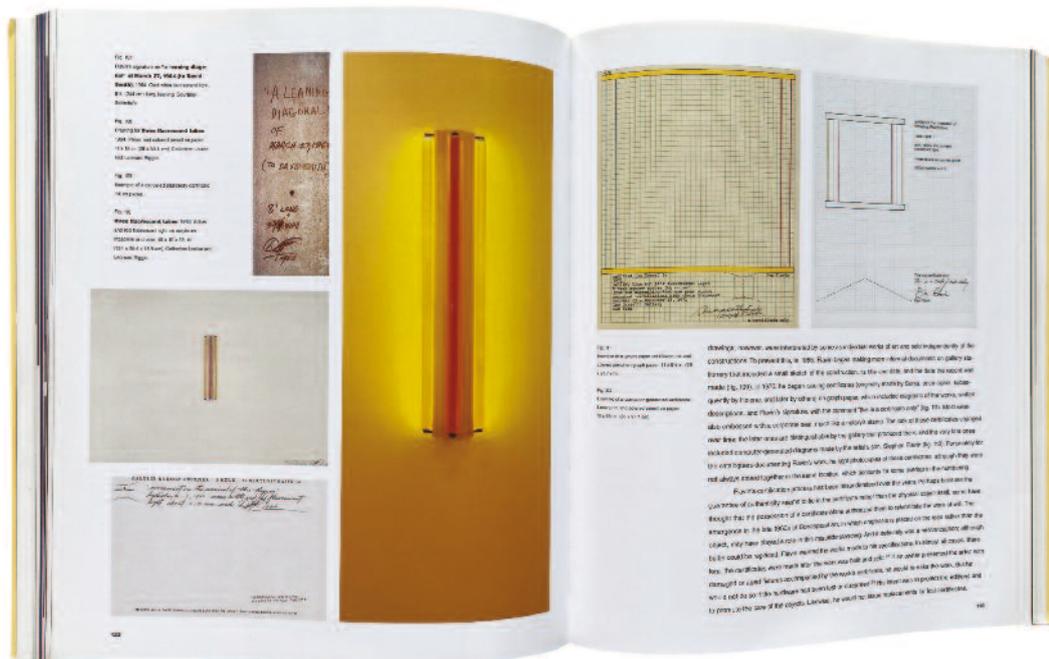


Fig. 45: Dan Flavin Spread from *Dan Flavin: A Retrospective*, Yale University Press (2005)

Flavin's works may be considered in two categories: firstly the temporary room-sized installations and site-specific commissions, and secondly the smaller-scale individual constructions made in editions or multiples of three or five. While there have been serious collectors of Flavin's works, such as Giuseppe Panza di Biumo who bought up some of the larger pieces, it was mostly the smaller, more easily maintained, transportable and re-installable works that sold (Bell, 2004). Whilst Flavin welcomed the idea of reproduction and repetition, as rejecting uniqueness, permanence and authenticity, he maintained well-understood art-world strategies for the circulation of his work, with all except the site-specific works being made as editions. This is consistent with Flavin's interests as a cataloguer and historian as documented by Tiffany Bell (2004), who gives the example that as a young artist he kept records of descriptions of his own work, as well as documenting his methods, daily events and letters, which were kept together with dated, annotated working drawings. He was later helped in this by his assistants and he kept well-organised documentation of his

work, files of letters, gallery invitations, and other ephemera relating to his practice. And whilst he seemed resistant to commercial demands, Flavin was forced to deal with the process of certification so that dealers could sell his work (Bell, 2004). Dan Flavin's work is interesting in relation to collections and archives because in many respects his art "confounds conventional cataloguing concepts, which depend on criteria of permanence, authenticity and chronology" (Bell, 2004).

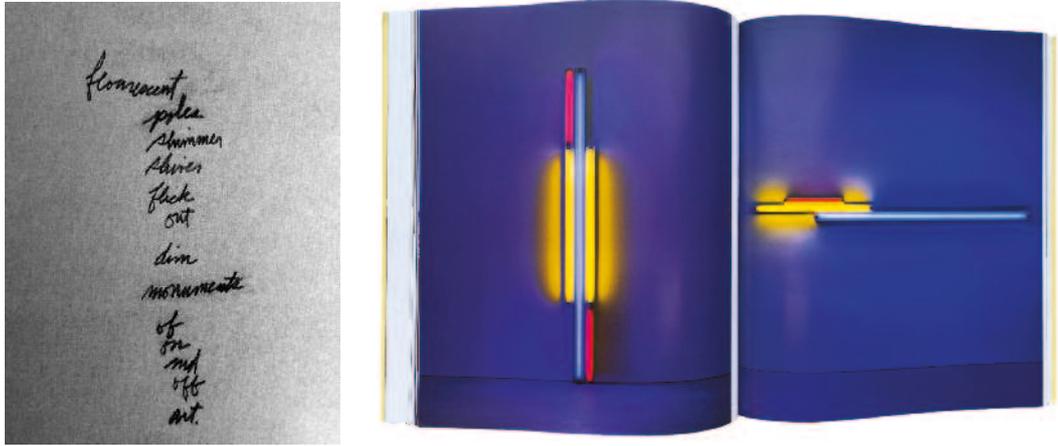


Fig. 46: Left: **Dan Flavin** 'Untitled Poem' Pencil on Paper (1961)

Fig. 47: Right: **Dan Flavin** 'Untitled' (In Memory of Sandy Calder) (1977)
from **Dan Flavin: A Retrospective**, Yale University Press (2005)

Flavin confronted and challenged conventional art-historical notions of permanence and authenticity by working with light which was considered elusive and especially by fabricating his art from commercial lighting fixtures, thus making it easy to reproduce. In a catalogue introduction to a 1973 show of Flavin's work at the St Louis Art Museum, Emily Rauh observed that Flavin compared his display to the "Celtic tradition of traveling minstrels, in which a bard would present his song and then disappear" (Govan, M. et al, 2005). Rauh also notes how changes to even permanent works occurred over time as they were re-lamped and re-constructed. With his works having been constructed from off-the-shelf light bulbs that are no longer in production, it has meant careful stewardship and conservation for Flavin's collectors. Whilst he suggested that when the bulbs burned out the work would no longer exist, insisting on a sense of ephemerality within the work, the curators and stewards of Flavin's work make it a priority to sustain their strategies for conserving it and ensure that the work remains authentic. Dia Art Foundation's Jessica Morgan explains: "What used to be a simple purchase from a hardware store is now a serious conservation issue" (Morgan, 2016).

The ephemerality of the light Flavin used in his art is apparent in the untitled poem written in 1961 (see fig 46) in which he characterised in the transience of light, reclaiming the idea of monumentality in art just as he did in his best-known series "monuments for V. Tatlin", 'pseudo-monuments' honouring the Russian artist-designer Vladimir Tatlin. In a practical sense the ephemeral quality of Flavin's works also central to the lights themselves, since like all bulbs they can be turned on and off, they have a limited lifespan and there is no assurance that they will continue to be manufactured.

CENTRE FOR INTERNATIONAL LIGHT ART, UNNA

The Centre for International Light Art, Unna, opened in 2001 and was the first dedicated museum to the genre. In developing the concept for this institution, Uwe Ruth envisaged the premises as “a continuously growing museum for artistic light-installations with an internationally important light collection – the first of its kind” (Anacker, 2012). The criteria for inclusion in the collection were that the works be by “the most renowned light artists, selected by strictly qualitative appraisal of their works” and following which permanent works would be installed that related to each of the rooms in the underground cellars, shaping them into individual works of art. Beyond the installations, and to ensure a “sustained involvement in light as a medium”, Ruth conceived of a space for temporary and changing exhibitions, actions and symposia. Since 1998 the collection has expanded with “the focus on the exemplary combination of light, room and bodily perception” strictly observed through each new commission. The concept of the collection therefore is connecting the experience of each light installation to the bodily experience of light (Anacker, 2012).

Twelve of the most internationally renowned artists have designed permanent installations for the underground rooms of this former brewery and are presented in the permanent collection exhibition: Mario Merz, Joseph Kosuth, James Turrell, Mischa Kuball, Christina Kubisch, Brigitte Kowanz, Johannes Dinnebier, Keith Sonnier, François Morellet, Christian Boltanski, Jan van Munster and Olafur Eliasson.

In James Turrell’s ‘Floater 99’, one of his so-called “Space Division Constructions”, he created a space in which visitors appear to float into shades of red and blue light, which make the borders of the room dissolve, described as “breathing in light, as if one could touch light itself”.

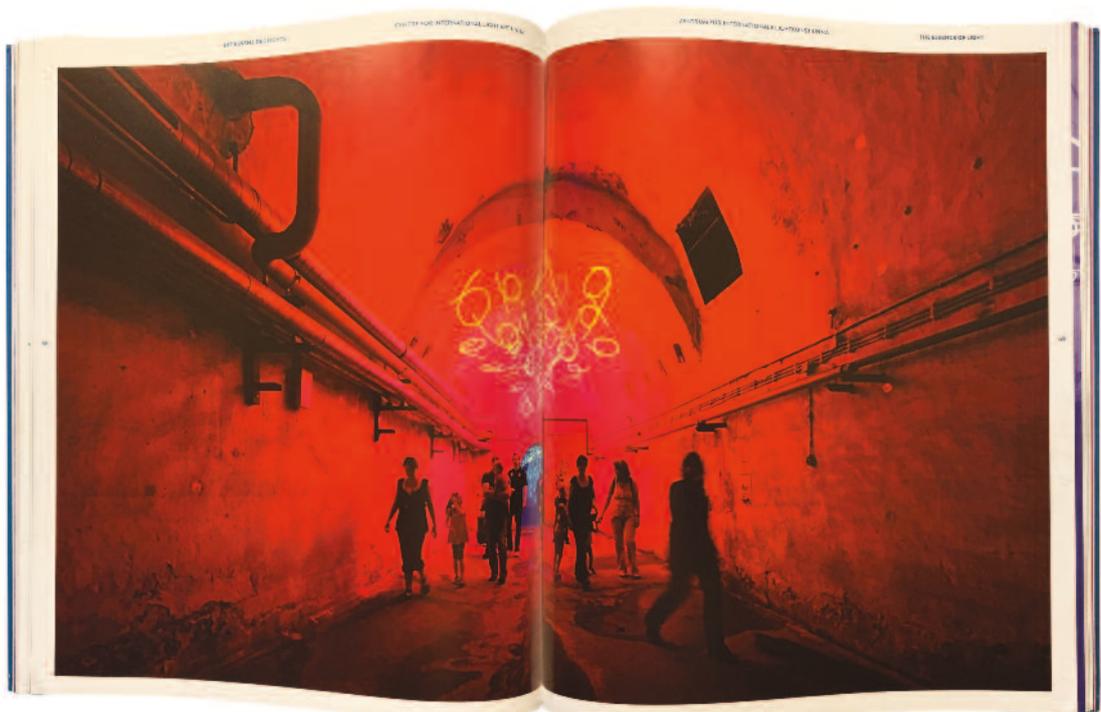


Fig. 48: **Keith Sonnier** 'Tunnels of Tears' Centre for International Light Art, Unna (2002)
From *The Essence of Light*, Wienand Verlag



Fig. 49: **James Turrell** 'Floater 99' (1999-2001) Centre for International Light Art Unna (2002)
From *The Essence of Light*, Wienand Verlag

In a similar way to astronauts, visitors have to grope their way around, step by step. With all their senses they are immersed into a light bath and experience how architectural realities dissolve to the point of disorientation. What seems at first to be a flat, dark violet picture on a pink wall, framed by a brightly lit border, turns out, when the visitor passes through, to be a colour room that one can enter and leave again. Uniquely, it is the only work in the collection that does not refer to the architecture of the specific location, but is created in a room within a room. In this situation without reference and time, 'Floater 99' takes up the role of the "Other".

Describing his artistic motivation for the piece Turrell said:

Think of a dream, a lucid dream where you perceive colours, where light pervades the scenes, where light creates an aura around objects! In dreams we often experience a quality of light that we do not perceive with open eyes. I want to experience in real life, with open eyes, what we see in our dreams with closed eyes (Turrell, 2012).

A light-sound tapestry constitutes the permanent remains of an original work by Christina Kubisch titled 'Schlohweib und Rabenschwarz' created between 1999 and 2001 for the Centre. Kubisch, a German installation artist and trained composer, chose the former fermenting cellar as the location for her piece, a room with four deep brick recesses. Resonating with their former function, these recesses were transformed by Kubisch into sound fields. She also installed a geometric constellation of loudspeakers on the black floor and illuminated them with black light so that they appeared to float. This installation attempts to recognise the original room and by means of an interplay of sound and light intensify the existing atmosphere whilst also creating new narrative.

Visitors can hear the light rush of flowing water mutated by its alienated rhythm into an abstract world of sound, nurtured by the primeval noises of an unknown nature. The room is submerged in foggy, muted light. A meditative mood full of secrets surrounds them (Osbelt 2012, and Ruth, 2004).

Because of the maze-like character of the premises with its labyrinth of rooms, it is currently compulsory to use one of the guides for a tour, which takes around 90 minutes to complete the circuit. Through this engagement the spectator is enabled to form a comprehensive picture of the different manifestations and forms of this relatively young genre of light art. It is perhaps only when spontaneous visits are possible and individuals are able to explore the works of light art without being part of a group or guided tour that it will become possible to lose yourself in the meditative contemplation of works such as Rebecca Horn's 'Lotusschatten 2006' or to have all your senses stimulated by Olafur Eliasson's 'Reflektierender'. "The live experience is key – its works of art can only be experienced in real-time – neither internet nor TV can convey the light effects, the smells, the multidimensional worlds of sound or the coolness of water drops" (Jaspers, 2012).

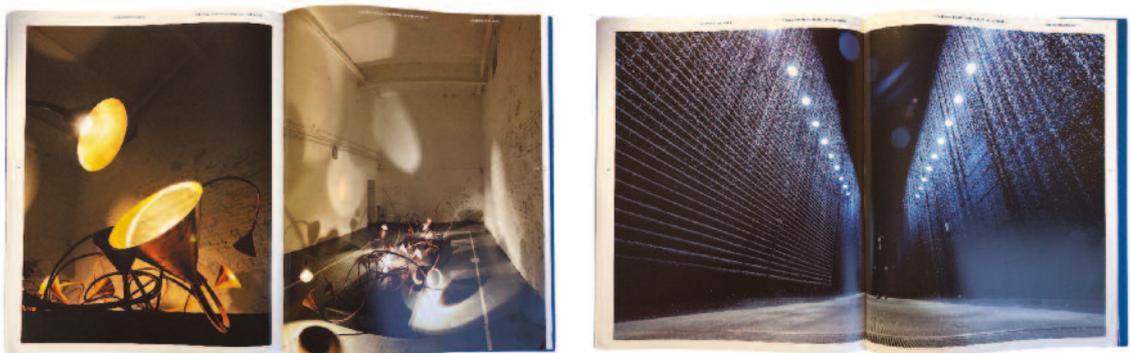


Fig. 50: Left: **Rebecca Horn** 'Lotus Shadows' (2006) Fig. 51: Right: **Olafur Eliasson** 'The Reflecting Corridor' (2002)
Centre for International Light Art Unna (2002) From the Essence of Light Publication

An important initiative developed by the Centre for International Light Art is the International Light Art Award which is a platform for emerging light artists who engage with key topics such as new technologies, energy usage and sustainability. It responds to Unesco's opinion that light is a "key cross-cutting discipline in the 21st century, and it is essential that its importance is fully appreciated. It is equally vital that the brightest young minds from all areas of the world continue to be attracted to careers in this field" (Unesco, 2015). Artists are invited to reflect on the 'Future of Light Art' and elaborate a concept for how this future could look, contributing to the discussion and development of light-art in an innovative and creative way. Artists working with light are often exposed to difficult conditions: light art installations need specific spaces that do justice to the works and to the effects the artists wish to achieve. High financial as well as technical requirements mean that often artists are unable to get beyond conceptualising their projects as models. Therefore, the award and accompanying exhibition, which takes place annually in Unna, engages with debates occurring at the nexus of art and science and when announcing the 2019 award on artconnect.com it proposed the following questions: "How does light influence how we see space? What effect does the simulation of light have on our communication, our sense of well-being, and ultimately our view of the world?".

2.3.2 ARCHIVES AND ARCHIVAL PRACTICE

The artist as collector, archivist, curator or documentarian has in recent years become a familiar figure. This instinct has often overlapped with the institutional commitment to preserve, with several artists being inspired by the museum's encyclopedic example and vast storehouses of art. Others are driven by an urge to make sense of the deluge of images, objects and events that are a factor of our daily lives, in an attempt to gain control of the chaos. The computer, video camera and our many portable recording devices have played a role in this urge to document and many artworks and exhibitions have been made around the subject of the archive (Smith, 1998). From a survey of available literature on the subject it appears that the archives of many galleries do not receive serious scholarly attention, whereas major museums have been the focus of an interest in display history since the 1980s and this has resulted in a number of critical theory texts finding meaning in the mediation and reception of art. In *The Archival Impulse* (2004), art historian Hal Foster defines archival art as a genre that "make[s] historical information, often lost or displaced, physically present. To this end [archival artists] elaborate on the found image, object, and favor the installation format." Foster infers that the internet represents an ideal form or "megarchive" that has normalised the collecting and compiling of information to the point where information itself can be viewed as a found object (Guasch, 2011). The idea of the archive continues to be an undeniable force and organising structure in exhibitions today (Artspace Editions, 2014). Many curators have stimulated discussion about archives by staging exhibitions that draw on the archival practices of artists today. *Archive Fever: Uses of the Document in Contemporary Art*, curated by Okwui Enwezor at the International Center of Photography, was described in the press as a "landmark show" which highlighted numerous examples of artists who employ archival documents in their work, "mixing eras and generations, meticulously splicing an imaginary whole from real archival parts" (Cotter, 2008).

Some examples of scholarly texts here include: Frances Spalding, *The Tate: A History* (London: Tate Gallery, 1998); Sam Hunter, *The Museum of Modern Art, New York: The History and the Collection* (New York: Museum of Modern Art, 1984); and Marcia Pointon, ed., *Art Apart: Art Institutions and Ideology across England and North America* (Manchester: Manchester University Press, 1994). A small selection of archives / artist archival practices is examined following their role as creative catalysts for generating artworks and exhibitions. This research to identify the ways in which archives can stimulate artistic practice took place at the Nýló Archive in Reykjavik, and in discussion with a number of creative practitioners in Iceland and the UK. Included in this section are extracts from interview transcripts with two artists whose artworks involve the archiving of non-conventional materials / cataloguing of unimaginable things, namely Katie Paterson's 'The History of Darkness' (2010-ongoing), Michael Light's 'Full Moon' (1999) and '100 Suns' (2003). Of relevance here too is the digital access offered by online platforms that can contribute to the experience and distribution of a collection or archive. Examining the digital archival approach initiated by Rhizome demonstrated the challenges of digital preservation and how to accommodate the digital archiving of web-based artworks.

It is clear that the digital archival approach opens up the potential for a virtual audience to engage in critical discourse around a collection or archive.

THE LIVING ART MUSEUM / NÝLÓ, ICELAND

Nýló was founded in 1978 initially as a collection, to preserve and archive the works of young artists ignored by art authorities at the time. In 1981, the Living Art Museum gallery was started and at first was run separately from the collection. The preserving and collecting activities gave way as it became one of the foremost venues for performance art in the 1980s. In the 1990s the focus shifted to international art and hosting artists from overseas and Nýló developed a reputation for being the most open and flexible exhibition venue within Iceland's network. In 2006 Nýló lost its main storage facility at the Iceland Academy of the Arts and it was decided by the board to open up the collection to explore and exhibit its contents, documenting and collating information through re-engaging with its community. This process involved documenting, registering and re-packing the works in the collection, which was found to have around 2000 pieces. Two independent archives were created from this process of documentation: the archive of performance art and the archive of artist initiatives in Iceland. Additionally, the history, working methods and operations of the museum were collated and published in the retrospective catalogue *The Living Art Museum 1978-2008*. The original documents now reside in the Reykjavik City Archives (Agnarrsson et al., 2013). During an International Placement co-hosted by Nýló Archive / Living Art Museum, I was able to conduct research into the Nýló Collection and Archive which was of interest because of its alternative self-organised model – “or perhaps self-disorganised structure within a cultural environment lacking in infrastructure” (Agnarrsson et al., 2013). The curatorial strategy at Nýló could be understood through its board which continues to be appointed on a two-yearly with members being given the opportunity to re-invent the artistic vision and direction of the museum, something that has taken place numerous times throughout its history. “In a small society, it makes complete sense that a platform sees its role as a lump of continuously re-mouldable clay; responsive and pro-active at the same time” (Agnarrsson et al., 2013).



Fig. 52: Left: Nýló /Living Art Museum, Iceland(2018) Fig. 53: Right: Birgir Andresson 'Graent' (1993) held in the Nýló archive, Iceland Photo Jo Joelson



Fig. 54: Left: Nýló / Living Art Museum, Reykjavik, Iceland (2018) Fig. 55: Right: Piero Manzoni 'Life and Work' Verlag Petersen Press, Berlin (1969) held in the Nýló Archive, Photo Jo Joelson

The Living Art Museum is a catalyst for evolving ideas in art, international discourse and opportunities for artists to practise in Iceland. It maintains three main archives: The Living Art Museum Archive, The Archive of Artist-Run Initiatives and The Performance Archive. The aim is to: “maintain and preserve the history of the local art scene; to preserve documents corresponding to the history of the museum itself, artist initiatives, and performance; and to make the archive accessible to future research and preservation” (nylo.is). The archive includes documentation of the artist-run spaces that have operated in Iceland and Icelandic-run initiatives abroad in the last 50 years in mobile and static forms. These have been platforms for progressive, experimental art and interaction between the arts community and the general community. *A Retrospective: The Living Art Museum 1978-2008* is dedicated to the assembly of the museum’s exhibition history, operating as a source book on contemporary art in Iceland. This publication lays open the museum archive and offers insights into the way the museum has presented and run itself over the years. Its contents are arranged chronologically across a total of 30 chapters, beginning with a timeline offering a quick view of the 30-year history of the museum and describing major events. Each of the subsequent chapters is devoted to an exhibition year. The layout is intended to present the information as clearly as possible with great emphasis placed upon illustrating each year using exhibition materials, including invitations, announcements, pamphlets, catalogues, lists of works and a select few photographs etc. It gathers together in book form the exhibitions, happenings, spaces and work of the museum and outside perspectives of the museum as well as making the archive and database of the collection accessible. The publication *Archive on the Run* is an examination of the institution’s history, highlighting key challenges such as: the tension between the collection and the exhibition venue; the archive; an opportunity to reflect on curatorial strategies, different roles and the significance of artist-curating for the institution; the artist as curator; the artist as art museum director; an autonomous space for creation.

In addition to studying the archive in its book form and the debate concerning the pros and cons of artist-curating and artists as curators, I was also able to engage with the physical archive in two ways: firstly at the archive itself which is housed in a town outside Reykjavik and where I located specific artworks and archival materials that provided research stimulus and connection to artists; and secondly, through a

selected part of the archive which formed part of a public exhibition at the Living Art Museum in Reykjavik. The location of specific archival materials housed in the store later led to studio visits, dialogue and interviews with a number of practitioners in Iceland and to reviewing catalogued documents from the archive exhibited at the museum in an open and unmediated way. By opening the archive to the public the Living Art Museum demonstrated its commitment to experimentation and ideas of impermanence, as well as offering its archive as a platform for experimental art, progressive exhibitions and a contemporary art collection. “Embracing impermanence is the imaginative strength of this place” (Agnarrson et al., 2013).



Fig. 56: Assorted photographs of performance by artist **Geoffrey Hendricks**, Nýló Archive, Reykjavik, Photos Jo Joelson

By embracing ideas of impermanence within an archive the dialogue is permitted to be less involved with legacy and more about possibility, more about experimentation, inevitable failures and less concerned with obligations. Leading on from this discussion in *Archive on the Run* is a quote from Nicholson Baker’s “Changes in Mind” (1997) in which he used analysis of changing social knowledge to consider stasis and the need to shift and change – “one sees a dogma and its vocabulary seeping from discipline to discipline, from class to class” – in order to illuminate the ways in which his mind moves towards new conclusions (Agnarrson et al., 2013).

What follows is examples of practitioners ordinarily working with themes of light, using archives as material for artworks and for exhibition. This includes interviews with artists whose work encourages engagement with archives, bringing archival material into the public domain and interpreting the materials in new ways that open documentation up to new discourse.



Fig. 57: Ephemera from artist **Geoffrey Hendricks**, held in the Iceland Nýló Archive, Reykjavik, Photo Jo Joelson

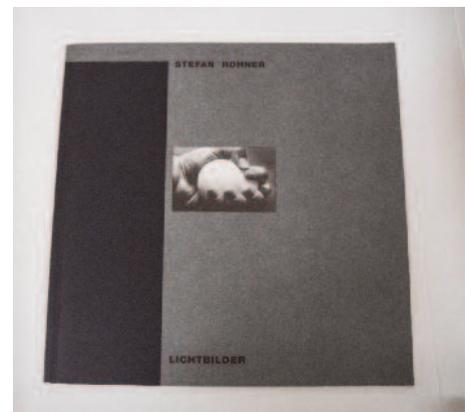


Fig. 58: **Stefan Ronner** ‘Lichtbilder’ publication held in the Nýló Archive, Reykjavik, (2018) Photo Jo Joelson

ARCHIVING AS A CATALYST –

Extracts from Interview Transcript with artist Michael Light

Over the arc of his career, photographer, artist and book maker Michael Light has had two driving concerns, light and space. Michael Light has created projects working with pre-existing archives and also builds archives of his own images in of the American West. He re-works culturally significant historical photographic and cultural icons into landscape-driven perspectives by working with public photographic archives. His first such book and exhibition, *Full Moon* (1999), utilised Nasa's vast archives of the Apollo missions to source lunar geological survey imagery captured by the Apollo astronauts in the 1960s and '70s to represent the moon both as a

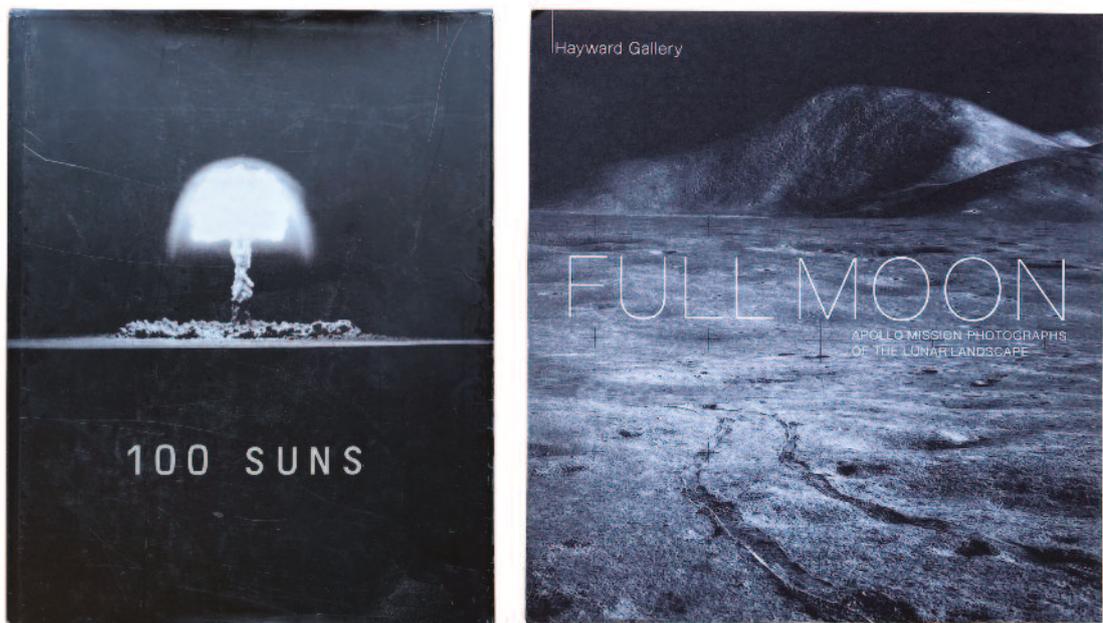


Fig. 59: Left: Michael Light '100 SUNS' Book Cover, Jonathan Cape Publishing (2003)

Fig. 60: Right: Michael Light 'Full Moon' Exhibition Leaflet, Hayward Gallery, London (1999) ©The South Bank Centre 1999

classically sublime desert and an embattled point of first human contact. *100 SUNS* (2003), another archival book project, for which Light selected military pictures documenting America's nuclear bomb tests between 1945 and 1962, focuses on the politics and the impact on the landscape resulting from the atmospheric nuclear detonations in Nevada and the Pacific Ocean (Hirsch, 2005).

In an interview with Light I asked about his approach to the projects '100 Suns', 'Full Moon', and how he constructed / re-constructed the image archives to form his own narratives as exhibitions and books. Light explained his interest in the book form and how since studying American History he had become interested in archives and that his projects deal with not only abstract things such as light and space but also politics and in particular American politics and power.

ML: I was interested in the Apollo Luna archive, because it was big, 33,000 images, it was just when digital was beginning to happen, nothing was online, it was another world and we knew about 10 of these 33,000 images ad nauseum because they'd been

polled at the time of the missions by the PR arm, by the National Geographic, by Time magazine, and Life magazine, so we had the 'footprint', the narcissistic footprint, and we had the flag on the moon and we had the patriotic, technological and human triumph but we didn't have a landscape of the moon, and we didn't have the moon as a place unto itself and we didn't have a meditation on the sublime, the traditions of landscape representation as we knew them, so I thought great, there are 33,000 pictures, I'm going to look at them and I'm going to do technically what has never been done before.

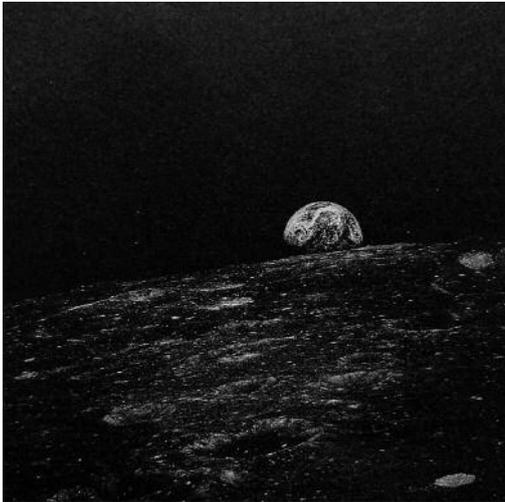


Fig. 61: Left: **Michael Light** 'Earthrise Seen for the First Time by Human Eyes' Photo by William Anders, Apollo 8 (1968) Exhibition Leaflet, Hayward Gallery, London (22nd July – 19th September 1999) ©The South Bank Centre 1999

Fig. 62: Right: **Michael Light** 'Full Moon: Earth Terminator' Photo by Michael Collins, Apollo 11 (1969/1999) Digital Image ©Michael Light 1999, Courtesy Michael Light and Michael Hoppen Gallery, London

If you have enough pictures, you can tell any story you want and so I decided to tell the story I eventually told with Full Moon. Let's reconfigure this away from American flags and footprints and talk about this place in terms of light and space and a vocabulary of the sublime, and it was indeed the light, the way light behaved in space that drove me, that nourished me through many long years of complexity with Nasa and digital. Full Moon was really a lot of different things but one thing it was, was an exploration of that fact, here is the basic fundamental vocabulary of the sublime, or of just landscape representation, you go to a mineral world, and you bathe it in unadulterated light, without an atmosphere, a vacuum of space, so there's no diffraction, no diffusion, a much clearer visual scenario than our eyes were ever evolved to deal with. Our eyes evolved to deal with the scattering of an atmosphere, and so forth, and so you get this alphabet of the sublime, a completely distilled version of what makes landscape and photography, and visual perception tick. I was the first person to scan these images at Nasa, we did eight editions globally of this, the Hayward show was concurrent with a big show at the San Francisco Museum of Modern Art, it was a massive project [...] The black and white film was able to capture the intensity of this light in a vacuum much better than the colour transparency film they shot – and it was the black and white aspect of the archive, that was very underpublished and underloved, that I really thrilled to. Film has a latitude and the black and white film had a wider latitude, that is to say it could capture brighter brights and darker shadows than the colour transparency film which was quite contrasty and it was the black and white stuff I loved working with.

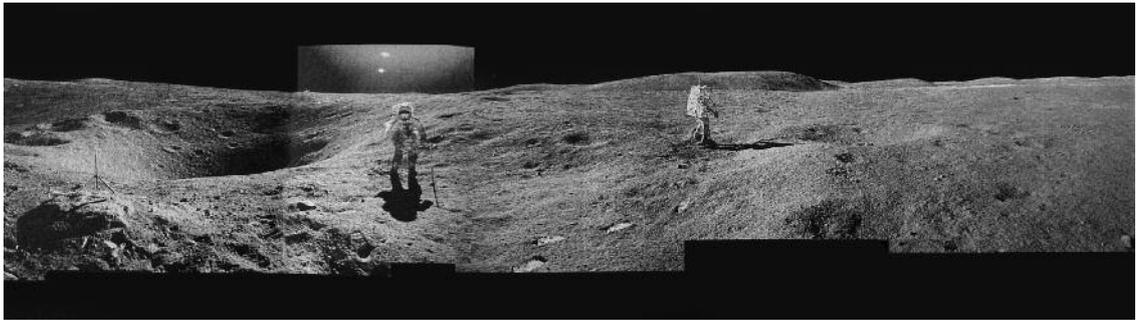


Fig. 63: **Michael Light** 'Charles Duke Seen Twice, Plum Crater' Photo by John Young, Apollo 16 (1972)
Exhibition Leaflet, Hayward Gallery, London (22nd July – 19th September 1999) ©The South Bank Centre 1999

It really captured this otherworldly light. If you were on the surface of the moon, it would be so bright your eyes wouldn't be able to see anything. They had these very dark masks, shades, sunglasses, on the astronauts' suits, because it was blindingly reflective, much more intense than our eyes could ever handle and so it was the photography that was able to see anything at all, because you could stop down the exposure, you could harness, corral this unmanageable light into something that our human eyes could deal with. Full Moon had a lot of aspects but the driving wonder for me was how light behaved in a vacuum. And it was an epically large project and then it was what next...

I wasn't interested in space per se, what I was interested in was light itself, how it behaved and the next step was to go into light, into human-fabricated stars, which is when we get to the hydrogen bomb seven years after the fission bomb was detonated in 1945. By 1952 we had fabricated our own small sun, our own small star. It operates on exactly the same principles as does the sun, it's just less hydrogen fuel, so to move from the qualities of light in a vacuum and the intensity of light in a vacuum, to let's go close in to the sublime – but obviously 100 Suns is the mechanics of light itself. We begin with a point of light in darkness in that sequence and we end with series of red apocalypses. It was the obverse of 'Full Moon', the dark side of 'Full Moon', it's replete with meditations on American power, it's archival.

In terms of working with the archive Michael Light explains he is not only interested in making his own images but in trying to make sense of the huge number of images and representations that we keep making. He questions how we can step back and actually think about our larger human archive. He considered 'Full Moon' to be "a globally owned saga" that "he wanted to take away from American claws". From 'Full Moon' the logical next project was '100 SUNS', taking him from "the blasted light of the surface of the moon or outer space itself, to then move to examining these fabricated human stars if you will ...and likewise nuclear capabilities and knowledge will be with humanity until it draws its last breath."

In an interview with Robert Hirsch, Light describes the idea of working with archival images as the next best thing to actually being 'there' in situations that would have been closed off to him such as nuclear testing, and that working with the archival images would get him close to the original experience of having captured them in real time and space. Sometimes he would feel the need to re-visit a site, to go to an "archival" location to gain a fuller sense.

For instance, with 100 SUNS, I went to the Bikini Atoll in 2003 to do aerial photography. It was a cathartic pilgrimage for me as a photographer. I needed to see this landscape – the clouds, the light and what remained in the land after so much focused violence. The physical act of photographing at one of the test sites was a way for me to complete a circle of meaning.

In an earlier interview for *Afterimage*, Robert Hirsch asked Light about how he interprets archival images and how he alters them. Light explained that he does so with great restraint:

I personally feel that iconic subjects, and the archives that house them, are not the right arenas for me to get overtly ‘artistic’ or ‘inventive’. I have a profound sense of respect for the inherent qualities of these images and work outward from there. The images in 100 SUNS were physical 4 x 5-inch and 8 x 10-inch prints, most of which were faded, funky copies of copies that had been bent and worn and written upon over the years. They conveyed an intense sense of object-hood, and seemed almost sculptures from that particular historical era. It was important to me to capture them as objects, then, rather than cropping them and getting rid of their ‘defects’, or making a modernist frame where the photography disappears and one falls seamlessly into the scene. They were visual nuggets from a particular cultural time and space. I do not use Photoshop creatively, but rather as a production tool – as a thorough but basically conventional darkroom for making exhibition prints (Hirsch, 2005).



Fig. 64: **Michael Light** '087 Mowhawk 360 Kilotons Enewetak Atoll 1956'
In **Michael Light** '100 SUNS' Jonathan Cape (2003) ©Michael Light 2003

In relation to the issue of conserving the image Light explains that he never adds information but he does compensate for an image that might have lost its original colour. He acknowledges that “this kind of manipulation can enrage people who believe in the idea of the photographic document as truth, but anybody who has spent time with cameras and photographs knows that images, like gravestone rubbings, are no more than impressions of the truth.”



Fig. 65: **Michael Light** '086 Mowhawk 360 Kilotons Enewetak Atoll 1956'

Fig. 66: **Michael Light** '023/024 Smoky 44 Kilotons Nevada 1957'

Printed in **Michael Light** '100 SUNS' Jonathan Cape Publishing (2003) ©Michael Light 2003

What if the type of film used to photograph a particular blast recorded it as green when the blast was really red? Does the image then lack veracity? Likewise, looking at a faded print of the green blast now gone magenta, how can we know what the exact 'truth' was, or is now? Is it the original red blast, the green film or the magenta print? All the lurid colors and intensity you see in 100 SUNS were in the original prints. I stay faithful to what's in the original print or film, but I do make a 'fine' print. In this way I alter the archival originals, but I don't feel that my 'interpretations' are deleterious to photographic 'truth' or 'veracity', because I'm not a true believer in either (Hirsch, 2005).

When asked how he selects images Light explained that he works intuitively:

I go into archives in stages, getting a sense of what's there, which allows a book to slowly emerge from the archival materials themselves. There are always surprises, which is part of the fun. Often those surprises lead to a fleshing out of an idea – in the case of 100 SUNS, discovering images beyond the typically known mushroom cloud. (Hirsch, 2005).

It is clear that Light's intuitive working process affects the structure of a book. He explained that with *100 SUNS* his surprise lay in finding images of the bomb detonating with people in the foreground, often close to the blast point. They provided him with a narrative rhythm he was not expecting to be there, involving human vulnerability. Light described how the challenge was to make a story out of 100 images of the same thing, and that by including images of people that meant he was able to move from the vast and the impersonal back to the human, and then

back out again. “My discovery of such intense images made me realise I needed them not just for visual interest, but also for the structural rationale of the book”.

Michael Light’s work drawing on the US National Archives and those of Los Alamos are literally exposing, and keeping alive in the public’s consciousness previously classified images of the testing of weapons, which since the Limited Test Ban Treaty between the US and the Soviet Union in 1963 has forced these experiments underground. Whilst testing became more frequent up until 1992, the testing of such weapons became at the same time invisible, which makes this collection all the more pertinent (Thompson, 2003).

At the close of *100 Suns: 1945-1962*, Light makes the case for the public disclosure of such a politically charged archive abundantly clear:

While eliminating the spectre of radioactive fallout, the shift to underground testing came at a paradoxically high price: cultural invisibility and secrecy... In all of these underground tests, there is no record that helps keep an informed citizenry viscerally aware of what its government is doing (Light, 2003).

ARCHIVING AS A PRACTICE – Extracts from Interview Transcript with artist Katie Paterson

There is an archival practice within Katie Paterson’s art. In our interview she explained how this is overtly present in the slide work ‘History of Darkness’ (2010-ongoing) and which she describes as “a cataloguing of space and time, linked to a research trip with Richard Ellis, where we were stationed at the WM Keck telescope. Here researchers look to the furthest visible points in the universe – at these distant jewel-like clusters of the earliest stars and galaxies to have evolved, right there in front of us” (Paterson, 2017). It was a way perhaps for Paterson to process something unimaginable, viewing something in the present which in fact happened billions of years in the past. She explained that her project ‘History of Darkness’ came from such unfathomable experiences. “I collect thousands of images of darkness that I individually hand-write, recording the distance from Earth in light years – a never-ending project given there is no end to darkness” (Paterson, 2017).

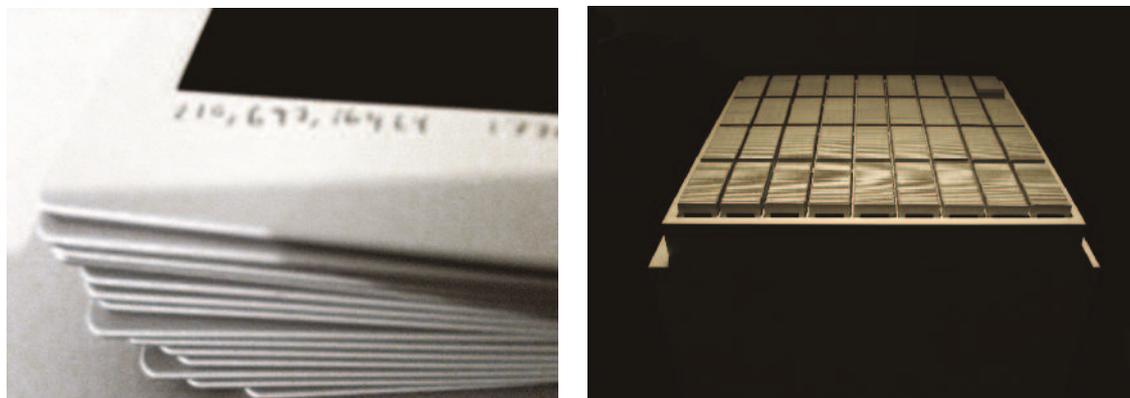


Fig. 67: **Katie Paterson** ‘History of Darkness’ (2010 – ongoing) Slide archive, installation view and detail
BALTIC Centre for Contemporary Art, Gateshead, 2010, Photo courtesy Katie Paterson

The collection of masses of data as well as physical collecting and archiving visually, is evident in Paterson’s projects ‘Hollow’ (which involved building a collection of nearly 10,000 different tree species and bringing them together in a piece of architecture), and works such as ‘All the Dead Stars’ (consisting of a vast aluminium map etched with 27,000 dots, each representing a star that is now extinguished). Paterson also gives the example of her work ‘Fossil Necklace’, for which she has a huge collection of fossils and thousands of wood samples, all diligently archived and labelled. She suggests her propensity to collect and catalogue has “something to do with the search for immensity, trying to capture something that’s so immense, it’s almost futile to even go there – considering the limits of collecting. Yet I don’t know, I still continue the pursuit of cataloguing the darkness over and over and searching for these thousands of dead stars” (Paterson, 2017).

I have encountered another of Paterson’s archival projects, ‘Totality’, as part of the exhibition ‘A Certain Kind of Light’ at the Towner Gallery, Eastbourne (2016) and for her retrospective at the Turner Contemporary, Margate (2019). ‘Totality’ presents an artwork constructed from a vast archive of images of historic solar eclipses printed on to tiny squares of mirror which form the surface of a large mirror ball. The images span early drawings (from the 1700s), photographs from the 19th century and advanced telescopic technologies from the 21st century generated at locations around the world. Over 10,000 images depict the progression of a solar eclipse across the room, from partial to total, mirroring the sequence of the sun eclipsed by the moon. Two beams of light strike the planet-like orb from opposite sides of the



Fig. 68: **Katie Paterson** ‘All the Dead Stars’ (2009) Laser-etched anodised aluminium, Photo courtesy Katie Paterson

room as it slowly rotates, casting a dizzying galaxy of eclipses, collapsed over time and space, across the room and its visitors. Whilst this physical representation of an archive might not manifest as an experience of the subject itself, it turns the subject on its head, so that something that is about darkness is made light, as though an archive is brought out of dormancy, to become a living experience.

DIGITAL ARCHIVES – RHIZOME

After researching analogue archives and practices it felt appropriate to consider the challenges of digital preservation and how to accommodate digital archiving. This section thus briefly examines the born-digital art institution Rhizome, based on the web and since 2003, an affiliate in residence at the New Museum in New York. Rhizome’s artistic programme includes exhibitions, events, artist commissions, publishing and ongoing research on digital social memory. The organisation supports digital preservation and software development and has played an integral role in the history of contemporary art, as well as engaging with digital technologies and the internet.

Rhizome started the ArtBase as a permanent archive for early works of net art, and other works within the broader new media art category as a response to the lack of

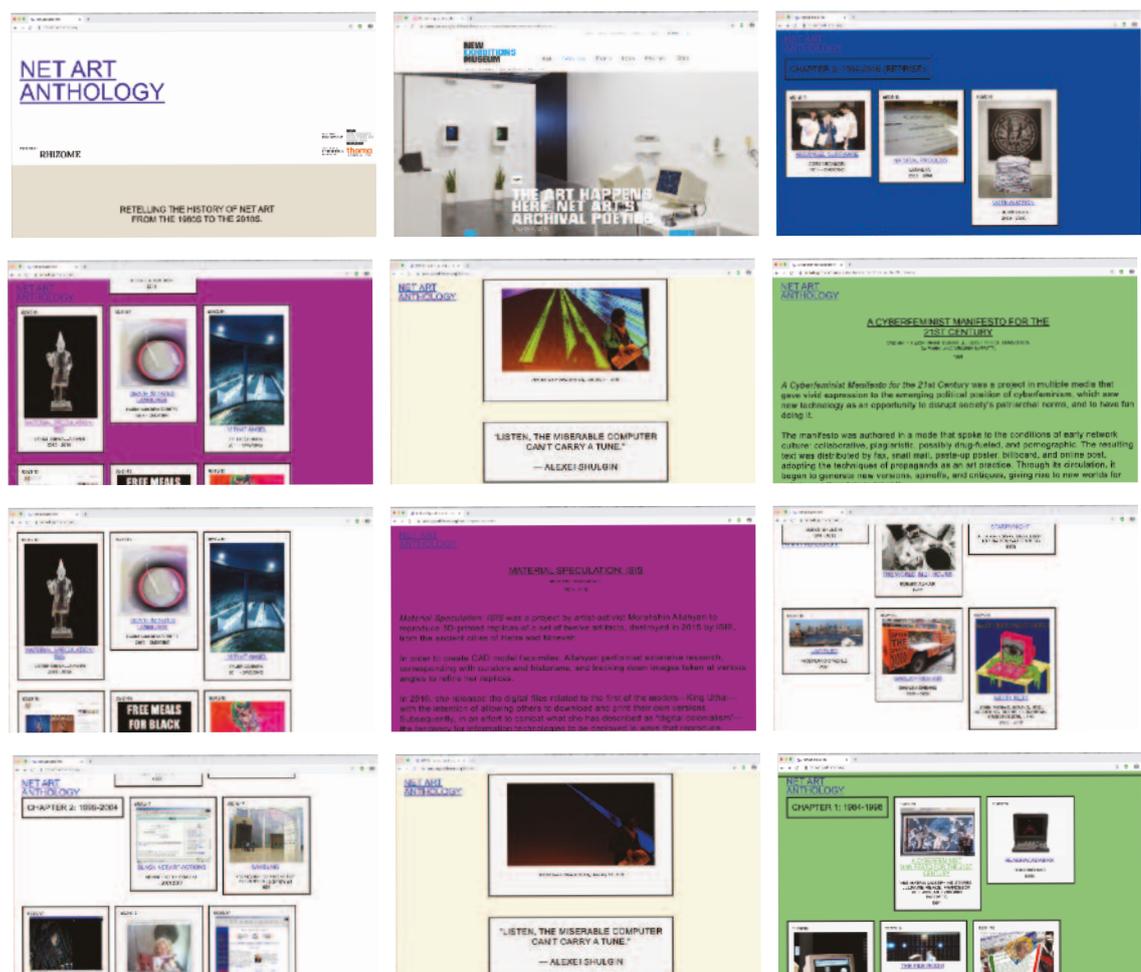


Fig. 69: Rhizome Net Art Anthology Website, Screensgrabs (2003 – present) www.rhizome.org

an art market and collecting institutions for net art. In a report documenting the history of ArtBase, Lozana Rossenova (PhD Researcher in Digital Archives Curation at London South Bank University / Rhizome) points out that whilst similar arguments have been quoted by Rhizome staff members who joined the organisation later on (Jones, 2006; Corcoran & Graham, 2014) this is technically incorrect, as there have been organisations working with new media art in Europe for at least a few decades before the ArtBase was established, as well as other online mailing lists or initiatives, such as The Thing, Turbulence, Ada'web, netzspannung, amongst others (Jones, 2010; Blome & Wijers, 2010), although few of these have been able to stay active as long as Rhizome or maintain a collection as large as the ArtBase (Rossenova, 2017).

Research into Rhizome's archive ArtBase demonstrates some of the ways in which "the internet has transformed the museum in the same way that photography and cinema transformed painting and sculpture" (Groys, 2013) and is useful in considering how the Library of Light concept might translate into a digital context. In the essay 'Entering the Flow: Museum between Archive and Gesamtkunstwerk' for *e-flux* journal #50 (2013) Boris Groys proposed the idea that "the internet made the museum's function of representing art history obsolete." One of the perceived challenges of online exhibitions is that interaction with virtual representation leads to disembodiment. Mark Hansen is critical of this idea and has argued that perceptual acts are always embodied even if they relate to the sensing of things belonging to virtual spaces (Hansen, 2004). It seems there is evidence to suggest that by losing access to the original artworks, and therefore the authentic experience, spectators of art on the internet can then be motivated to undertake a pilgrimage to art museums in search of originality and authenticity (Groys, 2013). In the case of Rhizome, the digital archive does not reproduce and represent images of existing

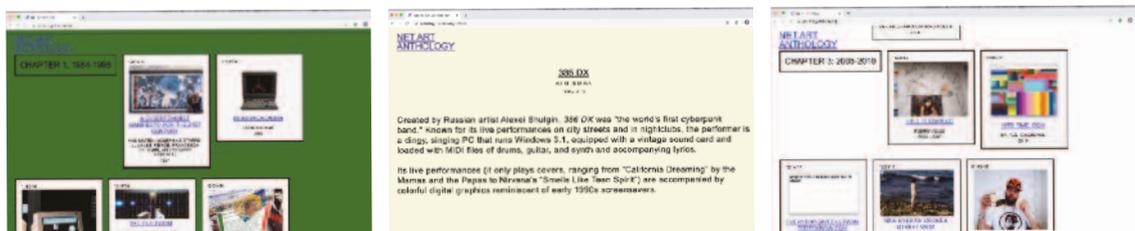


Fig. 70: Rhizome Net Art Anthology Website, Screenshots (2003 – present) www.rhizome.org

artworks stored elsewhere, rather it preserves and collects artworks made specifically for the web. Created in collaboration with Rhizome's digital preservation department, the Net Art Anthology was launched in 2016 and completed in 2019 and addresses the lack of historical perspectives in a field in which many of the artworks are often inaccessible. Through her PhD studentship working on this anthology, Rossenova created a digital interface that could be used by anyone, conducting an audit of works in the Rhizome archive and categorising how these works could be made accessible in a meaningful way. One artwork was released each week as part of an online exhibition, which also became a small physical exhibition "The Art Happens Here", at the New Museum, New York, and an accompanying catalogue detailing the project.

The series attempts to sketch out a possible net art canon, identifying, preserving and presenting 100 exemplary works in a field that could be characterised by diverse practices, multiple cross-collaborations and shifting aesthetic standards (<https://anthology.rhizome.org>).

Many questions emerged through this work, such as “What Does Conservation of Net Art Mean?” In creating an architectural model for the archive Rossenova explained that organising the archive chronologically meant this supplied a non-judgemental, non-hierarchical way to categorise the works (Rossenova, 2019).

The Rhizome website defines the Net Art Anthology in which net art is represented as “an expansive, hybrid set of artistic practices that overlap with many media and disciplines. To accommodate this diversity of practice, Rhizome has defined ‘net art’ as ‘art that acts on the network, or is acted on by it.’

The project specifically celebrates works of net art that:

- 1** Use the net in ways that give expression to emerging subjectivities
- 2** Model new forms of collective cultural practice, and/or
- 3** Exemplify aesthetic, subjective, political, and conceptual positions that have taken on singular and profound resonance within particular networks of artists.
- 4** Can be meaningfully restaged, reconstructed, or reperformed for this exhibition.

The structure of the Net Art Anthology confirms that it will exist as five distinct chapters. The first four will be chronological: comprising early network cultures and early web (through 1998); followed by Flash and blogs (1999-2005); surf clubs, early postinternet art, and social media platforms (2006-2011); and mobile apps and social media saturation (2012-present). “The final chapter will reprise all time periods, addressing gaps that emerge over the course of the project” (Connor, 2016).

A visit in person to Rhizome in the New Museum, New York (2019), was an opportunity to see how the digital archive could provide stimulus and content and translate from the online to a physical gallery exhibition. Aria Dean, Assistant Curator of the exhibition “The Art Happens Here: Net Art’s Archival Poetics”, gave me a tour and explained that the exhibition was a culmination of a two-year research and preservation initiative which presented 16 artworks selected from Net Art Anthology (anthology.rhizome.org), the major online exhibition charting the history of net art. The exhibition demonstrated how a coherent collection and archival project can communicate genres of practice and how technological developments have meant major shifts in the aesthetics of presenting net art works in museums and online.

2.3.3 LIBRARIES

Libraries are places that catalogue and preserve records of human culture and cultural activity, from fragile documents and books to entire archives. They are also secular gathering places that help spread democratic culture, as well as being

paradigmatic examples of social infrastructure, a line of enquiry taken by the American sociologist Eric Klineberg in *Palaces for the People* (2018). After spending time in various public libraries and experiencing first-hand how these institutions give refuge to people who feel excluded or diminished elsewhere, Klineberg described the public library as being crucial to democracy and wrote that “all people deserve free, open access to our shared culture and heritage”. He also criticises the tech enthusiasts who believe the digital social networks, which often amount to flimsy virtual communities, could be substitutes for local social bonds. As local, municipal libraries are increasingly under threat through cuts in local government spending, the concept of the library has been gaining ground in literary and artistic contexts,

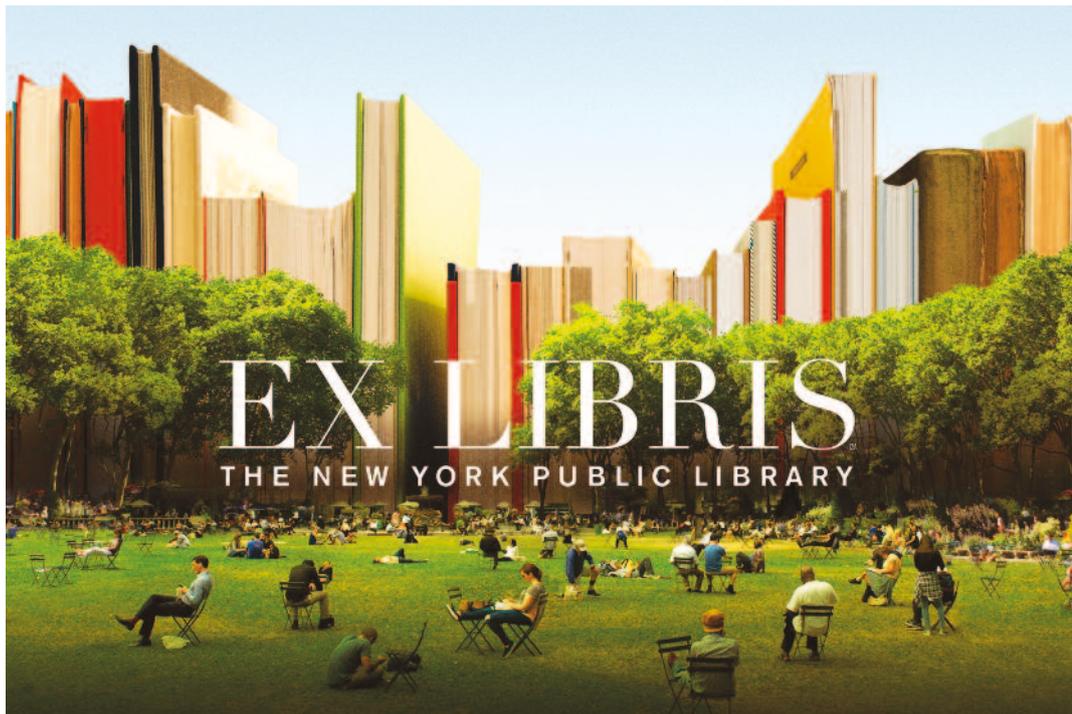


Fig. 71: *Ex Libris The New York Public Library* Film Poster (2018) www.cinemaforall.org.uk

notably in Frederick Wiseman’s 2018 film *Ex Libris: The New York Public Library*, in which human knowledge and its pursuit is followed through a civic institution, with its main branch on Fifth Avenue and its various outposts, including the Lincoln Center’s Library for the Performing Arts, Harlem’s Schomburg Center for Research in Black Culture, the Mid-Manhattan Library’s picture collection and the Braille and Talking Book Library in Lower Manhattan. The film explores the library as a physical resource that serves the betterment of everyone and yet also acknowledges how in the digital era the institution must adjust, charting the various dilemmas it faces because of these transitions. *Ex Libris* is proof that film offers an interesting way to document and frame archival research and provides a medium that allows it to become accessible on an intimate level to others.

Libraries as physical environments have many practical uses, yet there are also examples in which they act as a metaphor and as a space within the imagination. The most renowned example is perhaps Jorge Luis Borge’s ‘The Library of Babel’, a conceptual library metaphorically connecting the world with the book of life, in which

the Library “is unlimited and cyclical” (Gebbers, 2010). The labyrinthine element of library and text are intertwined to form a new actuality – a virtual reality through which to guide our thinking. In J.L. Heilbron’s *The History of Physics: A Very Short Introduction* (2018), he raises the metaphor of ‘physicist as librarian’, an idea first set out by the French mathematician Henri Poincaré in his keynote address to the first international conference of physicists, held in Paris in 1900:

He advised his audience... that they should collect the facts of experiment and arrange them for consultation in the most convenient manner, and that a good physicist was more librarian than philosopher... The metaphor of the library suited a large part of 19th-century physics, which boasted many new laws or effects easily entered in Poincaré’s imaginary catalogue (Heilbron, p.100-101, 2018).

An example of the library and archive as a conceptual artistic premise is the artist Roni Horn’s ‘Vatnasafn / Library of Water’, which opened in the town of Stykkishólmur on the west coast of Iceland in 2007. In a former library building, Horn created a sculptural installation of 24 glass columns placed in an irregular arrangement between the floor and ceiling, containing glacial water collected from Iceland’s glaciers, “offering at one and the same time a sculpture installation, a space for quiet observation and reflection and for community gatherings and exchanges of different kinds...” Horn imagined ‘Vatnasafn / Library of Water’ as “a lighthouse in which the viewer becomes the light. A lighthouse in which the view becomes the light” (Horn, 2009).

As the former town library it bears the history of books and yet it had been reconceived as a library without books. As well as being a library of water, it was also a library of weather since words in English and Icelandic covered the floor of the library, words that described weather and emotion. As Adrian Searle noted in his essay (2009), what all libraries share is silence, the sound of the unknown being worked at. And yet in this case he asserts: “Horn’s library of Water is rarely silent, or if it is, then the silence is a prelude to something” adding that libraries are as much for writers as they are places for readers and that in order to write one must turn away from books, in the way that to be physically present in the landscape we must turn away from it (Searle, 2009).



Fig. 72: **Roni Horn** Vatnasafn / Library of Water Book
Published by Artangel/Steidl, London and Göttingen ©Artangel/Steidl, Roni Horn 2007

2.4 CONTEXTUAL REVIEW SUMMARY

SUMMARY – EXHIBITIONS

Many of the early exhibitions of light practice celebrated the fact that art had become ‘electric’ along with everything else and reflected society’s need to understand the technological. This was evidenced in *Lights in Orbit*, an example of an early exhibition of pioneering artists exploring perceptual art, kinetic art and optical art which is recognised as having heralded the artistic application of what we now term ‘new media’. The willingness of audiences to engage with this new field was reinforced by the gallerist and curator Howard Wise who when reflecting on the show suggested that it satisfied “a newly developed sensitivity within ourselves engendered by modern life” (Ryan, 2014).

It is evident that there has been a steady increase in the interdisciplinary nature of light in art as demonstrated through exhibitions of works drawing upon diverse art historical traditions and aesthetic paradigms such as the concept of synaesthesia and more broadly the explorations of science and new technologies employed in the field of art and design. The *Light Fantastic* shows in 1977 and 1978 are examples of exhibitions discussed in this section that represent new light technologies, curated with the utopian vision that the nascent medium of holography was a ‘medium of the future’. Yet only a few years later the technological wonderment provoked by holography reached a limit, having crossed the boundary into advertising and becoming kitsch in the popular imagination. This is an example of a technologically driven medium failing to fulfil expectations, and instead remaining a marginalised medium “entangled with esoteric technology and with lowbrow kitsch” (Moore, 2012). It was not until the exhibition *Pictures from the Moon: Artists’ Holograms 1969-2008*, staged at the New Museum, New York, that the marginalisation of the medium was to see a reversal, and once again become imbued with a creative rigour and profile.

With the popularity of three-dimensional formats for film and TV and a widespread interest in the potential of advanced technology within culture more broadly, it seems wholly feasible from discourse around recent exhibitions such as *Pictures from the Moon* (2012) that the future of holography might well reap the rewards of the persistence of artists who continue to experiment with the technology in an attempt to see the world anew (Moore, 2012). The group show or exhibition exploring light as a theme has continued into the 21st century and is often perceived as being unable to escape from being a conversation with technology, whether antiquated lighting technologies, or current or forward-looking lighting equivalents. The Hayward Gallery’s exhibition *Light Show* displayed many works involving a complex array of technologies and encouraged audiences to experience the works bodily as well as interpreting them through situational, historical and cultural perspectives.

With science and technology at the forefront of much of modern culture, it is valid to question, as Anne Wagner has done in her essay (2013), whether a new set of principles concerning light and vision have come to govern light art in recent times.

The exhibition *A Certain Kind of Light* highlights the importance of bringing works from storage into the present through reprocessing, re-staging and the creation of new narratives that resonate in contemporary discourse. It also highlights the limitations of working with a collection on a specific theme such as light.

The seductive quality of light, the attraction and focus it draws, can also prevent it from attaining greater meaning unless it is used overtly to create a social or political statement. Again, whilst there are increasing numbers of artists using light as tools for social change, these works have been mostly site-specific, presented in public contexts for maximum visibility and impact. From research, it appears that the subject of 'political light' has not yet been addressed in a gallery context, however, this theme is set to be a part of the forthcoming exhibition *Macht! Licht! (Power! Light!)* which is due to open at the Kunstmuseum Wolfsburg in May 2020.

SUMMARY – LIGHT FESTIVALS

Although light festivals have a long history they represent a relatively new area that is crossing over into the field of contemporary art through the commissioning of high profile artists at certain festivals. The temporal and mainstream approach of light festivals predominantly contributes to the popularisation of light as a medium for entertainment and as used strategically for economic development supported by business, as discussed in both the Exhibitions section previously and in *Performance Light* in the ontology. The research into festivals of light has identified a number of curatorial strategies and concepts that include: the city as a laboratory for the role of light: an urban museum without walls in Lisbon's Biennale of Light, conceived as a "light-walk in the city" divided into three colour circuits (red, green and blue); a walking route is also the concept for *LichtRouten*, in Lüdenscheid, devised as part of a cultural mission to attract visitors who ordinarily wouldn't go into a normal museum but by participating will deepen their visual understanding of things; the positive re-imagining of public space through light interventions occupying key areas of the city, which is the driving concept behind *Lumiere London*; and *LightPool's* building on the history of the Blackpool illuminations with large-scale light installations containing coloured and dynamic lighting which attracts vast numbers of tourists.

The lux-heavy context of light festivals means that artists have to conceive works that can compete in an overwhelmingly sensory space. It is clear that artists are compelled to respond accordingly, with works becoming bigger, brighter and more spectacular, so that any possibility of creating an experience on a subtle or intimate level is likely to be diluted or disappear by the festival imperative to attract large crowds, in order to satisfy the stakeholders and sponsors. This research led to thinking about light as an active substance, light's immediacy and significations as well-crafted elements in many fields, and subsequently to the 'Spectacular Light' section of the *Library of Light* book (see PDF in Appendix pp.141-144), which argues against light being used as a continuous assault on the senses and instead for a well-considered visual concept of light.

Festivals can be successful and inclusive social gatherings bringing people together and generating income for cities, but there are also critics who suggest these cultural strategies are a 'carnival mask', a covering-up of social inequality, which trade in "familiar themes for passive consumers" (Gotham, 2005 In: Edensor, 2017). This generally means that the works have little or no connection with the place in which they are located and the scope for critical thought by spectators is limited by seductive extravagant displays. A Quality of Light (the biennale of light in Cornwall) is an example of an event which aimed to respond to place through light-themed art, although it was criticised for its lack of engagement with the region's art-historical past, and the distinctive lack of reference to the qualities of light specific to the local Cornish coastline.

There appears to be a connection between the curation of certain light festivals (such as Lumiere Durham) that are committed to commissioning works which contain a locale-specific narrative and site-specific works that are directly informed by the geography of place: "it's always about making a piece of work with the location and setting we have chosen for it" (Marriage, 2017). Whereas it is a perceived problem for some light festivals that they become part of a network and therefore numerous artworks are shown repeatedly in different cities at different light festivals, so at the same time not only do the artworks not relate to each new environment but each festival becomes like every other. Designer Roger Narboni shares the opinion that it is critical "to collect the lighting cultures that we are losing" and suggests the importance of working with a local partner to reflect in the work the local culture, their story (Donoff, 2016).

One major criticism aimed at light festivals is the viewpoint that too much light "may distort the image and sense of places" (Donoff, 2016). Artists and artist groups at the Future of Light Art Symposium (ZKM, Ruhr, 2018) also discussed the desire amongst the lighting community to value darkness in cities and to attempt to extinguish some of the lights. The drive to re-instate the value of darkness is also discussed in the work 'The Absence of Light' by Speirs and Major commissioned for the Lyon light festival, a work that directly criticised the city's lighting plan and wider issues of light pollution. Following the intervention by Speirs and Major, the city of Lyon reappraised their Light Plan and in this way the political aspect of the work achieved its ambition. This research led to the Absent Light section of the book in which the concept of darkness or the absence of light is a companion to art and is referenced within artists' practice. Darkness is also an issue raised and discussed in many of the interviews throughout the book and continues to polarise opinion.

SUMMARY – COLLECTIONS

(DIA ART FOUNDATION, NEW YORK AND CENTRE FOR INTERNATIONAL LIGHT ART, UNNA)

The Collections section focuses on the Dia Art Foundation and the Centre for International Light Art as two institutions with different organizational structures but

which share some similarities in that they collect, commission, display and maintain light-based site-specific works which are temporal and require the viewer to be an active participant. What is striking about the three examples of works owned and looked after by Dia is the extended time frame imposed by experiencing the works and the different modes of control and curation. All three works offer examples of a contemporary response to the idea of the spectator co-producing the artwork in a site-specific setting. Contrary to the fast-paced turnover of exhibitions in institutions and galleries (a response to the constant need for new displays and marketable opportunities to attract visitors), each of these works offers a different time-scale completely. In the case of Nancy Holt's 'Sun Tunnels' it is likely that each visit is utterly unique and different from any other, dependent on the season and the weather. The investment required to visit the work encourages a mode of exchange that is more concerned with states of being-ness and becoming, leading us to the experience of the here and now and, ultimately, to ourselves. Both Dream House and the Dan Flavin Institute are presented too as unique locations for the experience of light as a medium for art. They encourage individual and return visits by remaining *in situ*, places that can be re-visited time and again over the years and, according to the ever-evolving external social and political factors, the endurance of such places allows for the possibility of new narratives to be constructed. In the case of both the Dan Flavin Institute and Dream House, the material is ephemeral, and so the usual archival and cataloguing approaches seem antithetical to these artists' radical intentions and instead these are substituted for durational live experience.

At the Centre for International Light Art, Unna, there is also a focus on the experiential nature of the works and the architecture of the museum itself, with the concept of the collection connecting the experience of the light-based installation to the bodily experience of space. Through the focus on light-based installation and because each work is created in dialogue with the architecture of the museum, this institution has positioned itself at the centre of dialogues operating "between compelling perception-experiments and existential experience" (Ganser et al., 2004/2010). By housing site-specific works permanently the centre becomes a destination for Light Art and, like some of the Dia site-specific artworks, it therefore encourages a pilgrimage to the collection. By offering tailored tours of the building and the many installed light installations, visitors have time to absorb the individual atmospheres presented by the various works, while also cultivating a dynamic of localised knowledge production.

SUMMARY – ARCHIVES

It has become evident that the archival turn (since the mid 1990s) has become a multidisciplinary phenomenon with the archive as a subject of research, moving away from archives as sources to archives as subject. Echoing these philosophical shifts, museums today are changing, boundaries are shifting and instead of the obsession with generating histories, institutions are more concerned with generating knowledge and in the process recognise the increased interest in hybrid forms bordering the library, namely archives and art collections.



Fig. 73: Spreads of the **Nýló Archive** Printed In: *Nylistasafnid / A Retrospective: The Living Art Museum 1978-2008* (2010)

The examples researched herein share commonalities in that they each represent active archives or collections in which efforts are made to provide regular access to and engagement with their holdings. For example: Nýló's core focus as an organisation is to embrace ideas of impermanence in relation to its archive which, as discussed, allows the dialogue to be less involved with legacy and more about possibility, more about experimentation and inevitable failures and which allows the public significant access to its holdings through exhibition combined with laying the archive open without mediation or interpretation. Various ideas emerged from examining the Nýló archive and reading the publication *Archive on the Run*, including: the tension that exists between the collection and the exhibition venue and how the archive can usefully feed into the museum and exhibition programme; how the artist-run archive, artist-as-curator and artist-as-art-museum-director can challenge cultural authority by adopting a much broader and more inclusive approach to collecting and allow an archive and collection to be an autonomous space for creation; and through openness how the museum, its collection and archive can represent a community first and foremost.

It is also apparent that the artist-as-archivist and artist-as-curator utilise the category of collection within creative practice and are often following an intuitive approach, seeking to bring historical information into the present through reprocessing, re-staging and the creation of new narratives that resonate in contemporary discourse.

The way this is done differs in each case, for example, in Katie Paterson's work 'History of Darkness' (2010) the archival structure is used as a way to make sense of and come to know vast, complex and unimaginable ideas and things. Or in the case of Michael Light's work with archives, in particular with '100 Suns' (2003), he literally works with the archive to expose and keep alive in the public's consciousness previously classified images, re-constructing the narrative and in the process critiquing the original government-sanctioned version. He also used the process of

discovering images in the archive to create a structural rationale for his book and considers how archival images give him the sense of getting close to the original experience of having captured the images himself in real time and space. In Light's 'Full Moon' project he gained unprecedented access to the rich visual archive of lunar landscape photographs, from Nasa's Apollo missions, conceiving and producing a book and exhibition in which he constructed a textless visual narrative of an archetypal Apollo journey. Whilst Light chose the images he considered were the most aesthetically interesting, the photographs' original function was not aesthetic but instead they were regarded as precise documentary evidence.

Examining the digital archival approach initiated by Rhizome demonstrates the challenges of digital preservation and how to accommodate the digital archiving of web-based artworks. It is clear this approach opens up the potential for a virtual audience to engage in critical discourse concerning a collection or archive and also that this is becoming a popular new area of development, engagement and evaluation within the arts.

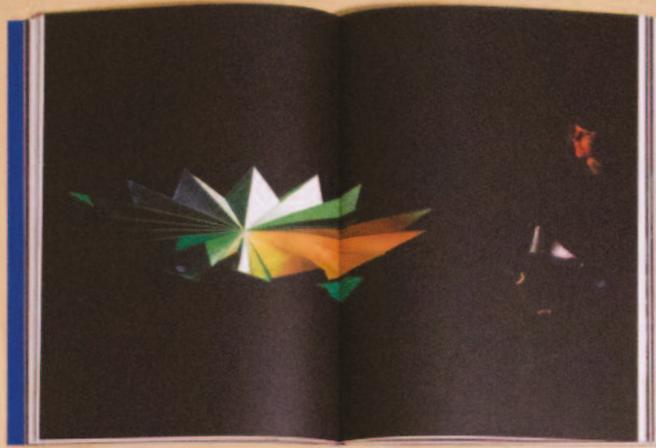
These artist-archival practices reflect the present time and contribute to art history and culture more widely through the construction of new narratives from images and image-making processes. Archives such as the one Rhizome created in an online context demonstrate how an appropriate digital interface can be created for the categorisation and experience of works in non-hierarchical terms. These archival approaches reveal ways in which vision, instrumentation and technology continue to evolve, and how artists are affected by these parallel developments in art and science.

SUMMARY – LIBRARIES

The examples researched in the Libraries section present the library as both a physical and metaphorical space that permits knowledge to be explored and framed in significantly different ways. The research has explored ways in which the library has been re-invented beyond its most familiar context as a collection of books and as a physical resource housing all kinds of knowledge, to become imagined, immaterial spaces as constructed by writers and artists in literature and the arts from examples such as "The Library of Babel" to Roni Horn's 'Library of Water'. All of these references have been influential in developing the Library of Light as a framework for research and in developing a structure for the book publication in which to capture the expansive and elusive nature of light and its diverse practices.



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CHAPTER 3

Artist / Curatorial Projects

3.1 Introduction

3.2 Collaborations in Light and Sound (Radio Broadcasts)

3.2.1 Introduction

3.2.2 Session 1

Haroon Mirza, Jack Jelfs, Laura Buckley

3.2.3 Session 2

Joshua White, Willie Williams

3.2.4 Session 3

Ragnar Helgi Olafsson, Karlotta Blondal,
Sverrir Gudjonsson

3.3 Researching Geographic Light

3.3.1 Writing Residencia

3.3.2 Film as Research Residency

3.4 Summary

1. The Joshua Light Show
In: *Art, Music Journals*
Joshua White / Dan Ladel 2010

2. Laura Buckley:
Repeldarker 2017

3. Jo Joelson:
Iceland Sketchbook 2019

4. Roni Horn:
Vatnasafn 2007

5. Karlotta Blondal:
Voices Through Darkness 2015

6. Ragnar Helgi Olafsson:
My Father's Library 2017

7. Sverrir Gudjonsson:
Twilight Songs 2019

8. Jo Joelson:
In Residence at the Library of Water 2019

Fig. 74: Publications, Catalogues & Leaflets

3.1 INTRODUCTION

In parallel with the production of the Library of Light book and exploring the creative medium of light through a dialogic approach, this method continued into practical projects presented in the public domain. These projects are discussed in the following sections and include a series of three radio programmes, creative writing and filmmaking. Whilst these are not in chronological order in this chapter there is a Timeline included in the Appendices (see Appendix 8.1) to show the original progression of ideas and development of projects.

3.2 COLLABORATIONS IN LIGHT AND SOUND

3.2.1 INTRODUCTION

Following the many interviews undertaken for the book it was evident that there were practices that involved both sound as well as light and therefore it seemed relevant to distribute this research material in a non-visual form. A series of conversations cohered around the subjects of 'Collaborations in Light and Sound' and 'Light and Darkness' to discuss aesthetic correspondences between acoustic forms and light practice. These conversations generated material for a mini-series of three radio programmes produced for the Bad Punk show on Resonance 104.4fm that were broadcast on Friday nights in March/April 2019 from 10-11pm. Each session included a live introduction and focused on a different approach to the theme. The contents of each programme are outlined in more detail below with links in the Appendices to the broadcasts archived on the Resonance website.

3.2.2 RADIO BROADCAST – SESSION 1 HAROON MIRZA, JACK JELFS, LAURA BUCKLEY

Session One featured pre-recorded discussions with contemporary artists who combine light, sound and moving image in installation and live performance work. The aim was to explore some of the different processes involved in collaborations between visual artists and musicians and to play some of the music and sound components of the works discussed.

The session began with the artists Haroon Mirza and Jack Jelfs in conversation, discussing their artist residency at CERN (the European Organisation for Nuclear Research, and home of the Large Hadron Collider), which resulted in the performance work 'The Wave Epoch', an immersive club experience and collaboration with the musicians Elijah (grime DJ/producer) and GAIKA (artist/musician). 'The Wave Epoch' imagines a scenario in which the collider has been rediscovered by a future civilisation and turned into a ceremonial site, similar to Stonehenge, inviting people to consider what culture will be like 2000 years in the future. Mirza and Jelfs also discussed their shared interests in the nature of consciousness, ontology, ritual, divinatory systems and the limits of language. The discussion gave insights into their working processes in music/image collaboration, from initial research to field recordings, to live performance. In Mirza and Jelfs's work there was an overarching

narrative and so the material collected at CERN was loosely worked into a production in which other performers were given free-rein to contribute their own material in a live performance context. Whilst the conceptual and narrative element of the work was clearly structured, the musicians were invited to perform in an improvisatory way. Interspersed into the conversation were field recordings made at CERN and also extracts from 'The Wave Epoch' live performance.



Fig. 75: *Left: Haroon Mirza & Jack Jelfs at CERN* Photo by Sophia Bennett/CERN Photo courtesy Mirza and Jelfs

Fig. 76: *Middle: The Wave Epoch Performance, Brighthelm Centre, Brighton,*
Photo XC Photography Courtesy Mirza and Jelfs

Fig. 77: *Right: Laura Buckley* Photo courtesy Laura Buckley

The artist Laura Buckley (who also works with sound) discussed the techniques she uses to create imagery and sound that feed into her projected video and kinetic installations, along with her music collaborators Dave Maclean (Django Django), Andrew Spence (New Young Pony Club), Andy Turner (Plaid) and Andrew Weatherall. Buckley's approach was somewhat different in the works she discussed, in which the collaborations mostly developed from her moving-image work and the music collaborators responded to the imagery to create a sound composition. These processes were affected by working remotely with the use of digital sound and imagery and all parties were able to send material back and forth for response. Much of the process was open to experimentation, improvisatory methods, cross-disciplinary dialogue, and practitioners adopted a responsive mode which led to a spontaneity in the work. This demonstrated a freedom of expression that is not often permitted in larger-scale productions combining sound and light, for example in lighting for rock concerts. The conversation with Buckley was underscored and interspersed with a combination of her own compositions and the work of the other collaborating musicians.

The pre-recorded discussions in which the explanations of artistic process were edited with music and sound were an effective way to present the material, evoking both the process of making the work and the resulting performance and installation works.

3.2.3 RADIO BROADCAST – SESSION 2 **JOSHUA WHITE, WILLIE WILLIAMS**

Session Two featured two artists who have shaped the evolution of the modern-day light show. Joshua White is the founder of Joshua Light Show that created mind-melting visuals for the biggest musical acts of the late Sixties (Janis Joplin, the Grateful Dead, Frank Zappa and the Mothers of Invention, Jefferson Airplane, Jimi Hendrix, the Doors, the Who); Willie Williams whose career as a lighting designer for some of the major rock tours of the last four decades, talked about his work with Stiff



Fig. 78: Left: **Joshua Light Show** (1967-68) L to R: Stephanie Magrino, Joshua White, William Schwarzbach, Jimms Nelson, Jane Nelson, Herb Dreiwitz and Thomas Shoesmith www.joshualightshow.com ©2017

Fig. 79: Right: **Joshua White** New York (2019) Video still Jo Joelson

Little Fingers, David Bowie and his enduring collaboration with U2. Session Two was revealing in terms of the trajectory of the use of light in live music performance. The interview with Joshua White was insightful in demonstrating the use of equipment and analogue techniques in the early development of what has become the modern-day light show. The striking fact is that the vibrancy of the '60s scene at the time became articulated through the light show, "it all just exploded at once, and everybody wanted to articulate it and to show it visually." Also of significance was that light was given equal billing with the music, "the light shows came into existence because they took what was nothing to look at and everything to listen to and made it into something equal for the eyes and ears." The Joshua Light Show didn't rehearse beforehand and the improvisatory nature of the work became a significant part of its strength and sense of vitality. "We familiarised ourselves with the music, the light show that we did was never rehearsed, we rehearsed the techniques and then we improvised. The analogy is good progressive jazz, everyone playing is a master of their instrument." What was also particularly informative was the detailed descriptions of the artistic process of creating the analogue light shows, the techniques being described as four main elements that were distinctive:

One: the liquid projection, which is simply mixing oil and water in curved dishes on a classic overhead projector, it's good because the playing field is big, its 10x10inches it's horizontal so stuff doesn't spill, that was the most famous thing and when you hear about light shows, and exploding amoebas and rainbow this and rainbow that, it's the liquid lights because they were very amorphous. Squish oil and water together all you want but they're never going to mix, they're just gonna make wonderful bubbles and shapes, so that was one primary thing.

Two: concrete imagery which we didn't use much of, we used it in film loops which we made specially, which would appear in the centre of some visual effects, or slides which would appear for a moment and then disappear, the more concrete the image the less you'd see it.

Three: the full-colour wash, so we could go from a red liquid plate and it would slowly dissolve to blue. I'm very proud of the pure colour and to this day we still use pure colour.



Fig. 80: **Joshua Light Show** The Mothers of Invention, Minnesota Theatre Center (1967)
Photo Herb Dreiwitz ©Joshua White 2010 Courtesy Joshua White



Fig. 81: **Joshua Light Show** Terry Reid plays into a liquid and light explosion (1967) Photo Herb Dreiwitz
From: 'The Joshua Light Show Artist Music Journals, A Curated Series from Soundscreen Design ©Joshua White 2010

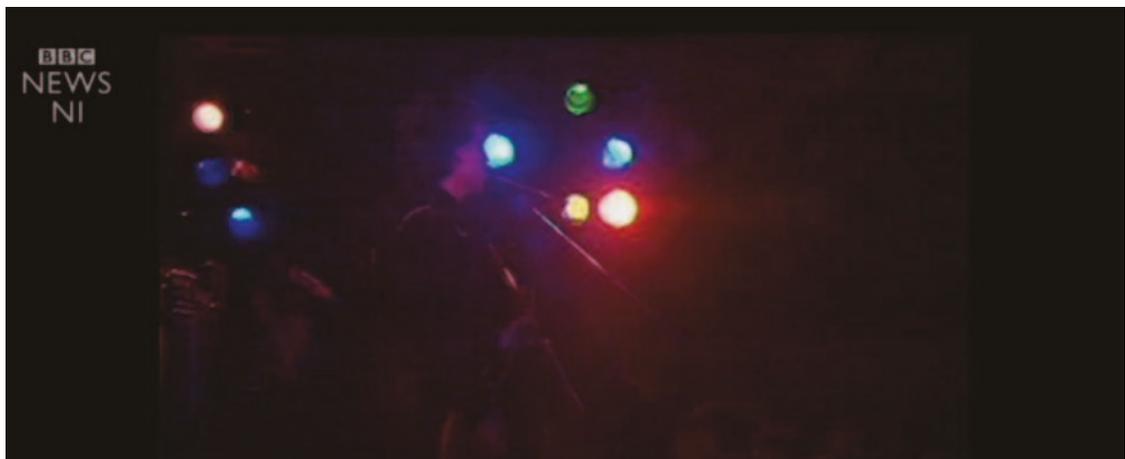
Four: the final thing which was unique to us was the recreation of the works of Thomas Wilfred, which we call 'Lumia'. Thomas Wilfred was someone who I saw at the MOMA, he was a self-taught musician and lute-player and he had this thing called 'Lumia', it had different variations including the Clavilux, his performance device and what it was, was a screen, and on the screen you would see abstract images, they were not unlike the Northern Lights but different, it was that kind of abstract image. Wilfred made kinetic sculptures called Lumia. I was determined to replicate the look and it became the very important fourth element of the light show.



Fig. 82: **Willie Williams** video still from: Lumia Domestica at Wallspace, London (2010)

Fig. 83: **Willie Williams** Screenshot from Stiff Little Fingers and U2 concert, BBC News NI (1981)

In contrast, the interview with Willie Williams demonstrated a very different language and approach to working with light. Beginning on a small scale in the era of punk rock, and working with the band Stiff Little Fingers, there was minimal equipment or time available for set-up or any desire to create an elaborate lighting design. However, over the course of his career, this was to change radically as Williams's work with bands such as U2 and REM led to huge production budgets, truckloads of equipment, increasingly sophisticated staging and complex lighting design and video. And as the international tours grew in scale so did the venues, at which point all aspects of the production becomes carefully orchestrated with the intention to create a repeatable show for each and every tour date. Across these two interviews, the aesthetic development and technological evolution of lighting design used in music performance is made explicit. The early liquid light show of Joshua Light Show has been dubbed the "forefather of VJ culture", and since 2004 when the light show was revived, more recent shows have been hailed by critics as "abstract cinema," "visual music" and "living artwork of organic complexity".



Fi. 84: **Willie Williams** Screenshot from Stiff Little Fingers and U2 concert, BBC News NI (1981)

Both of these interviews build on previous research around the liquid light show conducted for the “Performance Light” section of the *Library of Light* book (specifically the sub-section “The Electric Drama – psychedelic light”, pp. 145-147) in which new relationships with light were explored as musicians sought to create totally sensory environments for the experience of their music. There are interesting aesthetic comparisons and developments between early forms of lighting in rock n roll and the current techniques, trends including the incorporation of media in ever-expanding forms and formats.

3.2.4 RADIO BROADCAST – SESSION 3 RAGNAR HELGI ÓLAFSSON, KARLOTTA BLONDAL, SVERRIR GUÐJÓNSSON

Session Three featured the work of three artists whose work relates to the geographically specific extremes of light and darkness in Iceland – Ragnar Helgi Ólafsson, a writer and visual artist living and working in Reykjavik who discussed his imprint *Tunglið* (after the Icelandic word for moon) and how they publish books on the night of the full moon. Ólafsson also discussed his networked art project ‘Daybreak Forever’, which involves transmitting the sound of daybreak from different locations and time zones around the globe; Sverrir Guðjónsson, the Icelandic countertenor who has devoted his career to the musical heritage of Iceland, discussed his latest album *Twilight Songs* which takes the listener on a journey that travels the border between light and darkness; Karlotta Blöndal read from her work ‘Voices Through Darkness’, which drew on the Experimental Society of Reykjavik (a scientific society active from 1905-1911) and the experiments they conducted with the Icelandic spiritual medium Indriði Indriðason.

This was the most experimental of the three radio broadcasts, with each of the artists discussing concepts of light and darkness as site specific. The ideas and emotions were clearly embedded within artworks and practice, evidenced through the accompanying music and texts that were pre-recorded and included within the



Fig. 85: Left: Flyer for **Collaborations in Light and Sound** on Resonance 104.4FM (2019)

Fig. 86: Top Right: Video still from interview with Sverrir Guðjónsson, Reykjavik (2018)

Fig. 87: Bottom Right: Video still from interview with Ragnar Helgi Ólafsson, Reykjavik (2018)

broadcasts. Ragnar Helgi Ólafsson's work 'Daybreak Forever' was his response to the extreme darkness of winter in Iceland and his desire to bring an intensity of light missing from daily life in order that someone could bathe in the sunrise from a distant place. This was done only through the transmission of environmental sound from various locations around the world but nevertheless the sound vividly evoked the warmth and light from each place. Similarly, within Sverrir Gudjónsson's music on *Twilight Songs*, he evokes the extended state of twilight from Iceland's winter, creating pictures of the hidden folk and other potent mythologies from the dark landscapes at this time of year. Whilst Karlotta Blöndal's reference was historical it also contained the spirit of darkness evoked through mediumship and the unknown aspect of the dark. This programme was closely aligned to the ideas of 'geographic light' in which practices and responses to light are location and place specific (see link to Radio Broadcasts in Appendix 8.2).

3.3 RESEARCHING GEOGRAPHIC LIGHT

INTRODUCTION

I refer to the idea of geographic light as location and place specific, and as being inherent within certain practices. In *From Light to Dark: Daylight, Illumination and Gloom* (2017), Tim Edensor comments that "It is rather extraordinary that in geography and other disciplines, the key role of light in theorizing landscape has been almost entirely neglected." Edensor sought to redress this by considering how special qualities of daylight "foster a sense of place and inspire distinctive artistic representations and cultural practices of place", and explored "how we might think about geographies of daylight, artificial illumination and darkness".

Light as a culturally specific medium based on geographical location, has been explored in my practice previously, within a number of artworks that have evolved directly from experience of a particular landscape and documentation of light specific to that place. There are a number of ways of looking at landscape in relation to light, for example, one is to observe the details of ever-changing light, while another is to consider ways in which light and landscape have been interpreted in relation to cultural, symbolic and historical associations. The impact of light on society and its cultural and symbolic associations were evident during research and fieldwork conducted by the artists London Fieldworks in Brazil in 2009. Interviews were conducted with local people from the Mata Atlantica region, who gave accounts in the oral tradition of their experience of a natural light phenomenon 'Luz de Campestre', "Boi-tata" or translated into English, 'Light of the Countryside', the Brazilian equivalent of a will-o'-the-wisp. This highlighted a geographically specific light phenomenon experienced by a number of the local residents, who each recalled noticing it in different places and at different times – typically described as "a shining ball of light floating above the ground, which reacted to human presence in different ways". Such unusual sightings of light have led to landscapes being associated with supernatural, spiritual or metaphorical agencies. The sun has long played a divine role in ancient religion and equally other light phenomena including rainbows, lightning, and the aurora borealis have inspired mythological readings of place. Ancient structures were built to formalise a relationship with light as a sacred entity

for worship – the most obvious being Stonehenge, a place archaeologists recognise as having functioned as a celestial observatory to mark the winter and summer solstices, and where rites are still performed for the arrival of mid-summer and mid-winter. In the essay “Being Alive: Essays on Movement, Knowledge and Description” (2011), Timothy Ingold explained how we most often make sense of the landscape through observing its form, coming to know it visually rather than through its textual qualities. Light is the key to this knowing and yet in popular culture and representations of landscape the drive to formalise, simplify and freeze in time means that all the seasonal and diurnal fluctuations and dynamics of a landscape are lost. Practice which involves responding to a location through the observation and documentation of natural light phenomena contributes to knowledge and understanding alongside the subjective experience of a place. This practice has been manifested through short films including those in the exhibition “Short Films about Light and Dark”, **Skuggerwerk / Shadow Work** (2016) and **The Darkest Day** (2017) (discussed below in the section on the filmmaking residency), and projects such as the early work **Polaria** (2001/2) included in the book chapter Mediating Light. The last-named project involved a month of fieldwork in northeast Greenland in 2001, during which the artists studied and captured 24-hour daylight over the course of the month and its transition to polar darkness. *Polaria* developed out of interest in the

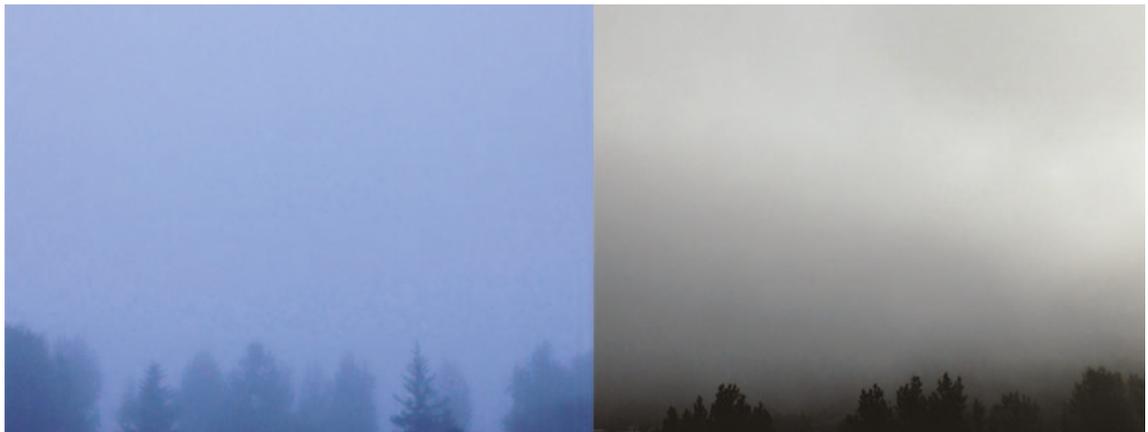


Fig. 88: Jo Joelson/London Fieldworks ‘Skuggerwerk/Shadow Work’, Seydisfjordur, Iceland (2016) Photos Jo Joelson



Fig. 89: Left & Right: London Fieldworks ‘Polaria Fieldwork’ (noon and midnight) Northeast Greenland, 2001
Photos Anthony Oliver, courtesy London Fieldworks

idea of ‘virtual light’, daylight simulation and its perceptual effects, and the question: What does it mean to mediate an experience using the medium of light? In the remote wilderness of northeast Greenland, and using a spectroradiometer – a sophisticated light meter that measures intensity or the number of photons for each wavelength of the spectral range of interest – a month’s worth of light data was recorded alongside the light’s impact on the body using bio-monitors to record physiological changes. In the field, the artists’ were freed from the diurnal rhythm of the rising and setting sun. There was a different kind of rhythm, the pattern of the sun circling overhead with its arc getting lower each day until by the end of the month it was visible just above the horizon line, as a line of red light bleeding into the sky above.

From the recorded data an artificial simulation or ‘virtual daylight’ chamber was constructed and, through interaction with the artwork, visitors could experience something akin to the light the artists experienced in the field. This ‘light in waiting’ was held in a database, waiting to be called up. Light captured as data, stored and then translated back into light, became a distilled, mediated, technologised simulation of polar light. The installation interface allowed the ‘user’ to control the light, with the visitor’s physiology triggering the light states that had been experienced in Greenland – re-created from data as precisely as possible. This interaction symbolised the almost invisible force of electricity and, through the controlling of this force, a new relationship that challenged the binary of material and immaterial space.

Light in combination with land and weather can physically locate us in time and space – or through activating the imagination or triggering an emotional response, the experience can be ‘out of time’, something more abstract that connects ancient and modern, the material of the universe and the man-made. The residencies (outlined below) contributed to research into geographical light, which became a new category included in the ontology. The emergence of a vocabulary associated with light also began during the first Iceland residencies in 2016 (this is discussed further below).

3.3.1 WRITING RESIDENCY ICELAND

A writing residency at ‘Vatnasfn / Library of Water’, Iceland, was made in April 2019 in order to continue exploration of ‘geographic light’. This residency focused on writing

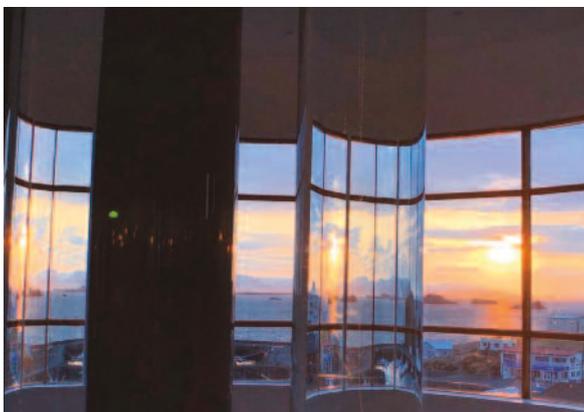


Fig. 90: Left: View from **Vatnasafn/Library of Water**, Stykkisholmur, Iceland, April 2019

Fig. 91: Right: **Jo Joelson** during artist residency at Vatnasafn/Library of Water 2019 Photos Jo Joelson

as art practice based on the geography of place, an approach studied in the work of other artists and writers such as Roni Horn, Nancy Campbell, Robert Smithson, William Morris, Rebecca Solnit, Eileen Myles and others. The residency at Vatnasafn directly engaged with the work of Roni Horn through the Library of Water and the residency programme (both of which were initiated by Horn and produced by UK-based Artangel) as well as through her writing, which has documented her regular returns to Iceland to undertake a number of field trips. Not unlike Horn's work, the writing residency was an opportunity to focus on an abiding concern with language and material, illumination and reflection, the elusive nature of light and its vocabulary connected to place and practice. The residency involved introspection and observation – observing and writing about light and image-making to record the light and its daily rhythms. It also involved dialogue with local people to explore historic and contemporary instances of the impact of light on people and locale – from its symbolism within religion and religious ritual, to the impact of volcanic eruptions on the natural environment and atmospheric conditions.

3.3.2 FILM AS RESEARCH - ICELAND SKAFTFELL CENTER FOR VISUAL ARTS

Film as research has been an approach followed in order to document some of the activity during residencies and fieldwork, including participatory video and visual ethnography. It is a process of gathering data which has a spontaneous quality, can capture thinking in process and be used as critical reflection as well as serving as a valuable reflexive tool for research. This approach was used by London Fieldworks to capture participation and to give voice to participants and research subjects. The use of film or videography as research is also demonstrated in the practice and works of artists / filmmakers: such as Nancy Holt, Luke Fowler, and Ben Rivers, who explore a very particular combination of landscape, ethnographic, documentary and fictional elements.



Fig. 92: Still of Skafffell Center for Visual Art, Seydisfjörður, Iceland
from 'The Darkest Day' film by London Fieldworks (2017/18) courtesy London Fieldworks

In summer and winter 2016, a residency at the Skaftfell Center for Visual Arts, Iceland, facilitated research and new filmmaking in response to the extremes of light and dark and the ways they are experienced personally, socially and culturally in the remote town and community of Seyðisfjörður, east Iceland. The residency engaged with ecology, the environment and people, aiming to identify and express local ways of knowing within the context of summer light and winter darkness.

The residency was divided into two parts. Part one took place in August and involved researching contexts and finding potential collaborators/participants, experimenting with film ideas and sharing process with the local community and a wider globally dispersed audience via live streaming. This research and process was built on during part two of the residency. With portable equipment, recording and editing facilities, we were able to operate with little more than a power supply and wi-fi. Based at Hóll, the Birgir Andresson residency provided another layer and interesting context for the project since Birgir Andresson (1955-2007) was an Icelandic artist whose parents were both blind and he spent his childhood living in an institution for the blind in Reykjavik. According to his friends the habit of describing things for his parents made him conscious about form and colours, light and dark, and this was reflected in his artworks. Staying in Andresson's house we were able to think about absence and the disappearance of light in the winter months. Experiments were devised to capture the various shadows that edged around the exterior of the house and through the interior before the 'blue hour' arrived. Mapping shadows, capturing temporal effects through hourly shifts in solar orientation, was an activity conducted whenever the sunlight was strong enough. Light was captured over long periods using large-format time-lapse stills photography, edited later as sequences.

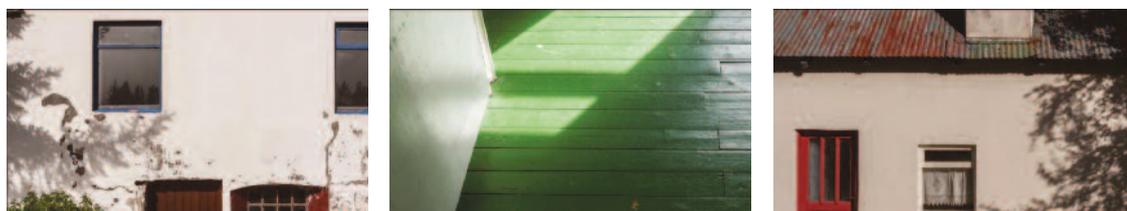


Fig. 93: Video stills from 'Holl' from the exhibition **Short Films about Light and Dark**, Seydisfjörður, 2017
courtesy London Fieldworks

The event "Short Films about Light and Dark" was presented in a gallery space in Seyðisfjörður at the end of the summer residency in 2016, with an artist talk and the projection of our short film works. Returning at the beginning of December 2016 we reconnected with local artist and musician Jokull and made a film in one day on the winter solstice, which was also Jokull's birthday. The approach to the making of this film was spontaneous in that we had invited Jokull to work with us and had arranged a party for him in the local bar in the evening but otherwise we worked with a range of equipment and followed him around, filming his movements and work over the period of the day. The film *The Darkest Day* was edited on returning to London and eventually screened at the Seyðisfjörður Festival of Light in 2017.

As well as image-making, a number of interviews were conducted with local residents to collect anecdotal evidence about the extreme bi-annual patterns of light and dark.

Some of the questions were informed by research and some were spontaneous. The interviews were recorded and provided information about local patterns of behaviour, perceptions, traditions, celebrations, events and festivals relating to the extremes of light and dark experienced in Seyðisfjörður, east Iceland. By reflecting on these interviews two things became clear, firstly that light and the patterns of light and dark have a significant impact on people’s lives and are responsible for shaping social rhythms and cultural practices, and secondly a vocabulary of light specific to the locale began to emerge through these conversations and this led to further understanding of the local impact of light and dark.



Fig. 94: Video stills from ‘The Darkest Day’ film by London Fieldworks shot in Seyðisfjörður, Iceland (2017/18) courtesy London Fieldworks

The impact of the surrounding mountains on the lived experience of light in the community was discussed many times during conversations with local residents. In the winter months the sun does not rise above the mountains that encircle the town and so remains completely out of sight, the weak available light only being increased if there is a snowfall. In the summer months, when Reykjavik experiences almost 24-hour daylight, the sun has already disappeared behind the mountains by the time people return home from work. Responding to this situation, a local pressure group called Samtök um sólríkara samfélag (Association for a Sunnier Society) proposed a bill to institute ‘super-summertime’ to re-introduce daylight savings (previously in effect in Iceland from 1917 to 1918 and again from 1939 to 1968). Since 1968 the clocks have not been set back after the summer and so Iceland remains one hour ahead of what is considered to be its actual time zone. This bill was rejected by the Althingi parliament which also did not accept the campaign. There were also local discussions about the disappearing light of dusk and the feeling of time being suspended that characterise the town in autumn with its dramatic loss of daylight. Local artists described this loss: “Each day in October has eight minutes less daylight than the one before. The sun is slower each day to crest the mountains which ring the fjord, until mid-November when it no longer rises above the mountains, and the town



Fig. 95: Video stills from Interviews with Seyðisfjörður residents, during residency at Skaffell Center for Visual Arts, Iceland (2017) courtesy Jo Joelson

experiences only indirect light until February” (Friz and Korabiewski, 2014). The cold, dark days keep people indoors most of the time. Local designer Sesselja Hlin Jonasard talked about the nostalgic feeling that comes with winter darkness, how life is simpler, with widespread use of candles in the home during this time and the intimacy this creates. Local librarian Sólveig Sigurðardóttir talked about the annual cultural festival Dagar Myrkurs (Days of Darkness), a celebration of the arrival of winter which is held during the first two weeks of November, when local residents gather to embrace the increasingly long winter nights as the sun disappears behind the mountains. All lights in the town are switched off for the torch parade which winds its way around the town whilst people take it in turns to tell ghost stories. Various other events take place as well and include a bread-baking class, artists opening their studios and workshops to the public and usually a grand finale: the Northern Lights party.

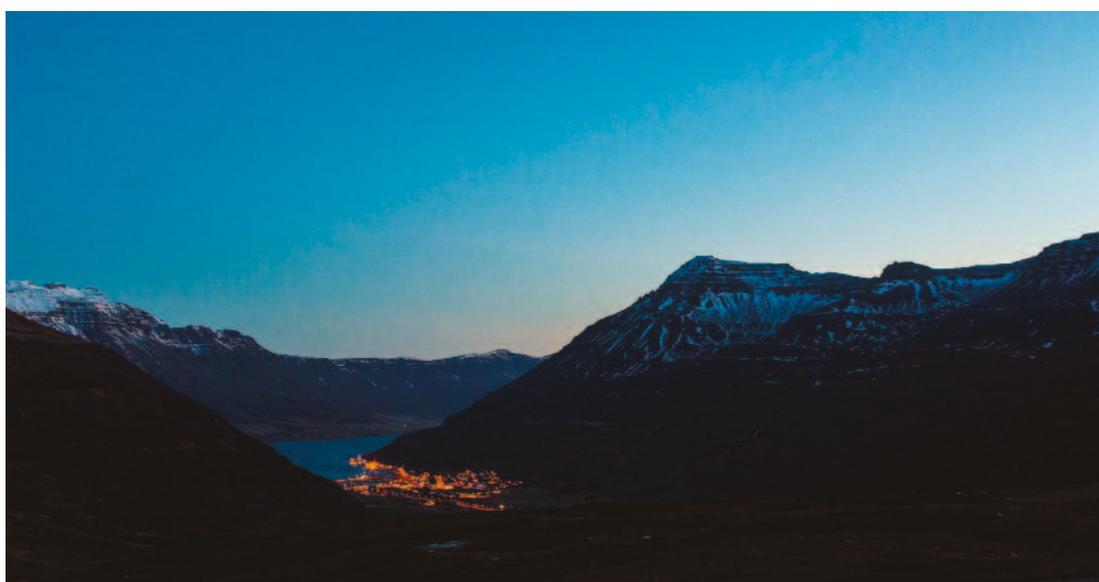


Fig. 96: Video still from **'The Darkest Day'** film by London Fieldworks shot in Seydisfjörður, Iceland (2017/18) courtesy London Fieldworks

When local artist Jökull Snær Þórðarson was asked to think about winter, reflecting he said, “The harsher the season, the more alive we are.” But it is not all about darkness, for Icelandic winter twilight envelops everything in shifting shades of blue. This time between night and day is called “the blue hour”, where the colour of the town and the mountains reflects the sky above – a surreal scene in which the only colour that exists is blue, a shade that shifts the world into a state that is neither quite awake nor asleep. The ‘blue hour’ is not so much an hour as a period of twilight, and occurs right before night and its blackness begins.

An encounter with ‘the blue hour’ is described by the photographer and Skafffell artist in residence Jessica Auer who captured it on photographic film and recalls:

My first morning in Iceland, I alternated between each of the seven windows of my studio apartment, craning my neck to look up the valley, down the fjord, up the mountain slopes and around all the other houses. It was 10am and the morning light maintained a

dark deep blue. As the day carried on, the sun never broke the mountains, but circled around the peaks – gracing only the tops of the opposing ridges with direct light. I was told that the sun would only find the town again in February (Auer, 2016).

Just as the long winter days are welcomed, the return of the sun three long months later to the deep fjord on 20th February is greeted with *sólarkaffi*, when family and friends get together for coffee and pancakes with cream, jam and sugar. From then on, the days get longer until mid-summer, and the fjord is illuminated in the midnight sun.

These interactions helped to build understanding of the local environment and to develop a vocabulary of light which included the categorisation of light specific to day and night (astronomical twilight, nautical twilight, civil twilight and direct sunlight) along with cultural, social and personal references such as: days of darkness, the darkest day, mourning light, nostalgic light, remote light, the blue hour, super-summertime, *sólarkaffi*, lightless, eternal night.

This emerging vocabulary has advanced ways of thinking about light and darkness in artists' practice by way of its impact on the perception of time, and its personal and societal impact. Significant perhaps is the development of a vocabulary of light specific to place. This identification of vocabulary continued throughout the interview process conducted for the book – but this time it was vocabulary specific to individual creative practices that used the medium of light (most often artificial). The next stage in deciphering the vocabulary involved ascribing meaning to each of the qualities.

3.4 SUMMARY – ARTIST / CURATORIAL PROJECTS

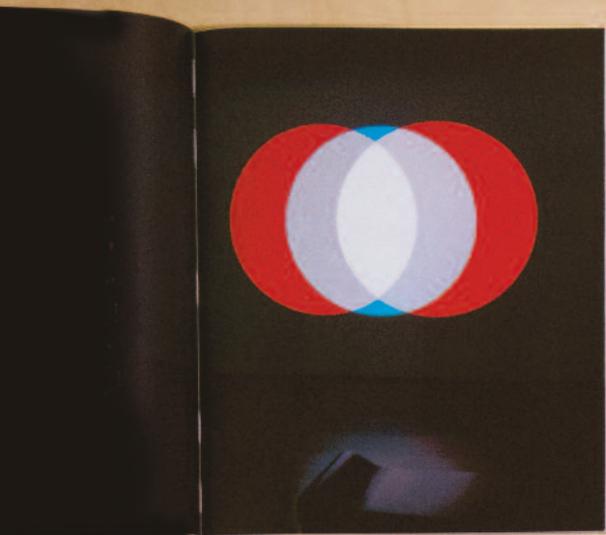
In considering artist–curatorial practice, various smaller projects have also been undertaken in which research has been disseminated publicly. These projects became satellites to the central production of the *Library of Light* book, extending the research for the creative medium of light through a dialogic approach.

In summary, the production of a series of three radio programmes – **Collaborations in Light and Sound** – could be considered as a non-material and discursive means of 'exhibition' for work that is mostly performance- or time-based. Using radio to transmit dialogues about light and sound-based art practice seems a wholly appropriate medium given that radio waves are electromagnetic radiation but just not visible, as light is. On a practical level, the features on artists and their collaborations with musicians worked well on radio precisely because it is a picture-inducing medium, whilst taking on the role of programme-maker or context-creator without having any images to rely on forces one to work harder, to engage with the back story, the purpose and process behind the final works being discussed. Radio has been understood as an art-form for decades now and Resonance FM, the radio station that broadcasts the programmes on, "strongly identifies with and super-serves London's creative and artistic community" (Resonance FM, website 2019). Through interviews, the programmes demonstrated varying approaches to working with light and sound using improvisatory live performative contexts from the 1960s to the present. These

practices include contexts as diverse as the liquid light shows of the psychedelic era (1960s to 1970s), 1970s punk rock, stadium rock and industrial light and sound in the 1980s and '90s, and the digital realm of live video and sound performance / contemporary light and sound practices of the 2000s. Each programme covered a different aesthetic sensibility or related one practitioner to another, such as the Joshua Light Show and Willie Williams, whose work occupies different aesthetic territory but which demonstrated how stadium rock lighting relates to its early beginnings in the liquid light shows. The third programme, recorded in Iceland, was the most poetic and examined reflecting on light and sound within art, literature and song in projects by three Icelandic practitioners, artists, writers, or musicians. In two of the interviews, artists (Ragnar Helgi Ólafsson and Karlotta Blöndal) read from their published books and this material was underscored and interspersed musically. The programmes had hybrid formats, part interview, part performance, giving a sense of both the process involved in creating the works and sharing sound-related material from the works produced. The programmes also provided material towards the Geographic Light research (also summarised below) in which practitioners who were inspired by place and the impact of the extremes of light and dark and inspired to create art in response.

The Iceland residencies, of which there were a total of four between 2016 and 2019 were themed around researching Geographic Light and involved a number of approaches including fieldwork and interviews, writing and filmmaking. The idea of light specific to place could be considered subjective, unless it is recorded scientifically, although its effect on people, the land and the everyday activities of a community are tangible as was evidenced in all the recorded dialogues; in this way the subject of light becomes significant as part of local knowledge. The residency as a model provides a good context in which to be responsive to a given situation over time and therefore these projects have attempted to capture not just the physical properties of light but something of its affective nature and the way this is embedded within the local culture. In consequence it has therefore been interesting to reflect on the ways in which light has been captured or mediated through personal artist-curatorial methods in order to create a portrait of place. These methods have included: recording natural light phenomena as data in the project 'Polaria' and re-presenting it within an artificial light-based installation; conducting interviews with local residents to record light-specific vocabulary; recording oral histories and narratives relating to the local environment in order to inspire content for the creation of works; observing and documenting the light in a specific place through writing; documenting light photographically and on video.

Each of the recent projects should be considered discursive and as having made a contribution to knowledge which has been helpful in shaping and further developing the research narrative for the ontology and book. Whilst Geographic Light was not used as a category in the ontology it is nevertheless a stimulating field for future research which can expand the research into broader cultural contexts.



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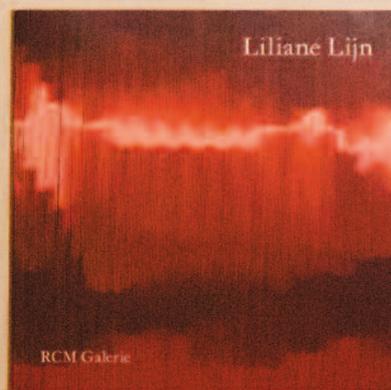


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CHAPTER 4

An Ontology Of Artists' Practices With Light

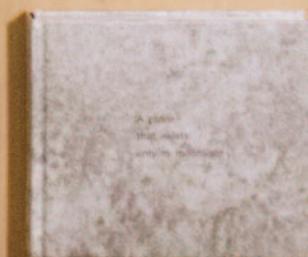
- 4.1 Introduction
- 4.2 Political Light
- 4.3 Mediating Light
- 4.4 Performance Light
- 4.5 Absent Light
- 4.6 Summary



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- 1. Susan Hiller: Magic Lantern 1987
- 2. Gustav Metzger: Decades 1959-2009
- 3. Iván Navarro: White Electric Chair 2006
- 4. Mark Boyle: From a Sensual Laboratory Photos by John Claxton 1970
- 5. Joshua Light Show: Portrait of Joshua White 1969
- 6. For a Partnership Society: Haroon Mirza 2018
- 7. Liliane Lijn: Early Work, RCM Galerie 2015
- 8. Anthony McCall: Lismore Castle Arts 2017
- 9. Katie Paterson: A Place That Exists only in Moonlight 2019

Fig. 97: Publications, Catalogues & Leaflets

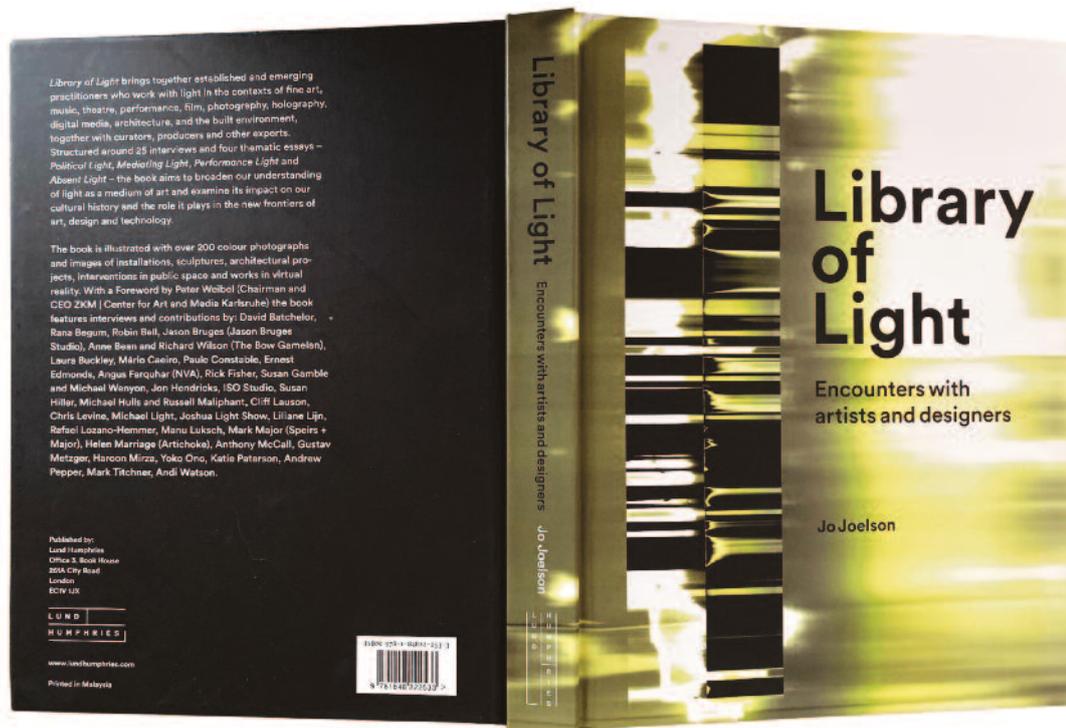


Fig. 98: *Library of Light* book by Jo Joelson published by Lund Humphries, London (2019)

4.1 INTRODUCTION

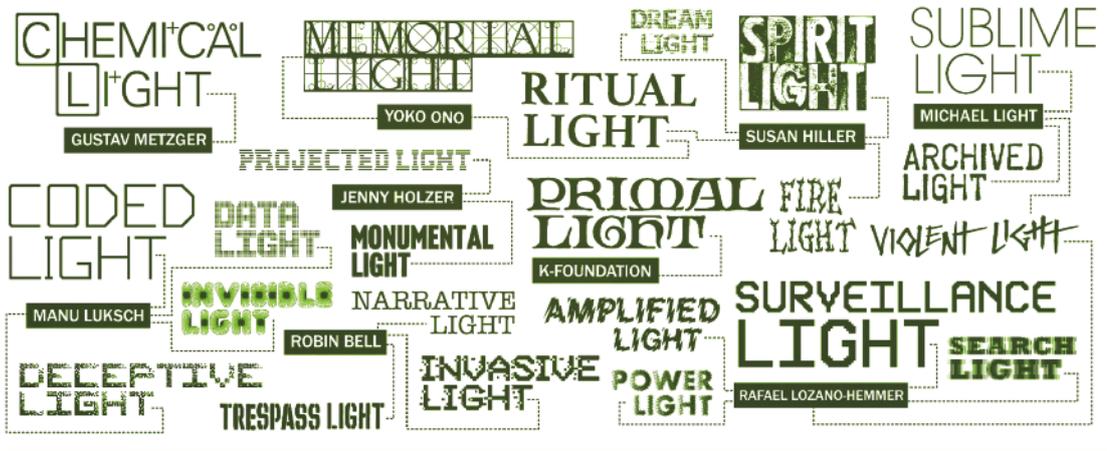
This chapter introduces the Ontology of Artists' Practices with Light developed for the *Library of Light* book publication at the centre of the research framework. Both the Contextual Review and many aspects of my art practice fed into the development of the ontology, for example, the vocabulary and language described in section 3.3. Geographic Light. The primary method involved in the development of the ontology involved conducting 30 interviews with artists, designers, curators, producers and others in an effort to identify distinctive vocabularies within the diverse range of practices. Throughout this process, through the transcription of interviews and the editing process and by assessing the language used by individual practitioners, a vocabulary of light emerged, identifying and naming different qualities of light. The process of establishing a light vocabulary also helped with creating thematical clusters. It is therefore it is within this ontology that a 'language of light' is revealed. Extracts taken from the four essays written for the book, including sections quoted from the practitioner interviews, locate the terms they use and places them in relation to specific modes of practice, disciplinary areas and fields of interest and expertise. Practitioners working across fields and disciplines over the course of their career is evidence that the language of light and vocabulary needs to support this. The typographic included below demonstrates the process involved in mapping the vocabulary across practices and ascribing meaning to each of the qualities of light.

As interviews led to more interviews, categories formed and themes of relevance and importance emerged. A mistrust of definitive categorical distinctions created the impetus to look for the strongest associations and correspondences between practices and how these related to art and performance history.

4.2 LIGHT TYPOGRAPHIC

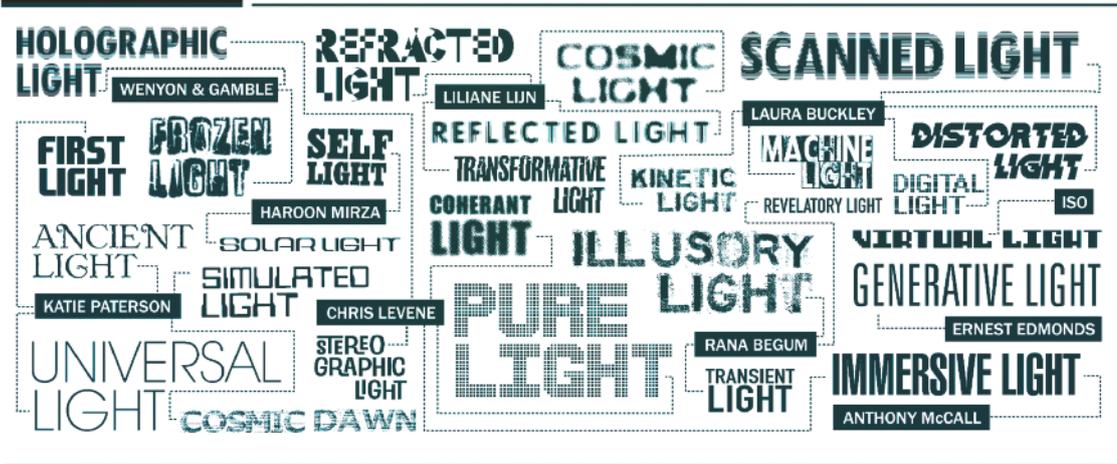
POLITICAL LIGHT

LIGHT USED TO MAKE A POLITICAL STATEMENT OR TRANSMIT A MESSAGE, OR REGULATED/CONTROLLED BY THOSE IN POWER



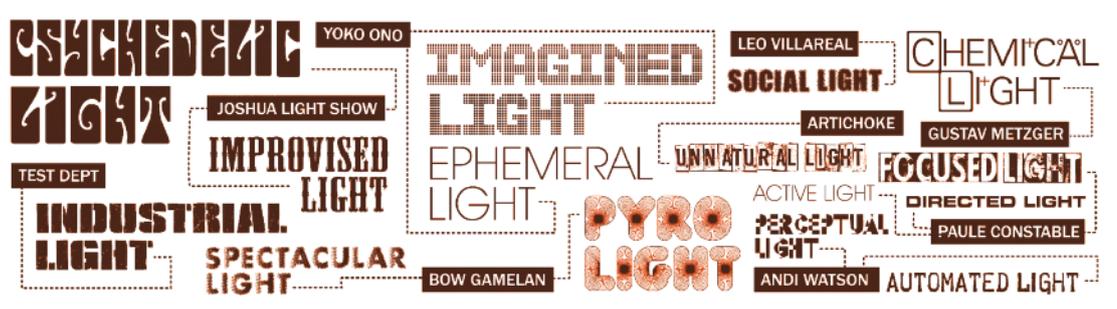
MEDIATING LIGHT

USING VARIOUS MEDIA, TECHNOLOGIES AND TECHNIQUES, TO CAPTURE, MODULATE AND MEDIATE LIGHT



PERFORMANCE LIGHT

LIGHT IN PERFORMANCE ENVIRONMENTS, THEATRE, MUSIC, FESTIVALS, OUTDOOR EVENTS AND URBAN CONTEXTS



ABSENT LIGHT

CREATIVE PRACTICE ENGAGING WITH DARKNESS



Fig 99: Light Typographic Artwork by Ian 'Swifty' Swift (2020)

These cycles of inquiry were productive, yielding insights which led to a body of knowledge that informed section headings in the book and themes around which to construct the writing. Ideas for texts and the shape of the book as a whole then began to find form. The semi-structured interviews offered a balance between the flexibility of an open-ended interview and the focus of a structured ethnographic survey, uncovering rich oral information on the personal processes, methodologies and experiences of light-based art-making by participants. The interviews were then transcribed and edited for publication. The material gathered gave insights into light practice which were used to develop preliminary hypotheses, explain relationships and create a foundation for further research. The role of the book became a way to collect and utilise ideas from discussions productively, prompting another round of research to produce a series of texts. The interviews were organised into the following sections, each with an introductory essay:

SECTION 1: **Political Light** considers political and provocative uses of primal and mechanical light, from fire to projected light.

SECTION 2: **Mediating Light** examines practices employing a variety of media and techniques to capture, modulate and mediate light, including holography and virtual reality and the challenges new technologies bring to the field.

SECTION 3: **Performance Light** discusses light in performative contexts for theatre, music, large-scale outdoor events and festival contexts and as a medium of urbanity.

SECTION 4: **Absent Light** draws together evidence about the duality of darkness and light in practices, the importance of darkness in the context of light and some of the social interpretations of light's absence.

The following sections are extracted from the book with some adaptations to the original essays and additional material included for the thesis.

4.3 POLITICAL LIGHT

Within a fast-developing global landscape, light and its uses are often political and bring the ethical and moral use of light into question, from seduction and superficiality to light's destructive power. Political light art can be consciousness-raising, critiquing the world of commodities, status and power. This section aims to locate and examine the various ways in which artists use light to engage and challenge social codes, political and economic realities.

Light as a means of symbolic and direct communication is replete within our visual and auditory landscapes. Projected light and the video signal have over the decades become a device for artists and artworks. In particular, the application of video and light projection in public spaces has emerged as a medium for activists, as a temporal statement. One of the earliest examples of light's use as a device for activism in art is in the work of the artist Jenny Holzer. Her synthesis of light and

language has utilised powerful projectors and large-format film to project declassified government documents on the subjects of interrogation, detention, torture and surveillance on to buildings in New York, including the facade of America's National Security Archive (2004). Holzer's early use of electronic message boards was a response to her increased awareness of language and voice as tools of patrimonial control. In March 1982, sponsored by the New York Public Art Fund, Holzer posted her 'Truisms' on to the large Spectacolor electric lightboard in Times Square. This was the world's first computer-programmed message board, of the type ordinarily for commercial use, but in the case of Holzer's 'Truisms' utterly transforming its context. Holzer's recent focus on serious gun crime in the US has seen her deploy a series of vehicles in the streets carrying projected texts such as "IT IS GUNS", a political use of messages in the public realm, light as an immediate form of communication.

The use of light to 're-message' public space, via buildings, takes on a different relation to temporality in the work of Washington-based multimedia artist Robin Bell, whose 'guerrilla' projects employ light as a most elusive medium and a tool for

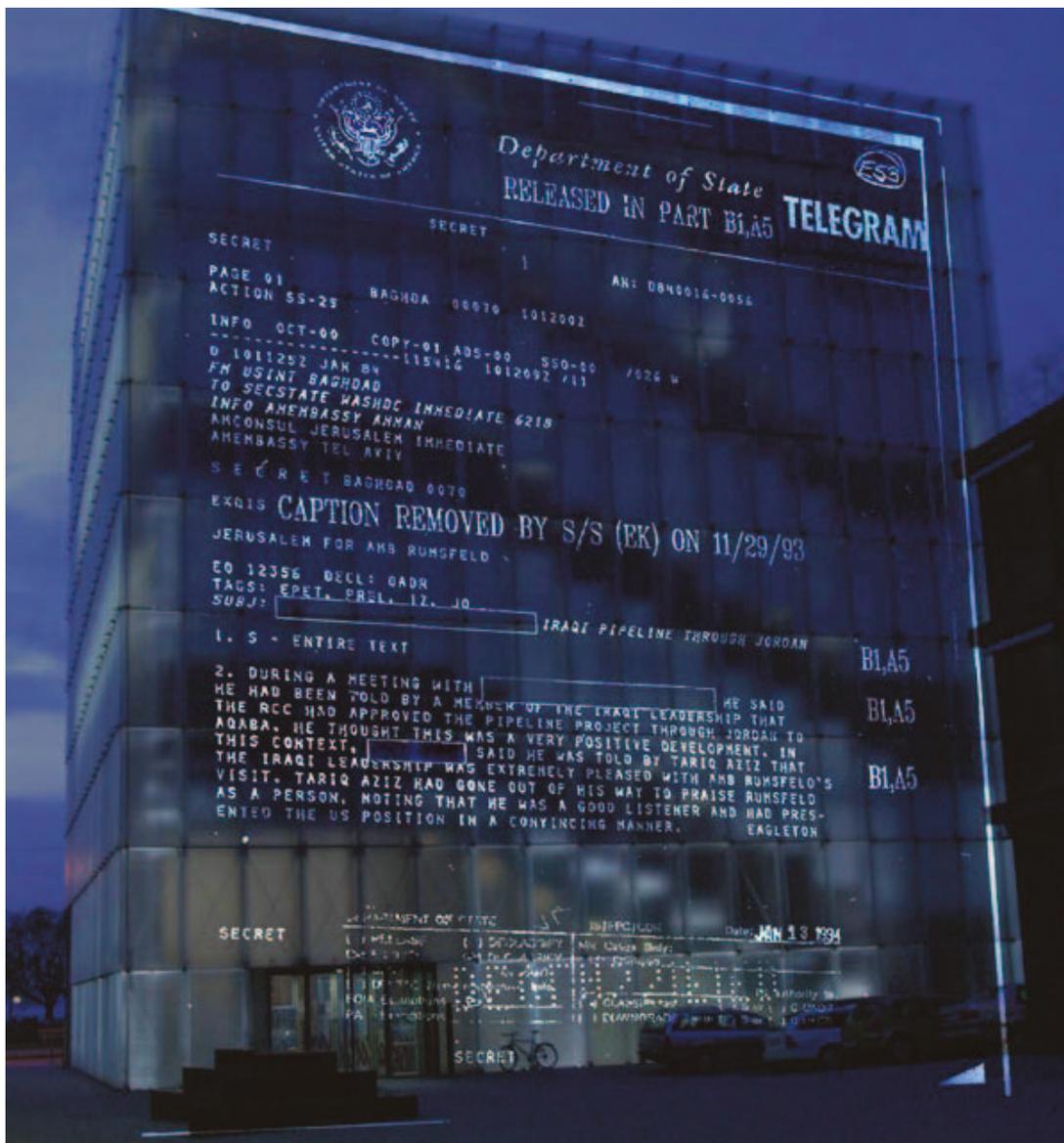


Fig. 100: Jenny Holzer 'Xenon for Bregenz. Truth Before Power' (2004) Photo courtesy Sprueth Magers

political change. Bell uses light fleetingly and literally to illuminate and engage the public in current political issues. Deploying high-power projectors, stationed on a specially equipped van, Bell projects factual statements and commentary directly on to significantly relevant buildings; these site-specific works are often injected with humour to bring a sense of hope to difficult issues. Because of the constraints imposed by the policing of public space, the projections often only appear for 10 to 15 minutes. When in August 2017 Bell projected: “THE PRESIDENT OF THE UNITED STATES IS A KNOWN RACIST AND A NAZI SYMPATHIZER” and “WE ARE ALL RESPONSIBLE TO STAND UP TO END WHITE SUPREMACY” on to the facade of President Trump’s hotel as a response to Trump’s refusal to address the violence of fascists in Charlottesville, it took just 10 minutes for security guards to block out the light. By then, however, the images were posted on social media and had gone viral. The use of social media in getting the message out to a global audience demonstrates the speed and reach of this approach.

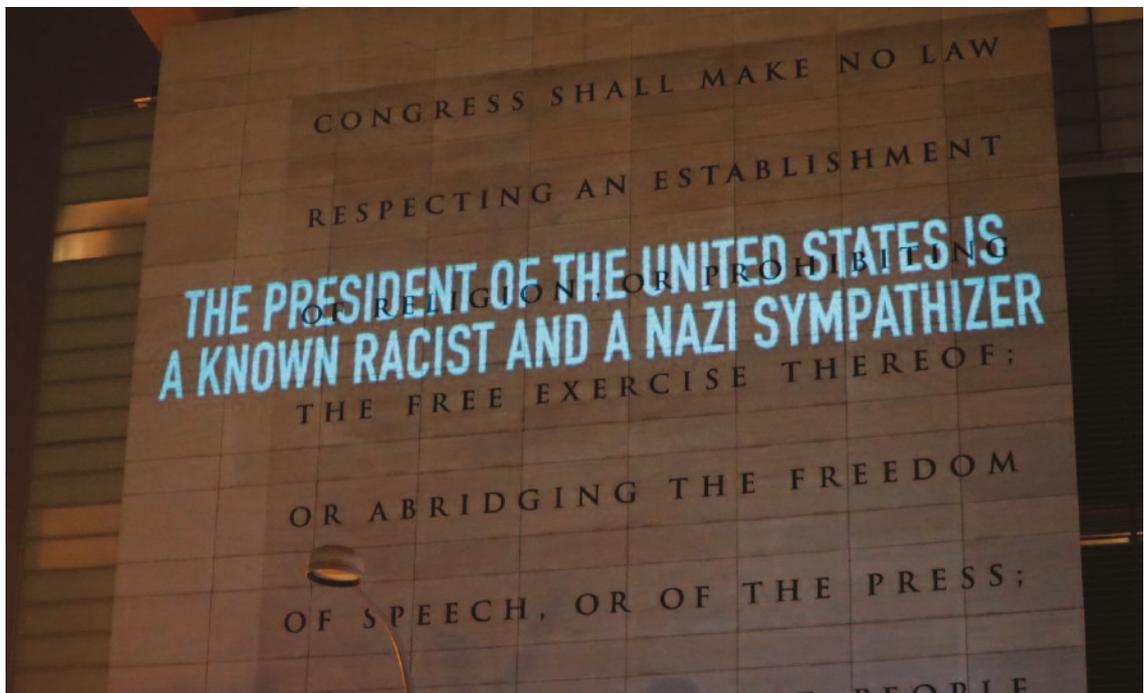


Fig. 101: **Robin Bell** 'The President of the United States Is a Known Racist and Nazi Sympathiser' (2017)
Digital 100ft video projection, Newseum, Washington DC, Photo Liz Gorman, courtesy Bell Visuals

A question was raised almost immediately in the *Washington Post* about whether this projection was a case of ‘light trespass’ and whether it constituted a criminal offence. Light trespass usually concerns the ‘trespassory’ effects of ambient light, which by definition is “a legitimate use of light on a nearby property”. It could be that the projected beam of light is tangible and can therefore be said to ‘invade’ property. However, Bell’s action was proved not to be illegal. When the ‘light trespass’ law in the US was originally passed it was well before any knowledge of the concept of light as being ‘invasive’ in the way we know today. If new laws are introduced to prevent ‘the invasion’ of these ‘new’ light sources on to another’s property, it would potentially sweep up the actions of artists using light in public spaces, and constitute a further method for restricting freedom of speech.

Dissent is under threat in this country and we've been fortunate enough to have found a medium that's been very effective, without finding ourselves in a lot of trouble. The worst thing that can happen right now is that people and artists are silent. So what we're constantly trying to do with light projections is to make something powerful: not dogmatic but factual so that it can be something we feel good about, that people who see it feel good about, empowered even. So I guess that goes back to my idea of seeing our work as being positive – we're respecting the light and using it in the right way (Bell, 2017).



Fig. 102: **Robin Bell** 'Pay Trump Bribes Here' (2017) Digital 75ft video projection, Trump Hotel, Washington DC
Photo Liz Gorman, courtesy Bell Visuals

The work of The Illuminator, the New York-based Political Projection Collective, has also been gaining attention through social media platforms such as Instagram. They have also created a manual for urban projection on their website on behalf of the Center for Urban Intervention Research at Carnegie Mellon. This includes guides on the equipment to use and how design philosophy can help in creating guerrilla projections:

Guerrilla projections have become a popular, practical and sometimes spectacular way to put forward a political message. Whether it be virtually re-installing a labor mural in Maine, tagging a state capitol building with a "for sale" sign in Wisconsin, or throwing up a "Bat Signal" on the Verizon building in NYC, projections have proven to be an effective and often inexpensive way to broadcast inspirational ideas and enhance planned actions (theilluminator.org).

Searchlights have always had political connotations and particularly so since their cultural exploitation by the architect Albert Speer for the Nuremberg rallies, while more recently they have been employed by artists as a readily accessible and powerful tool for activating public space. A powerful source of illumination, searchlights have the capacity to make bold statements that can appear in the night sky and cut through urban light pollution.

Notable recent works using searchlights include: the 'Tribute in Light', an annual commemoration of the 9/11 attacks on the World Trade Center produced by the Municipal Art Society in New York, involving 88 search lights configured into two 48-foot squares, installed on top of the Battery Parking Garage to represent the twin towers and lives lost – the beams of light occupying the empty space left by the destruction of the towers. Searchlights have also been used in artworks in remote locations such as for 'Peace Tower' in Iceland, artist Yoko Ono's memorial to John Lennon constructed from sky-pointing search lights on Videy Island, near Reykjavik. Another example is the recently conceived project 'Border Tuner' by the artist Rafael Lozano-Hemmer in which searchlights are used to make bridges across the El Paso-Juarez sky so that residents on both sides of the border between Mexico and the US can communicate and listen to each other.

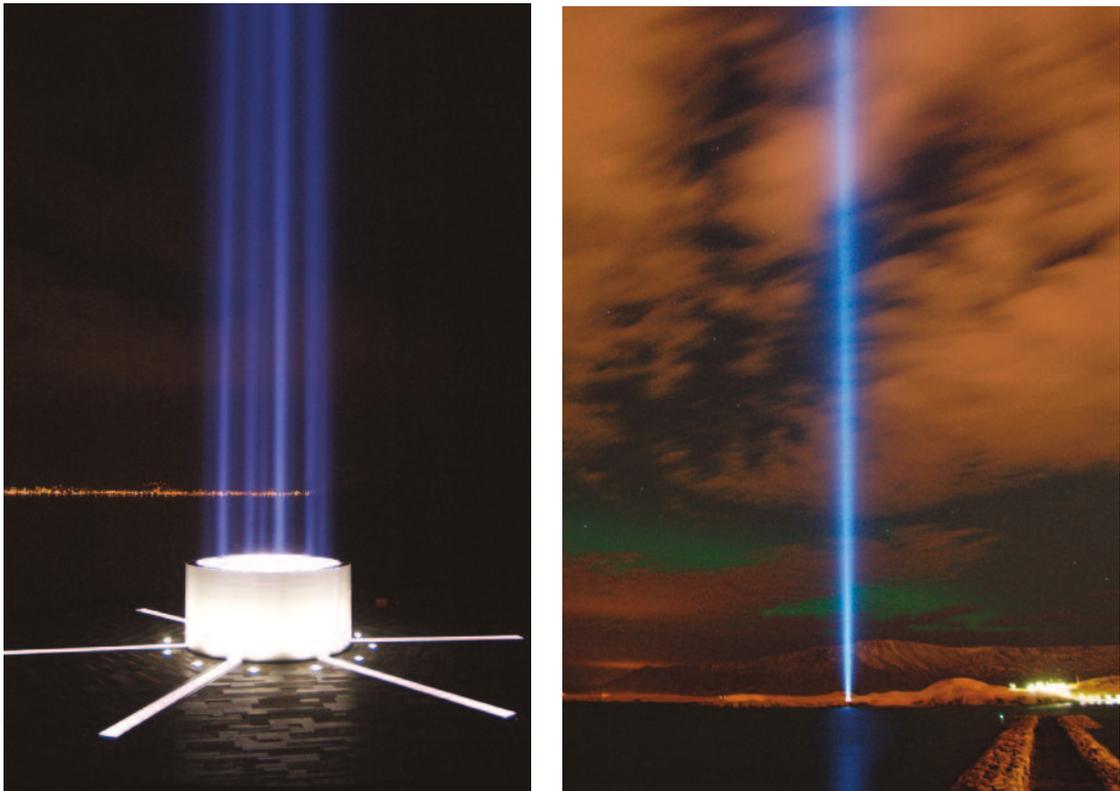


Fig. 103/104: **Yoko Ono** 'Imagine Peace Tower, Videy Island, Reykjavik (2007 - ongoing)
Photo TetsuTo Hamada ©Yoko Ono, courtesy Yoko Ono

Lozano-Hemmer, who lives in Montreal, explained how residents could participate:

The idea is to create bridges of light using powerful searchlights... that actually send the voice of people across the US-Mexico border. When you arrive, you'll have a microphone, a speaker, and you'll have a little tuning dial. When you turn the tuning dial, the searchlights scan the horizon of the other country... When my light and your light intersect in mid-air, the computer knows it and automatically opens a direct channel of communication so that now you can hear me and I can hear you... the idea of tuning, of listening to others, is exactly what we need at this time: politically and culturally. The symbolism of using the technology of light to transmit voices is such that you as an individual are being seen and heard. Your voice is a bridge to connect the two countries (Pracht, 2019).

In developing this project Lozano-Hemmer wanted to avoid the use of searchlights as spectacle and instead use them to create a project about intimacy and connection. He also describes wanting to put the control in the hands of the participating communities, to create an alternative narrative to that of the border wall, instead “a world of coexistence, interdependence, and a world where community brings together people in a way that is really a beautiful example for the rest of the world” (Pracht, 2019). His previous art projects also make use of searchlights and other ‘powerful electronics and include ‘The Trace’ (1995), ‘Vectorial Elevation’ (1999), ‘Amodal Suspension’ & ‘1000 Platitudes’ (2003), and ‘Pulse Corniche’ (2015).



Fig. 105: **Rafael Lozano - Hemmer** ‘Voz Alta, Relational Architecture 15’
Memorial for the Tlatelco Student Massacre, Mexico City (2008) Photo by Antimodular Research.

The way in which city planning is designed to prevent assembly and the expression of individuals is something that has concerned Lozano-Hemmer in past works, and his response to this has been to use light to amplify the individual voice and participation to an urban scale. The work ‘Voz Alta’ (2008; translated as ‘Aloud’) used searchlights to amplify the voice in a coded public message, for the 40th anniversary of the 1968 massacre of the students at Tlatelolco, Mexico City. The genesis of this memorial work was the killing by the state militia of around 300 students which took place ten days before the Olympics were due to begin in Mexico City. All trace of the slaughter was removed from the plaza that night, and the media were complicit so none of it was reported. For about 30 years it was taboo to make any mention of what had happened. Later, when the site was taken over by the National Autonomous University of Mexico and a memorial museum was built Lozano-Hemmer was invited to make a work in memory of the students who were killed.

In this work, members of the public could stand on the site of the massacre and speak into a megaphone, which had been modified to encode their voices into flashes of light and a powerful searchlight beamed on to the Ministry of Foreign Affairs thereby functioning as a signalling device to convey a message. The project also converted the voices of participants into FM radio broadcasts so that when the public saw the flashing lights in the night sky, if they simultaneously tuned their radio to 96.1FM they could also listen to what the people were saying – a kind of synchrony. Lozano-Hemmer talks about the importance and significance of the intervention not only in public space but through the media – the same media that had been so complicit in the original massacre in 1968. On this occasion, however, the survivors and witnesses were able to give their unmediated accounts, no longer as spectators or onlookers but as people on the inside speaking out.



Fig. 106: **Rafael Lozano-Hemmer** 'Voz Alta, Relational Architecture 15'
Memorial for the Tlatelolco student massacre, Mexico City (2008) Photo Antimodular Research.

This shifting perspective about what is permitted in 'public space' is exemplified in the constant monitoring in our cities through CCTV, the systems for which often use infra-red technology or 'invisible lighting' since they are designed to be covert. In this situation light exposes us, and the relationship between cameras and light in the security industry takes on a significance akin to cinematography or photography, although to entirely contrary ends. CCTV cameras are omnipresent, with their numbers increasing rapidly in public and private spheres, and combined with other data collection methods and AI we are facing ever greater levels of intrusion.

In the work of Austrian filmmaker Manu Luksch and explicitly in her film *Faceless*, the use of CCTV technology and CCTV images was explored when, in 2001, the European legislation on data protection was implemented in British law – granting the individual

citizen rights to view personal data. Luksch seized on this opportunity, as she saw it, to “hack the surveillance society, to tease images out of the closed circuit”. She duly approached companies that had installed CCTV cameras, claiming her right to her image data. When Luksch received the CCTV video material she found that the faces of third parties had been obscured – blacked out – something she hadn’t anticipated. It turned out that the CCTV operators had a duty to protect the identities of third parties and the *de facto* method was to obscure faces using black ellipses. *Faceless* (2007) was made entirely from imagery captured by public and corporate-controlled CCTV cameras in the UK, and Luksch’s film documents a woman trying to escape from the “perpetually administered present of ‘Realtime’”. Luksch reflects on the medium, not simply as video or even captured light, but rather as “images with a legal superstructure”.



Fig. 107: **Manu Luksch** Film stills from: ‘Faceless, AT/UK’ (2007)
 Narrated by Tilda Swinton, soundtrack by Mukul, Photo courtesy Manu Luksch

4.4 MEDIATING LIGHT

This section draws on dialogues with artists and designers working with a variety of media and techniques to capture, modulate and mediate light, including holography and virtual reality and examines the challenges new technologies bring to the field. It considers how light as a medium of information has infiltrated the everyday, and everything we know through light, and in relation to this how practice contributes to the ways we think about, experience and perceive light. As our connections to

technology deepen, the materiality of three-dimensional space is translated into the two-dimensional interface of 'the screen' – a screen that operates as a portal – the realm of the 'lost dimension' as described by Paul Virilio in 1984. Manufactured light is now at the service of, and embedded within, everyday media, and so light becomes implicit – illuminated pixels are composing the images of new media; consequently, artists working with new technologies are unintentionally working with 'light' even if we no longer register its efficacy. Light is then both the presence of the world and begins to fall away through its ubiquitous influence in so many contexts – perhaps this explains something of the ongoing fascination and investigation of light by artists and designers, a medium often entwined with the illusions of progress in science and technology. And yet as one new technology is adopted another is made obsolete.

Human perception has been adapting ever since instruments began to reinforce the act of observing. As 'big science' and modern scientific thinking marked the transition from natural philosophy and naked-eye observation at the turn of the 20th century – when atoms and electrons were made visible as mediated by machines – it was inevitable that human vision would lose its primacy. With the development of optical devices such as the lens, telescope and microscope, so the perceptual reach of the eye extended. As science became increasingly dependent on instrumentation and technological simulation, a distancing between the scientist and natural phenomena occurred, in conjunction with an acceptance of the passage from vision to visualisation.

In *Slow Manifesto*, the published blog entries of the architect Lebbeus Woods, he describes his long-held belief "that light does not reveal the presence of objects, but the other way around: objects reveal the presence of light". In shifting the emphasis, the perception of light becomes central to the subtle distinctions the brain makes between shape, edge, texture, colour, shadow and highlight. That light is capable of revelation and deception shows the degree to which it is mediating our vision, determining our everyday experiences and understanding of the world – the more nuanced the simulation, the more it seems the brain is asked to interpret.

Had a transcendental storm of colour vision today on the bus going to Marseilles. We ran through a long avenue of trees and I closed my eyes against the setting sun. An overwhelming flood of intensely bright patterns in supernatural colours exploded behind my eyelids: a multi-dimensional kaleidoscope whirling out through space. I was swept out of time. I was out in a world of infinite number. The vision stopped abruptly as we left the trees. Was that a vision? What happened to me? (Gysin, 1958).

Brion Gysin later found out, when reading W. Grey Walter's *The Living Brain*, that this 'vision' he had experienced was brought on by being subjected to the effect of natural flicker created by the sun whose light had been interrupted by the evenly spaced trees he was racing past on the bus. From this point on Gysin's work shifted in significant ways, and he went on to invent the 'Dreamachine' with Ian Sommerville to reproduce the natural flicker sensation he had experienced. With the Dreamachine there was no capture, only the lived experience of moving imagery elicited by the interaction between light and machine.

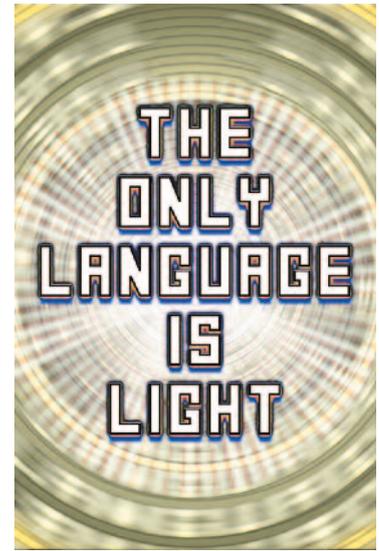


Fig. 108: *Left: Charles Gatewood, 'Brion Gysin and his Dream Machine' (1958)*
Fig. 109: *Right: Mark Titchner 'The Only Language is Light' (2003) Courtesy Mark Titchner*

What is art? What is colour? What is vision? These old questions demand new answers when, in the light of the Dreamachine, one sees all of ancient and modern abstract art with eyes closed (Gysin, 1996).

Some decades after Gysin's vision Mark Titchner made his work 'The Only Language is Light' (2003), which is a direct quote from Gysin and a reference to the Dreamachine. In making a lightbox of this text, Titchner explained it was "a self-referential idea about illumination, transcendence, light and the object itself", a homage to Gysin perhaps, within whose work he said "there was this idea of language being inseparable from the material of the universe".

The idea of transformative visions, the play of everyday sunlight as revelatory, also occurred for the artist Liliane Lijn when in Paris in the 1960s she set off to buy some lenses one morning and her gaze was drawn to a box of prisms in a shop window reflecting the bright sunlight. She invested in a few of them to create something that produced the same effect and ended up working with them from the mid 1960s to the late 1970s, making pieces such as 'Salute to the Spectrum Messengers' and 'Prismstones' in which, she attached prisms to stones which when exposed to direct sunlight, would give off flashes of light. This experimentation later inspired a large-scale installation work, 'Solar Hills', a collaboration between Lijn and the astronomer John Vallergera in San Francisco, in which an array of prisms installed on the Golden Gate Bridge refracted sunlight. In conceiving this work Lijn imagined that if there were enough arrays of prisms they could create a light bright enough to appear like a huge sun, "so there would be this extraordinary experience of two suns in the sky".

When artists work with different media and techniques to capture, modulate and mediate light, time and animation are almost always involved. For example, where photography might record a stilled moment as a two-dimensional image, with the medium of holography a slice of time is captured in three dimensions, the optical

information of a 3D object stored in a 2D plane. Once illuminated the original information is restored and the 3D object can be seen. During an interview with the holographic artist Michael Wenyon (2018) he made the point that, “I sometimes say, if holography was invented before photography someone would still have to invent photography. There is no simple technological evolution that leads you from photography to holography.”

At the time of the Royal Academy’s ‘Light Fantastic’ exhibitions in 1977 and 1978, holography was thought of as a ‘medium of the future’, a technological medium imbued with a kind of utopian vision. In his book *From Technological to Virtual Art* (2007), Frank Popper compares the ambiguity of presence and absence at the heart of holographic art to our perception of the stars, “whose physical presence has been superseded by the luminous wave that reaches our eye long after having been emitted”. Artist Andrew Pepper’s work with holography since the early 1990s brings it firmly into the domain of contemporary art, and by using the technology to give dimensionality to the line, dynamically engaging the spectator in the experience of a drawing, the line is released from its surface into space. In an interview with Pepper (2017) he recalled the period in the 1980s, studying holography with Dan Schweitzer, who suggested that since holography records the phase and amplitude of light reflecting from an object, it might also record a person’s heartbeat and brainwaves and other resonances which can then be switched back on and replayed – “the concept of the holographic universe”.

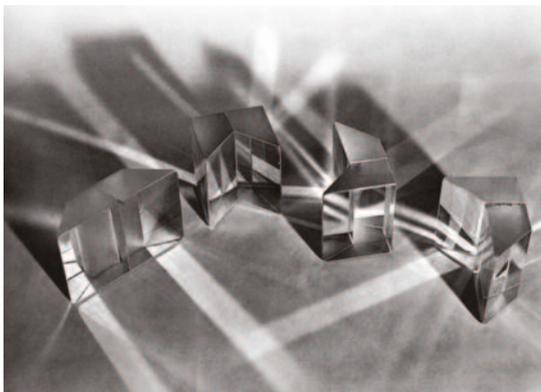


Fig. 110: **Liliane Lijn** ‘Crystal Clusters (Rhomboid)’ (1972) ©Liliane Lijn
 Courtesy Liliane Lijn, DACS / Artimage 2018 Photo Plastiques

Fig. 111: **Liliane Lijn** ‘Solar Hills’ (2005) Photo ©Liliane Lijn, all rights reserved, DACS 2018

In contrast to the heightened vision of holography, Norman Bryson’s view (2016), is that it possesses a quality of “temporal homelessness”, that it is “essentially untimely; it was born too late, or too soon; in a sense its time has never come”. With the advent of the Internet signalling profound consequences for ‘the book’ and its survival, artists Wenyon and Gamble produced a hologram entitled ‘*The Future of the Book*’, and during a residency at the Boston Athenaeum they created 54 holograms of books for “*Bibliomancy*” (1998), an exhibition reflecting on the life of books as objects, as repositories of knowledge, historical records and places of the imagination. This idea that holography never fully arrived is an intriguing characteristic of their work.

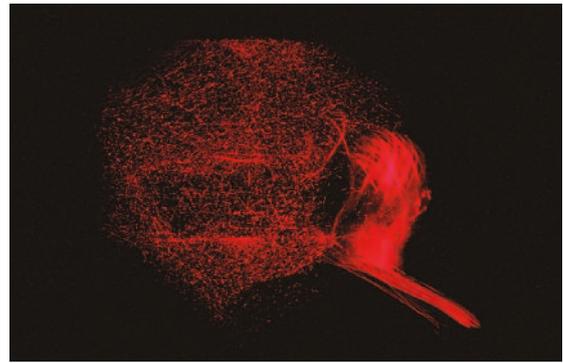


Fig. 112: Left: **Wenyon and Gamble** '54 Holograms of Books' Magnan Metz Gallery, New York (1998)
Fig. 113: Right: **Andrew Pepper** 'Coherent Points', with artist's head (2013) Photo courtesy Andrew Pepper

There seems to be a parallel between the technological fantasy projected on to holography in the 1970s and the current impulse and fascination with virtual reality (VR) as a medium. Light plays a crucial role in both: light as subject as well as a basic substance in generating and rendering the image. In holography the three-dimensional world is presented spatially but we are kept on the outside looking in. Holography cannot copy reality; its existence and foundation as a medium derives solely from what Peter Zec calls a “self-creating light” (1987). The limitations that Jean Baudrillard perceived are that holograms are a simulation of reality and therefore do not have a representational system, so there is no possibility of expression or abstraction, nor any potential for conceptual content within the medium.

There is an idealisation of VR that it may be a more ‘real’ representation, even though it is entered into via a gateway – a door into another reality that offers complete visual immersion, pulling the observer right into the image. Putting your attention into a virtual world is only part of the task, however for in order to feel completely present, there has to be a way to physically move around in the simulation and to experience the content. Entering the VR simulation of Modigliani’s studio at Tate Modern in 2018 is to enter a fully rendered environment in which everything visible is described through shading – light appears to reflect off surfaces, or it pours through a window – with the result that it looks believable. But it is a simulation and so I cannot feel the light on my skin or see the effect on my body, light cannot enter my eye, and so paradoxically the immersion it promises does not materialise; instead the virtual reality shrouds my sensorial and corporeal being. Without the sense of touch, I feel disembodied in a rendered dimension, present, but within a kind of illusionary prison.

Conversely, in experiencing the work ‘7 Sirens’ by Glasgow-based ISO Studio, the VR immersion is heightened through this very sensation of touch; the immersion begins in a visual and acoustic simulacrum of the room in which I experience the work. The virtual world, a volumetric space of real-time graphics and reactive motiongraphy, an unreal digital environment, is disturbed by a real object. This disturbance relates to Freud’s concept of “The Uncanny”, the sensation which emerges where the boundary between the animate and the inanimate is uncertain. I can move around, here my body feels involved in the mediation, I can sit on a 3D object in the VR environment and I experience a physical response when the floor appears to fall away, almost a sensation of vertigo.

One of the creators of the work, Damien Smith, explained how incorporating actual objects into the VR environment productively plays with perception:

One of our experiments was keeping three-dimensional objects in the space so that if you did want to touch the walls, the walls are there; you can feel the brick and you can feel the concrete, and your seat remains a seat but it becomes another object, it becomes a computer server, and it becomes an emanation of audio, and I think that's where VR could get really interesting. We're already seeing, in the theme park world, the mapping of environments and the creation of a synthetic version to play with your perception (Smith, 2017).

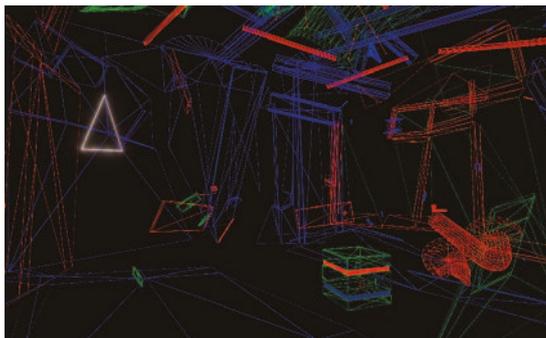
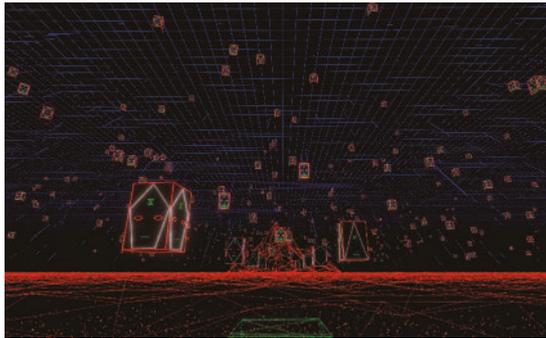


Fig. 114: ISO '7 Sirens' VR Installation and viewer (2017) Photos Rueben Paris, courtesy The ISO Organisation Ltd

Anthony McCall's 'Solid Light' works present a very different kind of immersion in light. The physical relationship that an audience has to these solid light works by stepping inside beams of animated light suggests they have form. I visit the Sprueth Magers gallery in London to see McCall's latest solo exhibition and am in the darkened gallery to experience 'Meeting You Halfway II' (2009). I stand at first outside the horizontal beams of light as two partial ellipses expand and contract at different speeds, the haze-filled light beams rotating slowly, the animated line visible against the black wall. The light invites me to step into its beam and as I do, I am enclosed; it is like stepping inside a cinema, at once illuminated by the projection, and at the same time becoming a silhouette; my hand and fingers cut through the beam, splicing the light and allowing it to re-assemble, breaking its perfect form and creating shadows. The planes of light occasionally align perfectly, if only for a fraction of a second. It is almost like a conversation between two people. This is not a rendered world; it is abstract and immersive and I am free to invent my own imagery. Here the imagination, the subjective experience, memory and metaphor are foregrounded.

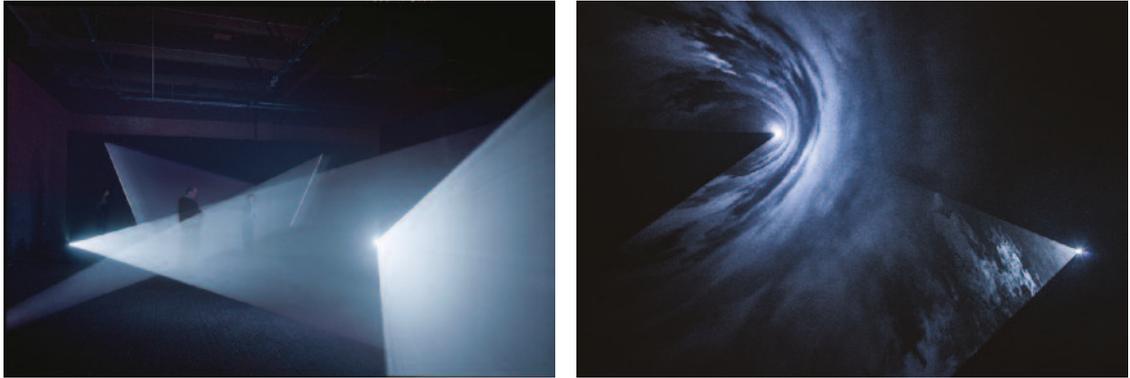


Fig. 115 / 116: **Anthony McCall** 'Swell' Installation View, Nevada Museum of Arts (2016)
 Photo Chris Holloman, courtesy Anthony McCall

When artists first started to use light as a sculptural medium in the 1960s, there was a shift that saw many artworks of the time relating to the French phenomenologist Merleau-Ponty's research into embodied vision. In *Phenomenology of Perception* (1945), he explored what it is to encounter the world in a 'primordial way'. He proposed "one's primordial experience is to exist toward things through a living (perceiving, feeling and acting) body". The relationships between the lived perspective, perception and the subjective limitations of the art object were of primary interest to artists of the Light and Space Group. Their work focusing on light as an environmental phenomenon resonates in the way in which it seeks to re-sensitise us to an experiential way of being.

The Light and Space Group were artists who emerged in southern California in the 1960s and became collectively known within the framework of the Light and Space movement. They were driven to create works that aimed to bring a sense of heightened awareness to the viewer's perceptions of light and space. Within this group was artist Robert Irwin who referred to his early theory and artistic practice as "Perceptualism" which focused on the human sensory experience as being central to an artwork. He worked with the medium of light to explore this idea and the relationship between the material and immaterial. The work of the Light and Space movement was reductive in the sense that it simplified art to the elements of light and space and yet the installations they created induced overwhelming sensory experiences, embodying the concept of perception and the sublime. Rather than presenting narrative imagery their works were all about giving the viewer a bodily encounter, a tactile engagement with the physicality of light. One aspect that is often discussed is the intention of the Light and Space movement to "re-sensitise viewers to an experiential way of being". Dawna Schuld explained how during the experience of such works the viewer is attending to the shaping of their own knowledge and perception:

... with no specific object to which we might attend, we are left to consider the work in terms of dynamics of perceptual engagement. We take the work with us: our heightened senses, now attuned to the subtleties of the conscious fringe, encounter a more vivid world than the one we left behind (Schuld, 2011).

ight, space and perception have long been central to artist James Turrell's installations, which require an active participant rather than a passive observer. His works incorporate light as a sculptural medium in both indoor and outdoor installations – natural environments and natural light as well as artificial light are often brought together in one work. Turrell's intent relates closely to Kant's critique that the sublime "is to be found in a formless object", represented by a

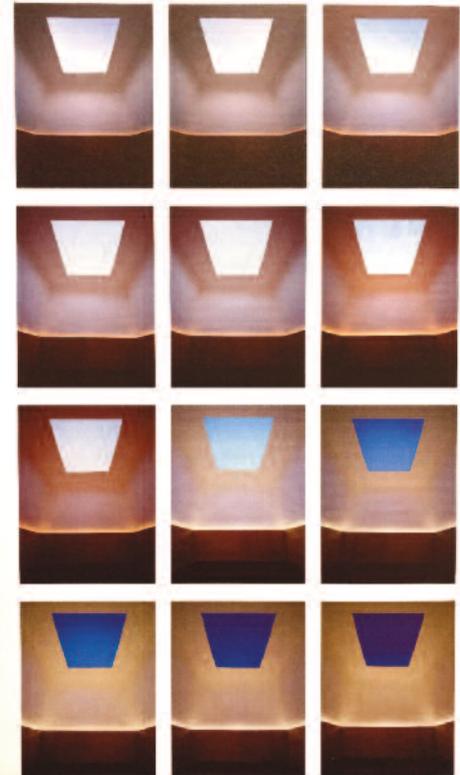


Fig. 117: **Left: James Turrell** 'Third Breath' Centre for International Light Art, Unna (2005/2009)

Fig. 118: **Right: James Turrell** 'Air Mass' (1993) Light Show, Hayward Gallery, London 2013 ©Southbank Centre 2013

"boundlessness" experience or feeling that could be summarised as being beyond the intellect. For Turrell, the medium of light connects the immaterial with the material; he exploits the way we process images to reveal that all we see in his installations are purely mental representations "My work is not an essay on light [...]. It is light itself. Light is not so much something that exposes, reveals; it exposes itself; reveals itself" (Turrell, 2012). Questioning what we see and how we might comprehend it is usually reserved for the experience of natural phenomena, especially when we encounter extraordinary or unusual and rarely seen visual effects in nature, such as a mirage, a Brocken spectre or a *Heiligenschein*. In the middle of an October day in London in 2017, an eerie yellow light emanated from a blood-red sun, unusually caused by Saharan dust brought to the UK by Hurricane Ophelia. The glass in high-rise city buildings reflected the yellowish hue and merged with the sky that had taken on the appearance of a bruise. Yellow hoardings became pronounced, standing out against other colours that had been subdued by the monochromatic light. In a similar way, a number of artists have destabilised the natural order of our vision by creating artificial environments in which colour-fields are presented for experiential encounters, for example, Ann Veronica Jannssens in her work 'Blue, Red



Fig. 119: **Ann Veronica Janssens** 'Jamaican's Colours for Mademoiselle Léone' Kunsthalle, Bern (2003)

and Yellow' (2001) 'Yellow and Blue' (2003), 'Jamaican's Colours for Mademoiselle Leone' (2003), 'White yellow Green Study' (2006). In the catalogue published for the exhibition 8'26" (MAC, Marseille, 2004) these pure colour projections combined with mist "abstract the experience from all temporal and spatial reference" (Pontegnie, 2004). This work therefore focuses on the physical, sensory aspect of the aesthetic experience, rather than a reliance on anecdotes, narrative or psychology to provide a multiplicity of sensations. Janssens explains in her 'Notes' for the catalogue (2004) that her "use of light to infiltrate matter and architecture is undertaken with a view to provoking a perceptual experience wherein this materiality is made unstable, its resistance dissolved. This movement is often provoked by the brain itself." Olafur Eliasson's 'Room for One Colour' (1997/2017) in which as spectators we become immersed in an environment installed with mono-frequency lamps, limiting our perceptual spectral range, so we are capable of seeing only shades of yellow, black,

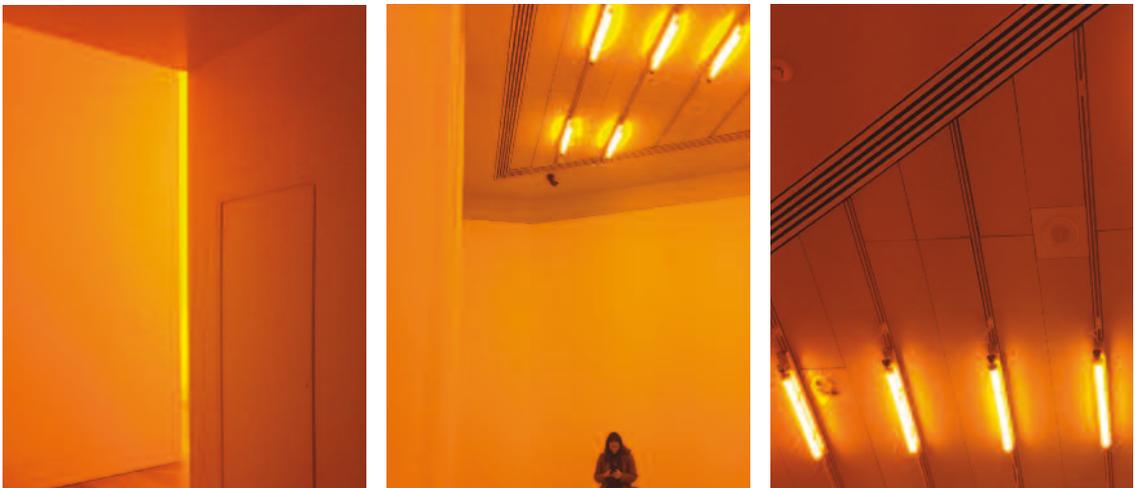


Fig. 120: **Olafur Eliasson** 'Room For One Colour' National Gallery (2017) Photos by Jo Joelson

white and grey; and Cameron Cruz Diez's 'Chromosaturation' (2010) is composed of three adjoining rooms transformed into colour chambers – one red, one green, one blue – light and colour as physical phenomena presented without external cultural reference. To experience these works is a continuously unfolding process, in which there is constant adaptation or re-attuning at work for the viewer-participant and a focus on perception and human vision. As spectators in the city, we are becoming more attuned to a 'proto-cinematic' environment which, when illuminated at night,

becomes “a potent metaphor for the forces of modernization” (McQuire, 2008). Visualising new forms of illumination and the future of the urban nightscape is central to Speirs and Major’s imagining of what the city of tomorrow will look like. Their virtual reality installation entitled ‘Third Age of Light’ (2017) responds to technological developments and environmental pressures in the field of architectural lighting. The VR experience of this work took me into a virtual sketch-like rendered visualisation of the night-time environment of King’s Cross, Primrose Hill and the South Bank in London, as it might appear in 2053. A soundscape enhanced the dimensionality of the experience and as I viewed King’s Cross there were illuminated signs, light integrated into the surface of roads and walkways, buildings with luminous surfaces, facades and screens carrying media, light-carrying drones and then there was personalised light, embedded in tattoos, jewellery and clothing worn by passers-by. VR in this instance attempts to convey a vision in which optical engineering and artificial intelligence coalesce to provide a partially augmented experience. What is proposed here is that some time in the near future we will be able to customise our experience of the city as it will be delivered through Augmented Reality.

Where will an idea such as this take us? Perhaps the most significant aspect of their vision is the body carrying personal light in different forms – not so unimaginable, because such developments are on our horizon now. What might this idea mean? Let us assume that through personalised light we may become identifiable as it becomes our individual profile, our signature. Does this mean that our presence can be expressed metaphorically through light, a signifier or a visible code?

All external light, whether artificial or natural, influences every aspect of human physiology: through the eye, through the skin, and even non-visual ocular interactions – all of which give rise to the circadian clock which influences brain function and neural pathways. However, there is little discussion about how artificial light is being introduced into our bodies, nor its impact and affect: from X-rays, microscopy, fluorescent imaging and magnetic resonance imaging to laser surgery. Where does the border lie between inside and outside, public and private? What does it mean to have light within us? This light beneath the surface has always been talked about as internal, and it has a profound relationship to religious and spiritual experience. Disney is full of it, but through its dark mediation by ‘the American dream’, whereby anyone carrying a ‘specialness’ is imbued with the power to illuminate or to emanate light, as though our genetic code, our gene portraits, our cells are actually quantifiable as pixels of light.

An idea of self-illumination lies at the core of ‘Speed of Light’, analogous on a visual and conceptual level to the way light is split into individual packets – or quanta. ‘Speed of Light’, a vast nocturnal choreographed public artwork by NVA, is an expression of light and time with the human at its core. Ambitious in scale, the original production – an Olympic commission for the Edinburgh International Festival in 2012 – involved runners in LED light suits following orchestrated routes at night to the top of Arthur’s Seat, Edinburgh’s iconic mountain. Farquhar described the visual experience of the work in our interview (2017):

It's the idea that you're observing energy, the source, light itself moving. The interesting thing is the scale shifts, so you can't see if you're looking at the inside of an atom and the spaces between particles, or whether it's on a planetary scale. It's not a directly political work, it is rooted in something larger and more abstract. How we view energy itself, how we expend it and how we witness it.

On one hand 'Speed of Light' epitomises the globalised tendency for speed and the super-fast communication of visible light, a representation of the way the digital subsumes us; and on the other hand it reflects a more embodied approach. The spectator is an important constitutive part of 'Speed of Light' – strangers who come together and through their participation produce a collective choreography, with the result that “the work in subtle ways seeks to leave behind the 20th century as the era of the combustion engine, instead highlighting the necessity and simple beauty of the human engine as a mode of transport in the 21st century” (Farquhar, 2017).



Fig. 121: NVA 'Speed of Light' Arthur's Seat, Edinburgh (2012) Photo Alasdair Smith, courtesy NVA/Alasdair Smith

If the technological transformations and the 'lost dimensions of space' lead to a mutation of human perception, then we might imagine an increase in virtualisation and with it a greater limitation of the possibilities of chance. Alighiero Boetti's work beautifully illustrates the magnitude of what would be lost: 'Lampada annuale' ('Yearly Lamp') (1966), is a single oversized light bulb in a wooden box which randomly switches itself on for 11 seconds each year, providing a remote chance that a viewer will witness the transformative power of energy, and that moment of illumination.

4.5 PERFORMANCE LIGHT

Almost all cultures have developed through an interpretation of light, both through its metaphorical richness and as phenomena where it acts as a kind of signalling in relation to the transition of the seasons, the time of day, as well as the symbolism it holds in relation to religion or ritual. What must we consider then when we address how our perception is altered or stimulated by artificial light? Its immediacy and significations are well-crafted elements in many fields including performance, for instance. Given that we are unconsciously drawn towards brightness, we are drawn to the object rendered most fully within our field of vision; lighting design is then literally 'pulling focus', guiding a particular encounter for the viewer.

In our interview, lighting designer Paule Constable refers to light as a protagonist in performance environments:

You can educate an audience quite quickly; you can tune them in to something, into darkness, tune them into looking this way and not that. You can create an image they can dive into and pull something out that needs to breathe and support. We don't need to assault the senses all the time. It's a conversation (Constable, 2017).

Lighting design is more than a mastery of the technology; it is about light's poetics in time, a construct of light-images that as a sequence create a visual concept of light, otherwise commonly referred to in theatre as the 'dramaturgy of light'. Constable is drawn to light that has a specific dramaturgical purpose and at the start of a new design process she asks: "Why is light in the room? What is its function?", questioning the character of light in the piece in order to "find the singular function for light and strip everything back to that".

In dance, light has a certain freedom from narrative and, for choreographer Russell Maliphant, and his lighting designer Michael Hulls, theirs is a process in which light, sound and figure combine to connect with the imagination – whether it is dreamlike or narrative. Hulls talks about working with low levels of light "at which your senses prick up because you're on the edge of visibility, and you're not quite sure what it is you're looking at and so your senses are heightened". If, then, we consider light as an 'active substance', as fundamental to the processes of making and receiving creative work, as artist and theorist Barbara Bolt has argued in *Art Beyond Representation* (2004), it needs to be understood at a phenomenological level and for the particular kind of engagement this sets up for the audience. This returns to the affective significance of the art of lighting design and the way we receive and respond to images through the visceral medium of light. The relationship between vision and embodiment is being recognised within the field of performance and relates also to the field of light art – a relatively recent consideration within art history – in which light is addressed as a medium in its own right. Light's language, its aesthetic and poetic expression, is continuously shaped and influenced by the historical encounters with other art-forms.

The light shows of the 1960s have taken on iconic significance, influencing the use of light in later decades as musicians sought to create total sensory environments –

echoing wider instincts across the arts, where the pursuit of non-representational forms were all in some ways embracing new relationships with light as described by Marshall McLuhan as ‘the electric drama’ in *Psychedelia and Other Colours* (2017).

With the social revolutions of the 1960s the direction taken by the emerging counterculture was fuelled by a new internationalism, together with the anti-war movement, the women’s movement, feminism, the sexual revolution and, in a different register, the revolutionary potential within the ideas of expanded consciousness or altered states – a desire to break the order. Experimentation was central to this, particularly through the relationship that developed out of music and altered consciousness, intensified by the era’s preoccupation with psychedelic drugs, which resulted in the formation of a new genre: psychedelic rock. Many of the bands associated with psychedelia – Pink Floyd, Soft Machine, the Jimi Hendrix Experience, the Velvet Underground and the Grateful Dead amongst others – saw experimental lighting as central to their live performances – the dominant aesthetic of amoeba-like blobs of liquid light projected over the band, otherwise known as the ‘liquid light’ show. The integration of the analogue manipulation of light into music performance, and the concept of the ‘liquid light’ show, can be traced back to the Light and Art course initiated by Seymour Locks at San Francisco State College in 1952, where Locks filled slides with liquid, displaying them via overhead projectors, while a jazz group improvised. This event can be seen as a kind of precursor to the modern-day ‘light show’ and laid its foundations, with Locks using overhead projectors, slide carousels, film projectors, transparent containers filled with coloured oils and water, colour wheels, lighting gels and mirrors – all contributing to make wild, abstracted light projections.



Fig. 122: **Gustav Metzger** ‘Liquid Crystal Environment’ (1966-2018) Collection du Musée d’art Contemporain, Lyon
Photo Blaise Adilon, courtesy MAC Lyon

The artists who pioneered and influenced the direction of the light show movement include American designer Glenn McKay, Scottish-born artists Mark Boyle and Joan Hills, UK-based Gustav Metzger and US-based Joshua White, who performed at the Fillmore East, New York, from 1968 to 1970 with his group Joshua Light Show, presenting shows every weekend for up to 10,000 people and receiving nearly equal



Fig. 123: **Left: Mark Boyle & Joan Hills 'Exploding Colour and Light'**
from a Sensual Laboratory, liquid light environment (1967) Photo by John Claxton

Fig. 124: **Right: Mark Boyle & Joan Hills 'The Soft Machine in the Sensual Laboratory Liquid Light Environment (1967)**

billing to acts including the Doors, Janis Joplin, Albert King, Chuck Berry, and Iron Butterfly. White's background in electrical engineering, theatre lighting, magic-lantern techniques and filmmaking provided the grounding for his craft-based cinema of an ephemeral, unrepeatable nature, which commingles almost the entire history of the projected image. The cult writer Glenn O'Brien recalled his experience of that time in the essay "Tune in, Turn on, Light up" (2005): "It's the pulsing blobs I remember, like chromosomes imploding in time with the band, a hopped-up visual artist doing action painting in real time on the canvas of our minds."

The sensibility of light and performance of the 1960s was redefined in the 1980s when artists and musicians working collaboratively, experimentally and site specifically merged art-forms to liberate ideas from the conventional definitions of music, cinema, theatre and art. Performance events often took place in the non-hierarchical spaces of disused buildings and outdoor locations, giving the work a freedom from the confines of the institution and other established venues, and in some cases lending an industrial backdrop to the work.

The Bow Gamelan Ensemble, one such group, formed in 1983 by Anne Bean, Paul Burwell and Richard Wilson, combined performance art, drumming, sculpture and multimedia, and joined forces for the New Music New Instruments event at the London Musicians Collective, inventing radical new instruments for live performances, using light and pyrotechnics, and adapting their performances for different environments. Wilson recognised there was a 'wow' element to the performances; however, Bean reinforced that performances were made using "raw, primal stuff ... although it was truly spectacular, it was a lot of commonplace materials" (Bean and Wilson, 2017).



Fig. 125: **Bow Gamelan Ensemble** 'Damn Near Run Thing' (1988) Photo Ed Sirrs, courtesy Anne Bean and Richard Wilson

Similarly, the DIY ethos of '80s industrial group Test Dept developed into an ideology and an aesthetic, representing the mood of the Thatcher era that saw the miners' strike, the Falklands War and the print-workers strike – by provoking and agitating, with music, visuals, politics and life all meshing together. Drawing on Russian constructivism, experimental and underground cinema, the filmmaker of the group, Brett Turnbull, created and projected Super 8 and 16mm film behind the band, following a punk aesthetic that rejected the iconic rock imagery and mainstream tendencies of the time. Bringing together live music, industrial lighting and projected imagery in abandoned factory spaces created a highly charged atmosphere. A combination of the group's political ideology and their theatrical and cinematic influences shaped and amplified their live performances, the merging of languages creating performance closer to anti-spectacle in its intention.

The convention for mainstream rock concerts since the 1980s has placed the emphasis firmly on the spectacular, with elaborate sets, moving lights, lasers, follow spots and video that replicates the onstage action, all presented at a scale firstly to attract an audience through the promise of sensational experience and then during the concert to reach those at the back of the stadium.

LED – (light emitting diode technology) is key in the development of audience lighting, considered by many to be the future of the production industry, and now ubiquitous due to its energy efficiency and contribution in reducing CO² emissions. Radiohead, a band known for their environmental credentials, took the lead some years ago,



Fig. 126: **Radiohead** 'A Moon-Shaped Pool' (2017) Photo Andi Watson courtesy Andi Watson

realising the impact of their spectacular concert lighting. In 2008 their lighting designer, Andi Watson, made the switch to energy-efficient LED lights for the 'In Rainbows' tour. Hanging linear fixtures above the stage that were more often associated with architectural applications, they appeared like floating lines of light above the band. While Radiohead succeeded in cutting their carbon emissions, Watson was also opened up to the sustainability and design potential of LED light, predominantly approaching light and projected light as sculptural materials, his designs drawing inspiration from the field of light art rather than from the language of rock n roll lighting. In our interview Watson acknowledges the growing relationship between the disciplines involving light:

We are likely to see the continued blurring of performance lighting/visuals and visual installation art. I have often felt that my most successful works have been lighting installations masquerading as concert touring systems. It is likely the difference between the disciplines will continue to shrink and will eventually disappear (Watson, 2018).



Fig. 127/128: **Radiohead** 'A Moon-Shaped Pool' (2017) Photos Andi Watson, courtesy Andi Watson

Light as urban performance has become part of our cultural experience in the city – New Year celebrations that involve impressive firework displays and the illumination

of iconic buildings, the light shows often being modelled on light spectacles for rock and DJ concerts. Two years after the Shard's completion, it became the subject of a light installation and performance by Jason Bruges Studio, in a countdown to the New Year 2015. Searchlights, strobes and LEDs adorned the top 40 storeys and spire of the building, pixels of light massing to form a pulsing numeric supergraphic '2015', together providing a backdrop to announce the New Year and the Shard as an internationally recognisable beacon for modern London.



Fig. 129: Jason Bruges Studio 'The Shard' New Year's Eve (2014) Photo courtesy Jason Bruges Studio

Andy Warhol recognised the power of illumination to transform architecture into a feature, elevating the mundane. Warhol shot his film *Empire* following the floodlighting of the Empire State Building in 1964, declaring the building to be the star and continuously filming it in a static frame for over seven hours of the eight-hour film. For some, the passage from daylight to darkness is excruciatingly uneventful, but those who commit to experiencing the film in its entirety come to appreciate Warhol's approach, which asks us to notice the subtle details, such as a flash bulb's firing from the Empire State's summit, or its floodlights turning off at 2am. Light becomes the film's narrative and by lengthening the running time by projecting the film at a slower speed, Warhol makes the progression to darkness almost imperceptible. For Warhol, the point of this film – perhaps his most famous and influential cinematic work – is to 'see time go by'. In an interview in 1975, he commented:

The best, most temporal way of making a building that I ever heard of is by making it with light. The Fascists did a lot of this 'light architecture'. If you build buildings with lights outside, you can make them indefinite, and then when you're through with using them you shut the lights off and they disappear (McQuire, 2008).

The abundance of electricity and its product, electrical illumination, and its convergence with modern media technologies, has created a whole new threshold in the psychogeography of the modern cityscape, altering the way we inhabit and socially interact. Within the social issues of public lighting are strategies incorporated

for safety, identity, advertising, pedestrian experiences and entertainment. City illumination contributes to a re-structuring of the city largely through advertising and prioritising certain buildings over others, effectively creating extreme contrasts between urban landmarks, populated centres, areas promoted for night-life or areas deemed less important.

During the day and night there are systems of control that are programmed to anticipate and respond to patterns of occupation and activity. Initially what was integrated into design is now being superseded by excessive uses of light, rendering the city in equal measure, flooded by light with its absence registered negatively as recesses of darkness and shadow. While open spaces during daylight might feel relaxed, after dark they feel unsafe, to be avoided. Being brighter and more visible attracts commercial success and signifies political power, and yet domination of the city through light not only reveals the extent of corporate power but also our deeply entrenched fear of the dark and the invisible, and a reluctance to confront uncertainty.

Peter Weibel frames it in another way, that light has become the vital medium of urbanity, our cities understood as light-scapes, and that we now live in 'dream cities', the role of the city changing from purely functional to spectacles of colour, light, motion and sound. No longer operating as mere tourist attractions, they have become "the natural habitats of digital natives ... as sites and scenery for self-representation, moving poems of light ... every urban thing – every facade and every mobile object or subject – can be a screen".

The digital language of light is fast evolving along with technology; the programming and dimming of lighting is sold with the idea that it has the capacity to be sensitive to environmental factors and the meeting of renewable energy targets. User interactions and experiences are enabled by coded manipulations of data streaming online between diverse devices. Human-computer interfaces (HCI) are integral to 'social light', a digital urban movement through which people experience light events in physical, virtual or augmented reality environments. The Internet of Things (IOT) is now at the forefront of interactive innovation, including the automatic remote digital controlling of light – pixels on screens being one such application – all of which is discussed in *Superlux: Smart Light Art, Design and Architecture for Cities* (Jackson, 2015). The trend towards extending our sense experiences across the urban environment means that increasingly LEDs are embedded everywhere into everything and the energy-saving benefits are steadily nullified.

4.6 ABSENT LIGHT

Darkness was described as absence, negation and melancholia by ancients and early moderns. The binary perception or dualistic opposition between dark/evil and light/good still persists in common thinking and categorisation, in Western tradition at least. Within popular culture mythical creatures, vampires, zombies and werewolves inhabit the night and there is the idea that a light-less world is where the dead reside. Many of these fears and ideas originated in rural places where there was little or no

illumination at night and where sightings of extraordinary phenomena were more commonly reported, or else in cities which before widespread electric illumination became hazardous places after dark. The impulse by moderns was to use artificial light to banish the dark, creating new media and art in its place. In *Artificial Darkness* (2016), Noam Elcott builds his thesis around a modern construct, a darkness artificially controlled for the production and reception of imagery. With the advent of photographic studios in which light and dark were controlled for both the recording and the processing of images, 'artificial darkness' evolved to become a concept which helped shape modern art and modern media through its sites of black screens and dark theatres, galleries, cinemas. Common to the reception of light-based media is a darkened auditorium and a brightly illuminated image. Artificial light and the reality it creates reveals itself most powerfully in darkness – it becomes life. In the darkness, the spectator gives the illuminated image their full attention, perception is heightened, magnified, and the image possesses an intensity it would not otherwise have.

Darkness has always been a 'companion' of art with regard to artists entering into the phenomena of dream states or lucid dreaming and a register of the subconscious. For Liliane Lijn, "Archetypes are dark by their very nature. I'm thinking without naming them of those extraordinary creatures that come to us in dreams, with fantasies and fears." When writing her book *Crossing Map*, in 1968, Lijn spoke of how she realised she had "to learn how to visualize darkness, not just the absence of light, but human darkness. That was something that began to interest me more and more. What is light? What is darkness? Darkness is non-existence, what we call death, that's darkness. And then the idea of re-birth and mythology."

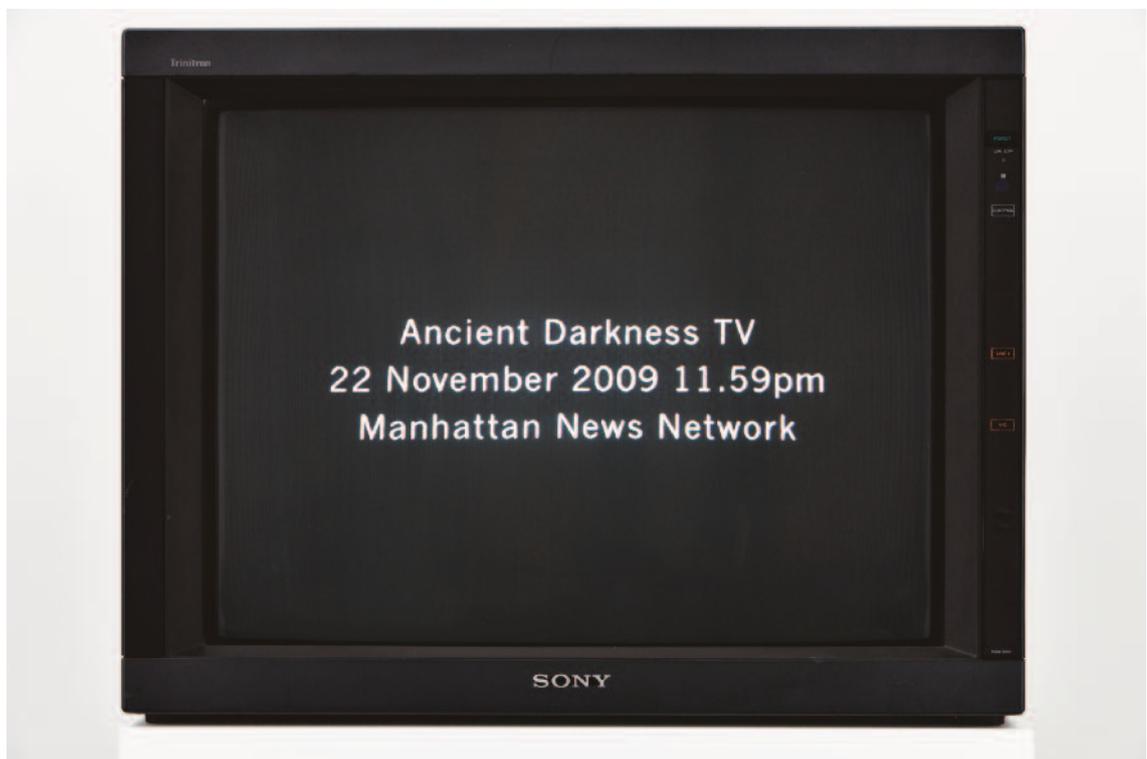


Fig. 130: **Katie Paterson** 'Ancient Darkness TV' (2009) Photo Peter Mallet, courtesy Haunch of Venison, London

For Katie Paterson, darkness is “the ultimate beyond, the ultimate unknown. [...] we see this empty space, and it’s what we imagine that fills that void.” Thinking about ‘Universal Darkness’ as a metaphor for not knowing, the cosmos becomes a place for reflection. The elsewhere of black holes, dark matter and dying stars represents a nature beyond, where the human disappears as a subject but where the imagination is boundless. At precisely 11.59 pm on 22nd November 2009, an image of ‘ancient darkness’ was transmitted for one minute on the New York television station Manhattan News Network (MNN). Paterson’s intervention into the usually noisy TV station revealed darkness from 13.2 billion years ago, shortly after the Big Bang and before the Earth existed, when stars, galaxies and the first light began to form. Of course, people watching TV possibly thought the transmission signal was down, that something had gone wrong, but in fact what they were viewing was an image of darkness from the furthest point of the observed universe.

When all external visual stimulation is cut off, humans produce their own light. The idea of ‘self-light’ created in the absence of visual stimulation was first observed and theorised by 19th century figures such as Johann Wolfgang von Goethe and Jan Evangelista Purkyně who identified that a lengthy immersion in darkness would yield the perception and visual sensation of subtle luminosities (Elcott, 1978); and in more recent neuroscience it is accepted that a stay in a darkened room produces a ‘gray equilibrium’, ‘intrinsic grey’, the visual result of low-level black and white neural activity. For his recent commission, ‘Chamber for Endogenous DMT (Collapsing the Wave Function)’ (2017), artist Haroon Mirza created a sensory deprivation chamber and conducted a study to examine the inherent potential for the human body to create and experience altered states of perception without any external visual stimulation. In our interview, Mirza questioned the possibility of darkness:

At what point do you ever have complete darkness? Even when you close your eyes or you’re in a pitch-black room like the anechoic chamber, you still see things. There is lots of light; there are any number of relics left on your retina for a long time and then your brain starts to generate images. There is never any evidence of pure darkness other than in death – which of course we can’t know (Mirza, 2017).

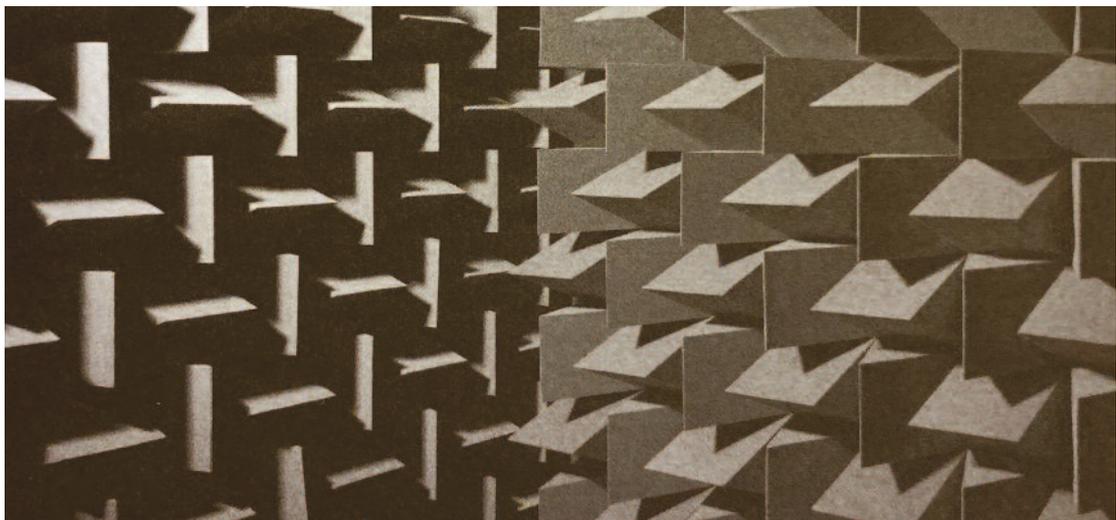


Fig. 131: **Haroon Mirza** ‘Chamber for Endogenous DMT (Collapsing the Wave Function)’ (2017)
From the exhibition For A Partnership Society at the Zabudowicz Collection, Photo courtesy Haroon Mirza

4.7 SUMMARY

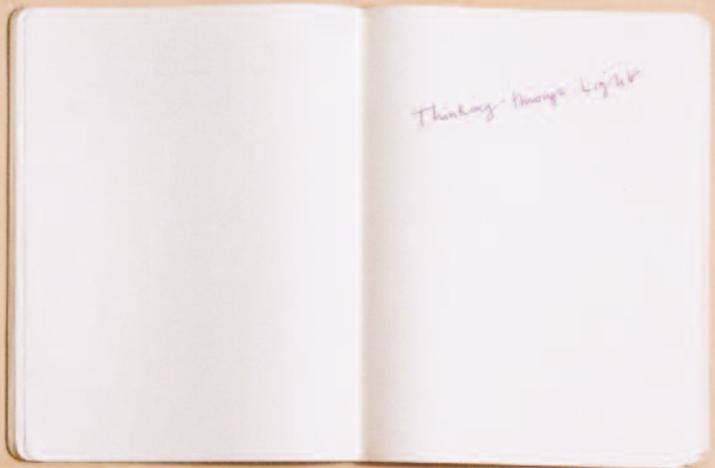
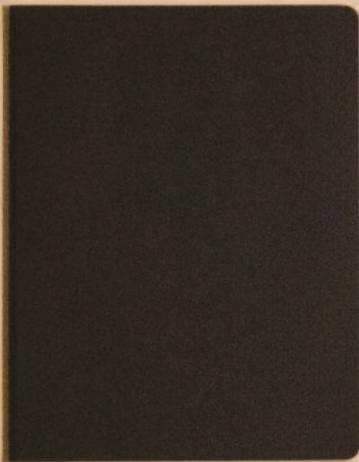
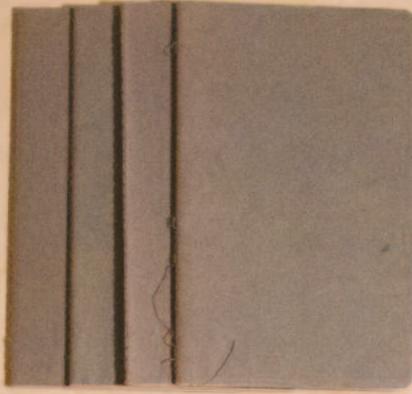
For light to carry more than being wholly subjective or a response to a series of technological break-throughs, then its poetics and conceptual meanings within creative practice need to be identified and acknowledged. It is in recognition of these varying qualities of light and how they are incorporated into creative practice that the identification of vocabulary becomes key in determining light's role in mediating our vision and everyday experiences of the world.

An extended list of categories of light practice was drawn up initially and against each category a list of associated practitioners. After the interview process and during transcription, reviewing and editing, an analytical and comparative study of individual practices, vocabularies, contextual information and art historical material was conducted. Identifying commonalities in practice and connections between them helped to focus down the long list of categories to just four. There were a number of practitioners who were originally included in more than one category as some practices expanded into other subject areas, however, decisions were made based on the predominant drive of each practice. Whether media, new technologies and techniques were central to a practice, or process was focused on structures of performance, or was politically motivated, these aspects helped to organise each practice into a single category. For each category an essay was written to draw on references and material relating to a wider range of practices and a number of sub-sections were created to enable coherent organisation of ideas and material. This was especially useful in the Performance Light category which involved practices occupying multiple art-forms and genres, including theatre, music, art and the public realm and therefore sub-sections with themes including 'spectacular light', 'psychedelic light' were created to discuss some of the key issues emerging from the interviews.

The focus on vocabulary was important for the categorisation which then led to the ontology development. This involved identifying a list of terms or concepts from each interview to associate each practice with one or a number of categories. In some cases and over a career there are perceptible shifts in aesthetic sensibility which can change the language and vocabulary used by practitioners. For example, where a practitioner initially started out working with light in a design context but moved to installation as a practice, the vocabulary might resonate more closely with the field of fine art rather than the field of design. And some vocabularies clearly indicate hybrid practice or collaboration across disciplines. There is evidence to suggest that such shifts in practice are a result of experimentation with new materials and technologies which present new opportunities and challenges.

By undertaking this process it was clear which categories encompassed a number of practices and therefore the careful mapping became a way to reduce down the number of categories. Political Light and Mediating Light have been identified as the most important categories for the reasons that they map technological developments and recent responses to the social and political landscape. These findings will be discussed in the conclusion following this section.

Fig. 132: Sketchbook and Notebooks



CHAPTER 5

Conclusions

- 5.1 Introduction – Research Aims
- 5.2 Reflection on Research Questions
- 5.3 Contribution to Knowledge
- 5.4 Reflection on Method
- 5.5 Future Research



Jo Joelson: Notebooks 2016-2019

5.1 INTRODUCTION — RESEARCH AIMS

This research study aimed to explore the historical, technological and aesthetic contexts that inform innovative art and design practices involving the medium of light. The research in this thesis has involved the scholarly investigation of historical examples, interviews with contemporary practitioners, exploration of their work and analysis of a diverse range of material. In parallel to this investigation, creative practice has been undertaken, primarily in the form of writing a book publication, conceived both as an artifact and an integral part of practice-based research, and also through talks, radio broadcasts, writing and filmmaking. Both scholarly and creative practice have sought answers to research questions that have been vital throughout the doctoral programme.

The primary research question asks, “How have the relationships between light, material culture and social experience been explored by contemporary artists?” In answering this question I conducted an extensive review of literature, exhibitions, festivals, and performance, alongside interviews with over 30 practitioners working in the fields of art and design. I have brought together seemingly disparate practices, movements and histories, focusing on those that critically engage with media, new technologies and interdisciplinary processes to examine the tension between the material, immaterial and social aspects of light. The research framework has engaged with the question in a creative and experimental way considering both the importance of the historical past with its technological limitations and the future potential of new media and technologies. It has informed, engaged and circumscribed my artist-curatorial practice.

5.2 REFLECTION ON RESEARCH QUESTIONS/SUMMARY OF FINDINGS

At the outset of the research project, two research questions were proposed, emerging from artist-curatorial concerns relating to the use of light as a creative medium and the establishing of a new ontology. These questions animate and underpin my research project and are reflected on throughout the thesis. In this section the questions and aims are applied again before reflecting upon the research with a summary of the findings.

Research Question 1: How have the relationships between light, material culture and social experience been explored by contemporary artists?

Question 1 Aims:

- > To examine light as a creative medium in art and performance since 1960 and trace some of the significant developments in aesthetics, technologies and related social and cultural practices.

- > To develop an ‘Ontology of Light’ to differentiate between individual light practices, the roles, meanings and function of light.

Summary of Findings

➤ **From Vocabulary to Ontology: Identifying and mapping the roles, meanings and function of light as a creative medium within various practices**

Throughout the research process a vocabulary of light has gradually emerged, identifying and naming qualities of light which relate to the material and immaterial aspects of light and practice (as visually described in the typographic in section 4.2). The genesis of the light vocabulary began during two residencies in Iceland (as described in section 3.3) in which research and fieldwork was initiated around the extreme bi-annual patterns of light and dark and the impact this had on the lives of local residents. The interviews revealed local behaviours, perceptions, traditions, celebrations, events and festivals relating to the extremes of light and dark. By reflecting on these interviews and the words used to describe phenomena, events and experience, an understanding of the local impact of light and dark and how light has shaped social rhythms and cultural practices was formed.

Following these residencies, vocabulary and language became significant in mapping the practice, as well as the meanings and function of light in the work of artists and designers. The process of mapping vocabulary revealed correspondences between practices as well as disciplinary distinctions. The discursive approach to research presented opportunities to analyse some of the complexities of light as a medium and subject – partly by revealing some of the hidden meanings and symbolism, information that is rarely shared in gallery contexts which was available through personal contact. As the vocabulary grew so a list of headings, sub-headings and areas of research evolved to ‘categorise’ practices and to shape an ontology for the book. These categories are: Political Light; Mediating Light; Performance Light; and Absent Light. An additional category, ‘Geographic Light’, was researched for the thesis to expand the focus from electric light to the experience and representation of light in relation to a specific place. The categories emerged following interviews with practitioners, as a way to represent, connect, draw comparisons between historic and contemporary practices. The division into categories also enabled reflections to be made on the investigation of the uses of light across creative fields: light as a political messenger, as pure information, light as ‘active substance’ in performative contexts, as an immersive experience, as monumental sculpture, theatrical presentation, communication device, as well as the cultural, symbolic and historical associations of light in relation to place. Where practitioners have transitioned between fields or collaborated across disciplines over the course of a career this is evidence that vocabularies and terminologies need to accommodate such shifts. Identifying and mapping new and shared vocabularies was productive during the research phase and invaluable in reflecting on the commonalities, shifts and slippages in practices and their art historical roots.

I found all of the categories to be useful in examining practices in relation to process and materiality. Political Light and Mediating Light proved to be the most consistently engaging categories, encompassing many practices because of the common use of

new technologies, techniques and processes used to capture, mediate and modulate light. The Political Light category sustained an interest through practices that engaged with 'social light' to effect a change in public consciousness.

A selection of light vocabulary has been translated into a typographic to convey the complexity and variety of light practice and demonstrate the mapping process that led to the ontology development (see Practice Portfolio – Appendix 8.2).

A PDF of the book *Library of Light* is included in the practice portfolio.

➤ **Mediating Light: Technological advancements and their impact on the aesthetics of light as a medium in the arts**

In researching the aesthetics of light as a medium in the arts over the decades – from examining a range of exhibitions on the themes of light to light in the public realm and light festivals – there appears to have been a noticeable shift from practice influenced by minimalism and kinetic art in the 1960s to larger-scale immersive / interactive environments and spectacular projection projects which have gained in popularity as we move into the second decade of the 21st century. This is partially evident from the aesthetic trends incorporating new lighting and control technologies being adopted by artists and designers. More than ever, practitioners are experimenting with hybrid forms which incorporate light and lighting technology in numerous ways, in combination with robotics, projection, new materials, sound, data and environments such as VR and AR, while additionally technology is being utilised for experience-based works to create interactivity, immersiveness, remote and streamed access.

As has been established in *Mediating Light* (Chapter 4.4), there is evidence that technological advancements across fields have contributed to the aesthetic evolution of the medium through practice, and this prompts the question: are intellectual and ethical approaches to creative uses of light diminishing as light becomes embedded within everyday media and devices? This section discusses and concludes that as a society we are moving towards an increasing desire and acceptance of highly mediated imagery and that in the 21st century our image-based culture is obsessed with seeing a more photogenic version of reality. It is light that is vital to its rendering.

Light has become a popular tool for creating immersive spectacle and functions as a crossing over from art installation to entertainment. This is evident in *Performance Light* (Chapter 4.5) which discusses the proliferation of light festivals and the popularity of spectacular immersive artworks that provide collective, sensory, technology controlled and driven environments. Also in this chapter the developments in interactive technologies and control demonstrate how lighting is adopted for audio-visual branding, amplifying the rock concert-going experience into a kind of hyper-collective experience, activity that is wholly in tune with the obsession for spectacle.

It could be argued that the technological sophistication employed in such ways brings an overwhelming sense of alienation rather than unity between people. Instead of

focusing on the live event there is a further distraction imposed on the spectator. And (as discussed in Exhibitions, Chapter 2.2.1) there is a suggestion that light as a medium in art becomes a distraction because it is “impossible to separate the atmosphere from the technology producing the effects or the desire to understand the trickery involved” (Ball, 2013). These aesthetic trends in light-based work are increasingly visible on social media which has become an outlet that manifests the spectacle in society. This connects back to the concept of the spectacle as outlined by Guy Debord in *The Society of the Spectacle* which argued that “All that once was directly lived has become mere representation” (Nunn, 2019). This is also an interesting point because as light-based work becomes less object oriented and more immersive, more sensory, more affective in real-time, so our everyday lived experience is increasingly mediated by screen-based technologies and light itself becomes mere representation (as discussed in Mediating Light, Chapter 4.4). Conversely, as technology advances and complex visual effects become more easy to achieve and so ubiquitous, it is the more intimate expressions and unusual techniques that emerge from experimental methods and processes which artists and designers are seeking in order to find poetry and construct alternative narratives that avoid the language of advertising or the realm of the ‘spectacular’.

In view of this perhaps, one of the connecting concepts between interviewed practitioners is the exploration and manifestation of the human relationship to light. It is evident that many of them engage with the narratives that light can evoke, both in terms of its material and immaterial properties but also underlying that is the human condition in all its complexities. By studying different practices, it is clear that light can activate subtle emotion or completely overwhelm the senses, depending on whether it is used to create spectacle, as a medium to entertain, to create immersive environments, or is presented as contemplative or functional.

One interesting aspect concerns when light is used to materialise form, for example, in Liliane Lijn’s work ‘Stardust Ruins’ (as discussed in Mediating Light in the *Library of Light* book) in which the virtually undetectable material Aerogel is made visible through the subtle projection of light on to its surface. In parallel to this, Anthony McCall’s use of projected animations of light become visible only through the use of haze which appears as a material in space, thus making the light almost material in and of itself (also discussed in Mediating Light). Another example from the book of the way light intersects with matter is also present in Rana Begum’s works in which natural light activates the combination of form (such as aluminium) and colour and through this symbiosis light itself is made material.

This has led me to conclude that there are essentially two different lenses through which to look at light based practice and bring different properties to the fore. This addresses issues of process and materiality – concerned with questions of aesthetics, institutional framing and exploring narrative and format.

To simplify: light based practice relies on the intrinsic materiality of light, whereas lighting-based practice that adopts light and lighting techniques and technologies is mostly processual and therefore considered immaterial. This is also true of

conceptually based artworks that rely on imaginative expressions of light and which are therefore also processual.

Political Light as a cultural and philosophical resource

Political Light was the first category to emerge during the research and became the subject of the first section of the book and ontology (see Chapter 4). As a category Political Light considers light as a productive tool and active messenger with the content of images/text conceived in response to current political situations. Within the discourse is examined the way in which light is used as a form of spectacle, power and control. Perceptions are constantly being altered or stimulated by electric or artificial light and there appears to be an increase in the use of artificial light in our cities and public spaces. In order to compete with the saturated light environments of our cities, artists and designers attempting to create a visual impact in public space are forced to take alternative and radical approaches to make their work visible. Whilst there is a fast-evolving role in light practices that involves new tools and canvases in cities and immersive spaces, through interaction and a sense of theatricality and spectacle, there is also an increase in light practices that engage in more socially productive ways, with light used to respond to and engage the public in the pressing political issues of the day such as climate change, migration, border control and social justice.

The use of projected light, searchlights and the hidden light of CCTV are all tools employed creatively, constructively and with political intent by practitioners in urban contexts. Robin Bell's projections of text on to buildings attempt to visually represent the issues we face in society. By attempting to tell the story visually this means that the projected images/texts can be used by journalists to talk about these issues, taking an abstract idea and making it positive. Bell uses illumination to create dialogue and over time has developed a language and aesthetic which is minimal, graphic and almost stylistically anonymous. Bell has always embraced the use of graphic text to create the clearest message possible and his work embodies the idea of light as a tool to create awareness and social change. In a recent skype conversation streamed live into a gallery in Washington DC, the two of us discussed how we reconcile what we use to make our work especially when we are discussing issues related to the environment and the climate crisis – in our cases working with light, it comes down to electricity, power and the grid.

An extension of this discussion is 'resource consciousness', in which light and in particular consideration of its sustainability as a medium in art and design is gaining ground and becoming a crucial part of the debate. Different rhythms, including pauses in activity, are important for all species including humans, and with the constant streaming of global media culture there is no respite, contradicting this natural phasing. If light as an active substance can be considered sustainable, and if its use as a creative medium is to avoid being part of the problem of visual noise,

there is an argument that suggests practitioners need to develop the subtleties of its language.

Research Question 2: Concerning archival practices, which curatorial / artist approaches best present dynamic and performative experiences produced by practitioners working with light and associated media?

Question 2 Aims:

- > To investigate a range of existing curatorial models that support light practice and the relationships between the social, cultural and technological factors that influence them.
- > To consider how light practice can be best archived, collected, categorised and experienced for accessible and comparative study.
- > To respond as an artist-curator to the medium of light through artistic methods and public outputs and consider how these approaches might offer additional insights into existing models and practices.

Summary of Findings

➤ **Documentation and categorisation of light practice**

As one of the earliest discernible forms of art employing new technologies, tracing the trajectory of light-based practices over the past six decades affords an insight into the passage between the aesthetic and the political. This offers further understanding through which to illuminate the potentialities within the contemporary media landscape. This research is timely since light is emerging at the turn of the new decade in the 21st century as a distinctive international art-form. It is hoped that the *Library of Light* book will contribute towards a shared historical framework.

Throughout the research I took on the various roles of interviewer, writer, editor, radio producer, and filmmaker, in order to think about and test appropriate curatorial strategies for a 'Library of Light'. These roles demonstrate how the material produced over the research period has required unique handling and in some cases led to engaging performatively with audiences. I began to identify archival and collection models that support light-based practices in active ways providing not only access to documentation of artworks but also enabling living encounters with works.

On the whole, the documentation and categorisation of creative practices that involve light are inconsistent, with few collections being dedicated to the medium. The Centre for International Light Art, Unna (as discussed in Chapter 2.3.1), is possibly the only existing physical collection of Light Art in Europe. The ontology of light practice developed through this research makes connections between practices to analyse how methods, processes and practices, have changed over time because of advances in lighting technologies, control and the adoption of light as a language in architecture, the public realm as well as in art and performance.

Whilst the challenges of collecting and archiving light-based practices have meant that collections of light-based art and design are scarce it is interesting to consider which approaches might best present the dynamic and performative aspects of these practices. Traditionally, and as discussed in the Contextual Review, a ‘collection’ groups together works under a unifying theme; they are curated, organised, categorised thematically in some way, whereas the ‘archive’ might house more paper based materials, and are invitations waiting for interpretation and response. Libraries tend to represent a public, democratic space and house many collections and archives containing knowledge of all kinds in the form of books, periodicals, film and music. In terms of the hierarchies of collecting, the library represents the form that is most open in terms of access, categorisation and structure. It is clear from considering different archival approaches that there are limitations to thematic categorisation and it would appear that a more open structure is more useful for the expansive and elusive nature of the subject and medium of light. Libraries are most often housed within a building and are material spaces, however, according to the British Museum “the familiar architecture of knowledge has dissolved” and what is required is a rethink of how technology can be used to allow new ways of visiting the galleries, virtual and physical (British Library, 2020 Strategy). In response to the position adopted by the British Library strategy is whether there is an argument to make a shift away from paper based archival processes in favour of purely digital records? The analogue remains accessible to everyone, whilst the digital is not, and so still presents barriers. It therefore, seemed interesting to propose a library as a framework, a conceptual construct that contains something that has both material and immaterial qualities such as light and the practices of light, and that this framework could in the future be expanded to manifest in virtual space. The vision for the project remains as a library, with open access and containing archived materials possibly to be made manifest in an online environment.

➤ **Exhibitions, Festivals, Spectacles and Audiences**

One of the challenges of curating light-themed exhibitions (as discussed in Chapter 2.2.1 in the section on Light Shows) is that displaying numerous works involving light can run the risk of appearing to be “an inventory of light art” with the instant appeal and advantage of luminosity rather than representing anything deeper. Perceived problems here include how the audience relate to the relationship between artworks and how the selected artworks contribute to an overall curatorial vision of the show. The sheer scope of an exhibition comprising electric light can mean that the eye begins to resist all the artifice after viewing the volume of works on show. There is also the continual awareness of the technology and special effects involved in a work involving light, the disenchantment of recognizing the automation of a controlled sequence and how this becomes obvious over time and how one kind of source might mesmerize more than another.

Research indicates that light based practices challenge audience spectatorship in ways that can invite participation. Light is a medium that materializes the interconnection between light and sight and is not necessarily the primary medium or content of an artwork (as the artist Anthony McCall might claim in his interview in *Mediating Light*), but one element of a multi-sensory experience that might involve

time, sound, site, form or narrative. Therefore, the management, orchestration and facilitation of spectator engagement with light based work – from the encouragement of ‘pilgrimages’ to site-specific works, focused interaction in the gallery, or on stage, random everyday encounters in the public realm, or on the street, can significantly contribute to experience and response. In some artworks it is the artists / designers who become the facilitators of aesthetic experience rather than the curatorial process.

There are many forms of spectatorship, from the spectatorial architecture of immersive artworks to the passive voyeurism of certain projects, but it might be recognised that much of the light-based art is an art dependent upon first-hand experience, with on-site time commitment and preferably over extended duration (hours, days, months or years). Perhaps this is the main reason why many of the narratives formed about these artworks and projects often lie in the hands of the curators, and yet the more one becomes involved in a practice or artwork the less it is possible to have an objective critical viewpoint.

Artists have re-appropriated spaces ordinarily used for advertising or entertainment and managed to transform their context, a kind of hacking of public space (as discussed in the work of Jenny Holzer in Chapter 4.3). This means the spectator or audience is surprised by the message or image they are presented with and this can be a successful way to engage the public with controversial material or politically motivated messages. Another example of the re-messaging of public space is through guerrilla-style projections that are temporary and bring a sense of humour and hope to current political issues (such as in the work of Robin Bell discussed in Chapter 4.3, Political Light), or subverting the media by making work for TV in which an unexpected transmission outside the usual format of broadcasting is able to reach and engage a wide public audience.

Geographic light, whilst not a separate section here, is an important research category with precedents in the Land Art movement and artists for whom natural light is integral to the concept and experience of an artwork. The immediacy of the encounter with such works is not determined by wider cultural references but by an affective experience. This is variously discussed in relation to the work of Nancy Holt (see Chapter 2.3.1, the ‘Sun Tunnels’ section in Collections, and also Chapter 3.3, Researching Geographic Light).

The concept of the collection at the Centre for International Light Art, Unna, is based on connecting the experience of each light installation to the bodily experience of light. As the director John Jaspers explains:

“The installations are not objects of detached viewing, but visitors passing through the light spaces experience new dimensions of light and of their own perception – with all senses.” Jaspers explains that the live experience is key – “its works of art can only be experienced in real-time – neither internet nor TV can convey the light effects, the smells, the multidimensional worlds of sound or the coolness of water drops”
(John Jaspers, 2012).

Within the field of light practice it has been interesting to consider the function of permanently displayed collections, artworks located at specific sites or artists inhabiting specific buildings, all with varying degrees of public access and stewardship. The relationship of the Dia Foundation in New York to the artists La Monte Young and Marian Zazeela, James Turrell, Nancy Holt and Walter de Maria, and also The Centre for International Light Art, Unna, presents a distinctive approach and curatorial strategy, rooted in long-term support and which combines archive, collection and exhibition. The works are all permanently on display at the various on- and off-site locations and function as living exhibitions, accessible to the public. These works could be considered as forms of Gesamtkunstwerk in that they are artworks that can be experienced only from within and where the border between spectator and artwork is erased. As in the work 'Sun Tunnels' in which one might be tempted to reconstruct the inner view and experience of the work from many positions through the vast amounts of available documentation, it necessarily becomes fragmentary. In the site-specific as in installation works within a museum, the spectator shares the same situation in that upon entering the stage they find themselves inside the spectacle. There is a crucial difference in this situation, however, which allows for the possibility of self-reflection compared to the theatre or music venue or the mass entertainment of a pop concert or film screening where the audience are end-on and the experience is forward-directed. In this case it is impossible for an audience to be self-reflexive.

5.3 CONTRIBUTION TO KNOWLEDGE

This research addresses a perceived gap in the existing literature on the subject of light as a creative medium. In considering Libraries, Archives and Collections it has been an interesting process to develop vocabulary, an ontology and a typographic as a way to explore the categorisation of practice. The method of collecting a vocabulary, developing an ontology and then creating a typographic demonstrates how, when contextualised, a series of words can become a mapping device to capture the role and meaning of light as practice.

A significant contribution to knowledge here is the 'light vocabulary' which then progressed into the 'ontology of light-based practice' within the book and was further developed typographically (see Chapter 4.2 and appendix) – in which particular qualities of the light-based practices examined and analysed within this research are visualised typographically – in order to convey the complexity of light across practices. The vocabulary, ontology and typographic have provided a route to thinking about light and darkness in relation to artists' practice. This has been helpful in shaping the research project narrative as well as inspiring future research. The ontology within the book is intended as a useful resource in making links and connections between practitioners. It focuses on the role of light in drawing attention to socio-political issues within culture and society; its reliance on and evolution alongside developments in contemporary media and computational technologies; and its contribution to the subject of light within art history (see Chapter 4: An Ontology of Artists' Practices with Light), in particular Political Light, Mediating Light and Performance Light. The research considers practices that have responded to

technological advancements across the field and so contribute to the aesthetic evolution of light as a creative medium. Typologies of light practice are often specific and are limited in terms of those practices that don't fit in neatly but extend such definitions. Being a visually affecting medium can also result in an underplaying of the ways in which light is used, the hidden meanings and symbolism being often left unexplained. It is evident that new interfaces for the subject and medium of light are needed by practitioners working in and across fields and also for audiences of this work. Light has evidently been slightly marginalised within art historical contexts and therefore by engaging with new phases of enquiry it will allow the field to open up to new practices, critiques and opportunities for social engagement.

5.4 REFLECTION ON METHOD

It was apparent through archival research that the premise of the majority of archives is to hold documentation of works and exhibitions rather than the original artworks. Engagement with the Nýló archive in Iceland (a fascinating time capsule of artists who have worked in Iceland since the archive began) helped to expand this standardised approach and demonstrate how a library model could incorporate the archiving/collection of various media.

The examination of the field from curatorial and artist perspectives identified both the diverse range of practice and the archival practices. The physical collecting and archiving of works produced by practitioners of light is challenging owing to the technological and temporal components, and is therefore less common than with those working in other media. This research identified institutions and collections whose roles include supporting, collecting, archiving, maintaining and presenting light based works that are site specific, performative, gallery based, online and in the public domain. Elements of ownership, spectatorship of projects and artworks, their production and distribution are all considered. The questions of what comprises an archive or a collection, what is needed to tell a story, what emerges through the process of uncovering material are all key to the way in which resources can contribute to knowledge and understanding of an art form or use of a medium.

The methods for researching this project were primarily dialogic and attuned to the analogue version of the project, centred around the ontology developed for the book. The book employed the metaphor of a library to perform the role of housing material that could form a collection/archive/exhibition, a strategic decision when thinking about the tension between the material and the immaterial nature of light-based practice and how this idea relates to digitisation. Consequently, if the project is to be developed further, it could take the form of an online, digitised library to provide fast and wide-ranging access to the diverse material produced during the research period. When dealing with light-based practices much of the materials are non-conventional. Digitising the materials produced during the research for incorporation as an online database, following a Rhizome model, for example, could provide fast knowledge access, although mediated through the screen. A structure for this would be based on further categorization and development of the ontology, while such a web-based project could provide a platform for commissioning future projects, curating online

exhibitions, hosting a podcast series or a blog for themed discussions. One challenge therefore in the context of performative works would be to consider how an online library of light could avoid marginalising the lived experience. The practice was manifested through a number of forms primarily involving encounters of a discursive nature and which were then distributed through publishing, radio broadcasts, texts, visual media and short film. The process of writing, conducting interviews and editing the publication, the activities associated with promoting the publication such as talks, and the other temporary projects provided opportunities for reflection and evaluation; from the exploration of curatorial models, and engaging with audiences and spectatorship, to taxonomies of light practice, and light as a language.

Radio proved to be an appropriate medium for the transmission of dialogic research which focused on collaborations in light and sound. Following the format of established radio programmes where interviews are interspersed with music or sound recordings proved to be a successful and alternative to the standard artists' talk with accompanying visuals. Instead, contributing artists were asked to describe the visual elements of their works for listeners. This also presented opportunity for reflection on the medium of light and whether it can be transmitted non-visually. These programmes were archived on the Resonance website and are therefore available to access for the foreseeable future (see link to radio broadcasts in Appendix 8.2). This has been an invaluable process for my own practice, allowing me to develop conceptually led work which acknowledges and makes reference to the rich history of light-based practice. My intention throughout has been to make the history of this field accessible to other practitioners so that they too can derive inspiration and situate their practice within this still-unfolding terrain.

5.5 FUTURE RESEARCH

It is crucial that in analysing practices involving light we demand new ways to analyse that are not solely reliant or connected with visuality, and that based on the cross-pollination of practices, we recognise the analysis of such work can also benefit from turning to other disciplines to expand critical vocabularies. The experience-based and discursive nature of this research, three years of interviews and discussion with artists, designers, curators, producers, audiences and students, has drawn attention to the potential of a language of light by generating a vocabulary that gives meaning to the medium of light and its creative use and authorship across practices and disciplines (for example, practices that involve art and science, or design and engineering). As one phase of research ends and a new research phase opens up, the research process has resulted in a shift to broaden my role as an artist-curator and writer, a practice which is currently coalescing into the development of new ideas and writing setting out the burgeoning landscape of 'political light' and certain areas overlooked in this volume of research, such as non-western light practice and the geographic specificity of light, both areas I intend to explore further in future research and projects. As an artist-curator the research has identified the relative effectiveness of a dialogic approach in considering existing practices and models in order to construct better future strategies around the medium of light.



Fig. 133: Mark Titchner 'Light More Light' (2003) Photo courtesy Mark Titchner

6.0 LIST OF REFERENCES

Abulafia, Y. (2015) *The Art of Light on Stage*. London: Routledge.

Agamben, G. (1993) An Essay on the Destruction of Experience In: *Infancy and History: The Destruction of Experience*. London, New York: Verso.

Agnarrsson et al., (2013) *Archive on the Run: The Living Art Museum*.

Anacker, R. (2012) Introduction. *The Essence of Light*. Centre for International Light Art, Unna (2002). Cologne: Wienand Verlag.

Aries, Deller, Sims (2019) *Wiltshire Before Christ*. London: The Store X.

Auer, J. (2016) Interview in Seydisfjordur with Jo Joelson August, 2016..

Austin, J. L. (1955) Art Term: Performativity. Tate Gallery website.
Available from: <https://tate.org.uk>

Baudrillard, J. (2008) 'Simulation and Transaesthetics: Towards the Vanishing Point of Art', *International Journal of Baudrillard Studies*, vol.5, no.2 (July 2008).

Ball, P. (2013) From Symbol to Substance: The Technologies of Light. *Light Show*, exhibition catalogue. London: Hayward Gallery.

Battaglia, A. (2017) *Art News*. (Battaglia, Ed.)
Available from: <http://www.artnews.com/2017/10/31/the-artnews-accord-jessica-morgan-and-rebecca-rabinow-in-conversation-10-31-17/> [Accessed 3 July 2019].

Bean, A. and Wilson, R. (2017) Interview with Jo Joelson, Banyard Road, London, 11 July 2017.

Becker, K. (2006) 'Luzboa'. In: *Lisbon Invented by Light*, International Biennale on the Theme of Light 2006. Guetersloh: VIA-Verlag (2007).

Bell, R. (2017) Interview with Jo Joelson by Skype, 19 December 2017.

Bell, T. (2004) Fluorescent Light as Art in: *Dan Flavin: A Retrospective*. Hayward Gallery, London. New Haven and London: Yale University Press.

Berleant, A. (2011) 'The aesthetics of art and nature'. In: *The Aesthetics of Natural Environments*. Ed. Carlson, Allen.

Berleant, A. (2004) *Mississauga*. Canada: Broadview Press, pp.76-89.

Bishop, C. (2012) *Artificial Hells: Participatory Art and the Politics of Spectatorship*. London: Verso.

- Blome, G. & Wijers, G** (2010) Visibility, Distribution and Memory through Networks and Collaboration, in Dekker, A. (ed.)
- Bolt, B.** (2004) *Art Beyond Representation: The Performative Power of the Image*. London: I.B. Tauris.
- Bourriaud, N.** (1998/2002) *Relational Aesthetics*. Paris: Les Presses du Réel.
- Boyle, S.** (1978) *Light Fantastic 2*. Catalogue for the second exhibition of holography at the Royal Academy of Arts, London: Bergstrom + Boyle Books.
- Braedikow, T.** (2013) Light Matters: Europe's Leading Light Festivals. *Arch Daily*. 29 October. Available from: <https://www.archdaily.com/443556/>
- Brox, J.** (2010) *Brilliant: The Evolution of Artificial Light*. London: Souvenir Press.
- Bryson, N.** (2016) 'Books, Too, Have Their Destinies: Wenyon & Gamble's Bibliomancy', In *Bibliomancy: An Exhibition of Holograms*, exh. cat., Boston, MA: The Boston Athenæum, pp.10–16.
- Burns, A.K.** (2018) Artist on Artist Lecture - Video: A.K. Burns on Nancy Holt. Dia: New York, 27 November.
- Caeiro, M.** (2017) Interview with Jo Joelson, Lisbon.
- Carlson, A. Berleant, A.** (eds.) (2004) Introduction: The aesthetics of nature
In: *The Aesthetics of Natural Environments*. Mississauga, Canada: Broadview Press, pp.11-42.
- Carlson, A.** (2004) Appreciation and the Natural Environment. In: *The Aesthetics of Natural Environments*. Ed. Carlson, Allen, and Berleant, Arnold. Mississauga, Canada: Broadview Press. pp.63-76.
- Carlson, A.** (1993) Appreciating Art and Appreciating Nature. In: *Landscape, Natural Beauty and the Arts*. Ed. Gaskell, Ivan. Kemal, Salim. Cambridge: Cambridge University Press.
- Carlson, A.** (2009) *Nature and landscape: An Introduction to Environmental Aesthetics*. New York: Columbia University Press.
- Candy and Edmonds.** (2018) Practice-based Research in the Creative Arts: Foundations and Futures from the Front Line. *Leonardo*, vol. 51, no. 1, pp63-69. MIT Press.
- Casson, H.** (1977) Introduction. *Light Fantastic*. Catalogue for the first exhibition of holography at the Royal Academy of Arts, London: Bergstrom + Boyle Books.
- Chapman, R.** (2017) *Psychedelia and Other Colours*. London: Faber & Faber.
- Connor, M.** (2016) Net Art Anthology Launches Today, Net Art Anthology, 27 October, 2016. Available from: <https://rhizome.org/editorial/2016/>

Constable, P. (2017) Interview with Jo Joelson, Covent Garden, London, 30 August 2017.

Cotter, H. (2008) Well, It Looks Like Truth, Art Review. *The New York Times*, 18 January 2008, pp.31.

Couldry, N. and Hepp, A. (2017) *The Mediated Construction of Reality*. Cambridge, UK: Polity Press.

Corcoran, H. & Graham, B. (2014) Self-collection, Self-exhibitions? Rhizome and the New Museum, in Graham, B. (ed.) *New Collecting: Exhibiting and Audiences after New Media Art*. Farnham, Surrey, England; Burlington, Vermont: Ashgate. pp.97–110.

Cowley, S. and Joelson, J. (2006) Little Earth: A Solar-Planetary Investigation, in *Arts and Science Research Fellowships* a special section of *Leonardo*, ed. by Ferran, B., Leach, J., White, T. MIT Press.

Cumming, L. (2017) A Certain Kind of Light Review - Let There Be Mirror Balls. Towner Art Gallery, Eastbourne. *The Observer*, 29 January.

Available from: <https://www.guardian.com/artanddesign/2017>

Cumming, L. (2013) Light Show Review. Hayward Gallery, London. *The Observer*, 3 February.

Available from: <https://www.guardian.com/artanddesign/2013>

Donoff, E. (2016) One-on-One with Roger Narboni Interview with lighting designer Roger Narboni, principal of Concepto. *Architectural Lighting*, 17 August.

Available from: <https://www.archlighting.com/industry/one-on-one/>

Edensor, T. (2017) *From Light to Dark: Daylight Illumination and Gloom*. Minneapolis: University of Minnesota Press.

Eichorn, K. (2008) Archival Genres: Gathering Texts and Reading Spaces, *Invisible Culture, An Electronic Journal for Visual Culture*. Issue 12: The Archive of the Future/The Future of the Archive, May 2008. Available from: https://rochester.edu/in_visible_culture/Issue_12

Elcott, Noam, M. (1978/2016) *Artificial Darkness: An Obscure History of Modern Art and Media*. Chicago: University of Chicago Press.

Ellis, C.; Adams, T., E. & Bochner, A. P. (2010). Autoethnography: An Overview [40 paragraphs].

Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 12(1), Art. 10.

Available from: <http://nbn-resolving.de/urn:nbn:de:0114-fqs1101108>.

Farquhar, A. (2017) Interview with Jo Joelson at NVA, Glasgow, 2 March 2017.

Ferro, S. (2013) The Mind-Bending Science of James Turrell's Art, *Popular Science*, 24 September.

Available from: www.popsci.com/science/article/2013

Foster, H. (2004) *An Archival Impulse*. Fall. no. 110, pp.3-22. Cambridge, Mass: MIT Press.

Franklin, B. (1785) Meteorological Imaginations and Conjectures. *Memoirs of the Literary and Philosophical Society of Manchester*. 1st series.

Friz, A. and Korabiewski, K. (2014) Trilogy for Night and Radio. A Collaborative exchange between two travelling sound artists. 23 December 2014.
Available from: radioartnet.net/11/2014

Ganser, K., Sedlack, A. and Ruth, U. (2004/2010) The Concept - Rooms as Beings and Light as Material in: *The Essence of Light*. Centre for International Light Art Unna (2002) Cologne: Wienand Verlag.

Gebbers, A.C. (2010) In the Labyrinth of Meaning, essay in: *The Library of Babel, In and Out of Place*, a publication produced to coincide with the exhibition at 176 Zabłudowicz Collection 25 February-13 June 2010, p.12.

Godfrey, M. (2012) *Alighiero E Boetti*, Ebook. London: Yale University Press.

Govan, M. and Bell, T. (2005) *Dan Flavin, A Retrospective*. Dia Art Foundation, New York, National Gallery of Art Washington. New Haven and London: Yale University Press.

Govan, M. et al., (2005) *Dan Flavin: The Complete Lights, 1961-1996*. New Haven: Yale University Press.

Groys, B. (2013) Entering the Flow: Museum between Archive and Gesamtkunstwerk, *eflux Journal* #50 December 2013.
Available from: <https://www.eflux.com/journal/50>

Guasch, A.M. (2011) Art and Archive, 1920-2010. Genealogies, typologies and discontinuities, *Research on Visual Culture*, Quarterly magazine, July-September 2011.
Available from: www.globalartarchive.com/anna-maria-guasch/recent-work

Gysin, B. (1958) Journal entry, 21 December 1958, P. Cecil (ed.) *Flickers of the Dreamachine* (1996). Hove: Codex.

Hanhardt, J. (1990) Report on The International Congress on Art in Holography, for The Board of Regent's Saint Mary's College Notre Dame, Indiana, published 1991.
Available from: <http://www.art-inholography.org> [Accessed 11 January 2016]

Hansen, M. (2004) *New Philosophy for New Media*. Cambridge, Mass: MIT Press.

Heilbron, J.L. (2018) *The History of Physics. A Very Short Introduction*. Oxford: Oxford University Press.

Henderson, L. D. (2019) Illuminating Energy and Art in the Early Twentieth Century and Beyond: From Marcel Duchamp to Keith Sonnier, in: Kahn, D. (ed.) *Energies in the Arts*. Cambridge, Mass: MIT Press, p.127-169.

- Hirsch, R.** (2005) 100 Suns and the Nuclear Sublime: An Interview with Michael Light. *Afterimage*, July/August 2005. Retrieved 24 June, 2019, from lightresearch.net: Available from: https://lightresearch.net/interviews/pdf/MICHAEL_LIGHT.pdf
- Holt, N.** (1977) Sun Tunnels. Retrieved 3 July, 2019, from *Artforum.com*: Available from: <https://www.artforum.com/print/197704/sun-tunnels-3599>
- Horn, R.** (2009) *Vatnasafn / Library of Water*. London and Göttingen: Artangel/Steidl.
- Howard Wise Gallery**, (1967) Lights in Orbit pamphlet, Howard Wise Gallery Records, Archives of American Art, Smithsonian Institute. Available from: www.eai.org
- Ingleby, R.** (1997) A Quality of Light review *Independent*, 1997.
- Ingold, T.** (2011) *Being Alive: Essays on movement, knowledge and description*. London and New York: Routledge.
- Jackson, D.** (2015) *SuperLux: Smart Light Art, Design and Architecture for Cities*. London: Thames and Hudson.
- Janssens, A.V.** (2004) Catalogue for the exhibition 8'26' at Musée d'art contemporain, Marseille, 2003–2004. Paris: École nationale supérieure des Beaux-Arts.
- Jaspers, J.** (2012) Interview with John Jaspers. *The Essence of Light*. Centre for International Light Art Unna, (2002) Cologne: Wienand Verlag. pp.12-16.
- Jones, C.** (2010) Do it Yourself: Distributing Responsibility for Media Arts Preservation and Documentation, in Dekker, A. (ed.) *Archive2020: Sustainable Archiving of Born-Digital Cultural Content*. Amsterdam: Virtueel Platform. pp.40-59.
- Kahn, D.** (ed.) *Energies in the Arts*. Cambridge, Mass: MIT Press.
- Kant, I.** (1987) *Critique of Judgment*. Trans. Pluhar, Werner S. Indianapolis/Cambridge: Hackett Publishing Company.
- Kant, I.** (2002) Over schoonheid. Introduction Jacques De Visscher. trans. Jean-Pierre Rondas and Jacques De Visscher. Amsterdam: Boom.
- Klinenberg, E.** (2018) *Palaces for the People: How to Build a More Equal and United Society*. New York: Penguin Random House.
- Lauson, C.** (2013) *Light Show*. London: Hayward Gallery.
- Lauson, C.** (2013) Light Art: An Immaterial Material, in *Light Show*, exhibition publication, Hayward Gallery, London, 2013.

- Lauson, C.** (2017) Cliff Lauson Interview with Jo Joelson in *Library of Light: encounters with artists and designers*, London: Lund Humphries.
- Levere, J.L.** (2015) Dan Flavin's 'Icon' Constructions on Display in Bridgehampton, *The New York Times*. 13 August.
Available from: <https://www.nytimes.com/2015/08/16/nyregion/dan-flavins-icon-constructions-on-display-in-bridgehampton.html>
- Light, M.** (2003) *100 Suns*. London: Jonathan Cape.
- Light, M.** (2018) Interview with Jo Joelson via phone from San Francisco, June 2018.
- Lozano-Hemmer, R.** (2017) Interview with Jo Joelson at Manchester International Festival, July 2017.
- Marriage, H.** (2017) Interview with Jo Joelson at Artichoke, Toynbee Hall, London 23 May.
- McQuire, S.** (2005) Immaterial Architectures: Urban Space and Electric Light, *Space and Culture*, vol.8, no.2 (May), pp.126–40.
- McQuire, S.** (2008) *The Media City: Media, Architecture and Urban Space*. London: Sage Publications.
- Mela Foundation** (2019) Dream House, Sound and Light Environment, New York.
Available from: <https://www.melafoundation.org>
- Merleau-Ponty, M.** (1945) *Phenomenology of Perception*. London and New York: Routledge.
- Moholy-Nagy, L.** (1947) *Vision in Motion*. Chicago: Theobald.
Available from: https://monoskop.org/images/0/Od/Moholy-Nagy_Laszlo_Vision_in_Motion.pdf
- Moore, J.** (2012) Foreword. *Pictures from the Moon: Artists Holograms 1969-2008*. Exhibition Broadsheet. New York: New Museum.
- Morgan, J.** (2016) Live from the Dan Flavin Institute, *artsy.com* 30 July 2016.
Available from: [facebook.com/artsy/videos/live-from-the-dan-flavin-art-institute/](https://www.facebook.com/artsy/videos/live-from-the-dan-flavin-art-institute/)
- Mondloch, K.** (2010) *Screens: Viewing Media Installation Art. 30 Electronic Mediations*. Minneapolis: University of Minnesota Press.
- Moynahan, G.B.** (2012) Holography. in: *Pictures from the Moon: Artists' Holograms 1969-2008*. Exhibition Broadsheet. New York: New Museum.
- Nadel, D.** (2010) *Seriously Ecstatic: Joshua White at the Fillmore East, 1968–70*. New York: Sound-screen Design.
- Nunn, E.** (2019) Social media as an extension of Guy Debord's *The Society of the Spectacle* (1967) *JAWS: Journal of Arts Writing by Students*, volume 5, number 1, 1 March 2019, pp.79-91.
London: Intellect.

- Osbelt, K.** (ed.) (2012) *The Essence of Light*. Centre for International Light Art, Unna (2002) Cologne: Wienand Verlag.
- Palmer, S.** (2013) *Light*. London: Palgrave Macmillan.
- Parikka, J.** (2012) what is media archaeology. Retrieved 3 July 2019
Available from: <https://jussiparikka.net/2012/05/08/what-is-media-archaeology-out-now/>
- Paterson, K** (2018) Interview with Jo Joelson via phone from Berlin. Published in: *Library of Light: encounters with artists and designers*. 2019. London: Lund Humphries.
- Pepper, A.** (2017) Interview with Jo Joelson at Nottingham Trent University, 13 July 2017.
- Piène, Otto** (2019) The Proliferation of the Sun: On Art, Fine Arts, Present Art, Kinetic Light, Light Art, Scale, *Now and Then*, *Arts Magazine* 41 (Summer 1967): 29. Cited by Henderson, L. D. (2019).
- Pillow, W.S.** (2010) Dangerous Reflexivity: Rigour, Responsibility and Reflexivity in Qualitative Research. In: *The Routledge Doctoral Student's Companion*, edited by Pat Thomson and Melanie Walker, pp.270–82. London: Routledge.
- Popper, F.** (1966) Introduction In: *Kunstlichtkunst*, exhibition catalogue, van Abbemuseum, Eindhoven.
- Popper, F.** (2007) *From Technological to Virtual Art*. Boston: MIT Press.
- Pontégnie, A.** (2004) Nothing but Space, In: Ann Veronica Janssens 8' 26". Paris: Ecole nationale supérieure des beaux-arts.
- Pracht, A.** (2019) Border Tuner creates bridges of light across El Paso-Juarez sky so residents of both sides can listen to each other. *Borderzine Reporting Across Frontiers*, 24 October.
Available from: <https://borderzine.com/2019/10/border-tuner-to-create-bridges-of-light-across-el-paso-juarez-sky-so-residents-of-both-sides-can-listen-to-each-other/>
- Rexer, R.** (2019) Nancy Holt's Sun Tunnels: Interview with Dia curator Kelly Kivland
[Online] Available from: <https://www.sculpturenature.com/en/nancy-holts-sun-tunnels-land-art-dia-kelly-kivland/> [Accessed 8 April 2019]
- Rodda, M.** (2009/10) In: The Emancipated Spectator, Jacques Rancière, *Art and Research a Journal of Ideas, Contexts, Methods*, Volume 3 number 1. Winter 2009/10.
[Online] Available at: <http://www.artandresearch.org.uk/v3n1/pdfs/rodda.pdf>
[Accessed 15 April 2019].
- Rossenova, L.** (2017) History of the ArtBase, in: Discovery Phase & User Research. July 2017.
- Ryan, T. R.** (2014) Wise Lights. *Art in America*, Oct 1.
Available from: <https://www.artnews.com/art-in-america/> [Accessed 10 Dec 2019].

- Rugoff, R.** (2013) Foreword to Light Show, exhibition catalogue. London: Hayward Gallery.
- Ruth, U.** (2012) in Osbelt, K. (ed.) *The Essence of Light*. Centre for International Light Art Unna (2012) Cologne: Wienand Verlag.
- Searle, A.** (2009) How Like the World Was All over After All, in: Roni Horn, *The Library of Water / Vatnasafn*. London and Göttingen: Artangel / Steidl, pp.34-43.
- Schielke, T.** (2013) Light Matters: Europe's Leading Light Festivals. *Arch Daily*. 29 October. Available from: <https://www.archdaily.com/443556/>
- Schuld, D.** (2011) Practically Nothing: Light, Space and the Pragmatics of Phenomenology, in: (ed.) Robin Clark, *Phenomenal: California Light, Space, Surface*. Berkeley: University of California Press.
- Selvin, C.** (2019) Nancy Holt's Land Art Sculpture 'Sun Tunnels' to be Conserved by Dia Art Foundation. *Artnews*. 23 April. Available from: <https://artnews.com/art-news/nancy-holt-sun-tunnels-dia-art-foundation>
- Smith, D.** (2017) Interview with Jo Joelson and Clyde Lawson at ISO Design Studio, Glasgow, 5 December 2017.
- Smith, D.** (2011) Models of Open Source Production Compared to Participative Systems in New Media Art, University of Sunderland.
- Smith, R.** (1998) In the Eye of the Collector, Seeking the Innate Order or Chaos, Art Review. *New York Times*, 31 July.
- Sooke, A.** Pipe dreams: Nancy Holt's modern-day Stonehenge, Alastair Sooke, *Telegraph*, 2012.
- Spence, R.** (2015) Roni Horn's Seductively Perplexing Work. Financial Times. <https://www.ft.com/content/8002ab32-03ab-11e5-a70f-00144feabdc0> [Accessed 3 December 2019].
- Stillman, N.** (2003) Dream House. *The Brooklyn Rail*. [Online] Available at: <https://melafoundation.org> [Accessed 24 June 2019]
- Strickland, E.** (1993) *Minimalism: Origins*. Bloomington: Indiana University Press.
- Szczelkun, S.** (2013) MetaMute, London.
- Titchner, M.** (2018) Interview with Jo Joelson at Mark Titchner's studio, Forest Hill, London, 26 January.
- Turrell, J.** (2012) in Osbelt, K. (ed.) *The Essence of Light*. Centre for International Light Art Unna Cologne: Wienand Verlag.
- Unesco, (2015)** International year of Light and Light-based technologies. Available from: www.light2015.org/Home/Light/ForDevelopment/UNESCO-actions.html

Virilio, P. (1984 [1991]) *The Lost Dimension*; first published as *L'espace critique* (Paris: Christian Bourgois, 1984) translated by Daniel Moshenberg. New York: Semiotext(e)

Von Hantelmann, Dorothea. (2014) *The Experiential Turn*. In *On Performativity*, edited by Elizabeth Carpenter. Vol. 1 of Living Collections Catalogue. Minneapolis: Walker Art Center.

Wagner, A. (2013) *Vision Made Visible*, in: *Light Show*, London: Hayward Gallery.

Watson, A. (2018) Interview with Jo Joelson by Skype and email from New York, February/March 2018.

Weibel, P., Jansen, G. (eds.) *Light Art from Artificial Light: Light as a Medium in 20th and 21st Century Art*. Berlin: Hatje Cantz.

Wenyon, M. (2017) Interview with Jo Joelson at London Fieldworks studio, Hackney, 14 August 2017.

White, G., Jesse, E. (1870) *The Natural History of Selborne: with observations on various parts of nature and the Naturalist's calendar*. Bell & Daldy.

White, J. (2019) Interview with Jo Joelson, New York.

Wigley, M. (n.d.). *discursive-versus-immersive-museum-massage*.

Retrieved 3 July, 2019,

Available from: <https://stedelijkstudies.com>: <https://stedelijkstudies.com/journal/>

Zec, P. (1987) *Holographie: Geschichte, Technik, Kunst*. Cologne: Dumont Buchverlag.

Zec, P. (1990) Report on The International Congress on Art in Holography, for The Board of Regent's Saint Mary's College Notre Dame, Indiana, published, 1991.

Available from: <http://www.art-inholography.org> [Accessed 16 September 2019]

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Fig. 73: Spreads of the **Nýló Archive** Printed in: Nylistasafnid / A Retrospective: The Living Art Museum 1978-2008 (2010) Published by The Living Art Museum, Reykjavik, Iceland (2010)

Fig. 74: **Publications, Catalogues & Leaflets**

1. **The Joshua Light Show** The Joshua Light Show Artist Music Journals, A Curated Series from Soundscreen Design ©Joshua White 2010 ©Dan Ladel 2010
2. **Laura Buckley** 'Repeldarker' in the book *For A Partnership Society*. HRM199 / Haroon Mirza / Elizabeth Neilson. Published by Zabłudowicz Collection ©the authors and Zabłudowicz Art Projects, 2018
3. **Jo Joelson** Iceland Sketchbook 2019 ©Jo Joelson

4. **Roni Horn** Vatnasafn / Library of Water. Co-published by Artangel and Steidl, 2007
5. **Karlotta Blöndal** Voices Through Darkness, Harbinger project space, Reykjavik, 2015
6. **Ragnar Helgi Ólafsson** My Father's Library Published by Bjartur, Reykjavik, 2017
7. **Sverrir Guðjónsson** Twilight Songs. CD Cover 2020
8. **Jo Joelson** In Residence at the Library of Water 2019. Photo by Jetson ©Jo Joelson

Fig. 75: **Haroon Mirza & Jack Jelfs at CERN** Photo Sophia Bennett/CERN
Photo courtesy Mirza and Jelfs

Fig. 76: **The Wave Epoch Performance**, Brighthelm Centre, Brighton, 2018
Photo XC Photography Courtesy Mirza and Jelfs

Fig. 77: **Laura Buckley** Photo courtesy Laura Buckley

Fig. 78: **Joshua Light Show** (1967-68) L to R: Stephanie Magrino, Joshua White, William Schwarzbach, Jimms Nelson, Jane Nelson, Herb Dreiwitz and Thomas Shoesmith www.joshualightshow.com ©2017

Fig. 79: **Joshua White** New York (2019) Video still Jo Joelson

Fig. 80: **Joshua Light Show** The Mothers of Invention, Minnesota Theatre Center (1967) Photo Herb Dreiwitz, From 'The Joshua Light Show Artist Music Journals, A Curated Series from Soundscreen Design, ©Joshua White 2010

Fig. 81: **Joshua Light Show** Terry Reid plays into a liquid and light explosion (1967) Photo Herb Dreiwitz
From: 'The Joshua Light Show Artist Music Journals, A Curated Series from Soundscreen Design ©Joshua White 2010

Fig. 82: **Willie Williams** video still from Lumia Domestica at Wallspace, London (2010)
www.youtube.com/watch?v=XIRY0guDN7E

Fig. 83: **Willie Williams** Screengrab from Stiff Little Fingers and U2 concert, BBC News NI (1981)
www.bbc.co.uk/news/av/uk-northern-ireland-45103507/u2-and-stiff-little-fingers-rock-mandela-hall-in-1981

Fig. 84: **Willie Williams** Screengrab from Stiff Little Fingers and U2 concert, BBC News NI (1981)
www.bbc.co.uk/news/av/uk-northern-ireland-45103507/u2-and-stiff-little-fingers-rock-mandela-hall-in-1981

Fig. 85: Flyer for **Collaborations in Light and Sound** on Resonance 104.4FM (2019)

Fig. 86: Video still from interview with Sverrir Guðjónsson, Reykjavik (2018)

Fig. 87: Video still from interview with Ragnar Helgi Ólafsson, Reykjavik (2018)

Fig. 88: **Jo Joelson/London Fieldworks** 'Skuggerwerk/Shadow Work', Seydisfjörður, Iceland (2016)
Photos Jo Joelson

Fig. 89: **London Fieldworks** 'Polaria Fieldwork' (noon and midnight) Northeast Greenland, 2001
Photos Anthony Oliver, courtesy London Fieldworks

Fig. 90: View from **Vatnasafn/Library of Water**, Stykkisholmur, Iceland, April 2019

Fig. 91: 'Jo Joelson during artist residency at Vatnasafn/Library of Water', Stykkisholmur, Iceland, April 2019
Photo Jo Joelson

Fig. 92: Still of **Skaffell Center for Visual Art**, Seydisfjörður, Iceland
from 'The Darkest Day' film by London Fieldworks (2017/18) courtesy London Fieldworks

Fig. 93: Video stills from 'Hóll' from the exhibition **Short Films about Light and Dark**, Seydisfjörður, Iceland, (2017) courtesy London Fieldworks

Fig. 94: Video stills from **'The Darkest Day'** film by London Fieldworks shot in Seydisfjördur, Iceland (2017/18) courtesy London Fieldworks

Fig. 95: Video stills from interviews with Seydisfjördur residents, during residency at **Skafthell Center for Visual Arts**, Iceland (2017) courtesy Jo Joelson

Fig. 96: Video still from **'The Darkest Day'** film by London Fieldworks shot in Seydisfjördur, Iceland (2017/18) courtesy London Fieldworks

Fig. 97: **Publications, Catalogues & Leaflets**

1. **Susan Hiller** 'Magic Lantern' 1987. From the Exhibition Publication, Tate Britain 1st February - 15th May 2011 ©Tate 2011

2. **Gustav Metzger** 'Liquid Crystal Environment (Detail)'. From 'Decades 1959-2009'. Serpentine Gallery, London 29th September - 8th November 2009 ©Serpentine Gallery, London. Koenig Books, London and authors

3. **Iván Navarro** 'White Electric Chair' (2006) from 'Threshold' Book ©Edizioni Charta, Milano 2009 ©Iván Navarro

4. **Mark Boyle & Joan Hills** 'The Soft Machine in the Sensual Laboratory Liquid Light Environment (1967) 'Journey to the Surface of the Earth Mark Boyle's Atlas and Manual' published as part of an exhibition at the Haags Gemeentemuseum 16th May - 12th July 1970, Edition Hansjörg Mayer Cologne, London, Reykjavik

5. **Joshua Light Show** Portrait of Joshua White 1969. Photo Herb Dreiwitz. From 'The Joshua Light Show Artist Music Journals, A Curated Series from Soundscreen Design ©Joshua White 2010

6. **Haroon Mirza, HRM199** 'For a Partnership Society' Haroon Mirza 2018. 'For A Partnership Society'. HRM199 / Haroon Mirza / Elizabeth Neilson. Published by Zabłudowicz Collection ©the authors and Zabłudowicz Art Projects, 2018

7. **Liliane Lijn** Early Work 1961-69, RCM Galerie, 4th June - 20th July 2015 ©Liliane Lijn

8. **Anthony McCall** Exhibition Leaflet, Lismore Castle Arts, Ireland, 1st April - 15th October 2017

9. **Katie Paterson** A Place That Exists Only In Moonlight (2019) ©Kerber Verlag Bielefeld/Berlin & Katie Paterson

Fig. 98: **Library of Light** book by Jo Joelson published by Lund Humphries, London (2019)

Fig. 99: Light Typographic Artwork by **Ian 'Swiftly' Swift** (2020) ©Jo Joelson/Ian Swift

Fig. 100: **Jenny Holzer** 'Xenon for Bregenz. Truth Before Power' (2004) Photo courtesy Sprueth Magers

Fig. 101: **Robin Bell** 'The President of the United States Is a Known Racist and Nazi Sympathiser' (2017) Digital 100ft video projection, Newseum, Washington DC. Photo Liz Gorman, courtesy Bell Visuals

Fig. 102: **Robin Bell** 'Pay Trump Bribes Here' (2017) Digital 75ft video projection, Trump Hotel, Washington DC. Photo Liz Gorman, courtesy Bell Visuals

Fig. 103/104: **Yoko Ono** 'Imagine Peace Tower, Videy Island, Reykjavik (2007 — ongoing) Photo TetsuTo Hamada ©Yoko Ono, courtesy Yoko Ono

Fig. 105: **Rafael Lozano-Hemmer** 'Voz Alta, Relational Architecture 15' Memorial for the Tlatelolco Student massacre, Mexico City (2008) Photo by Antimodular Research. Courtesy Rafael Lozano-Hemmer

Fig. 106: **Rafael Lozano-Hemmer** 'Voz Alta, Relational Architecture 15' Memorial for the Tlatelolco student massacre, Mexico City (2008) Photo Antimodular Research. Courtesy Rafael Lozano-Hemmer

Fig. 107: **Manu Luksch** Film stills from: 'Faceless, AT/UK' (2007) Narrated by Tilda Swinton, soundtrack by Mukul, Photo courtesy Manu Luksch

Fig. 108: **Charles Gatewood** 'Brion Gysin and his Dream Machine' (1958)
Vertigo Op Art and A History of Deception 1520 to 1970 Published by Walther Konig, Koln, Germany ©2019

Fig. 109: **Mark Titchner** 'The Only Language is Light' (2003) Courtesy Mark Titchner

Fig. 110: **Liliane Lijn** 'Crystal Clusters (Rhomboid)' (1972) ©Liliane Lijn
Courtesy Liliane Lijn, DACS / Artimage 2018 Photo Plastiques

Fig. 111: **Liliane Lijn** 'Solar Hills' (2005) Photo ©Liliane Lijn, all rights reserved, DACS 2018

Fig. 112: **Wenyon and Gamble** '54 Holograms of Books' Mangan Metz Gallery, New York (1998)

Fig. 113: **Andrew Pepper** 'Coherent Points', with artist's head (2013) Photo courtesy Andrew Pepper

Fig. 114: **ISO** '7 Sirens' VR Installation and viewer (2017) Photos Rueben Paris, courtesy The ISO Organisation

Fig. 115 / 116: **Anthony McCall** 'Swell' Installation View, Nevada Museum of Arts (2016)
Photo Chris Holloman, courtesy Anthony McCall

Fig. 117: **James Turrell** 'Third Breath' Centre for International Light Art, Unna (2005/2009) Centre for International Light Art, Unna (2002) From *The Essence of Light* Publication.
Published by Wienand Verlag, Cologne

Fig. 118: **James Turrell** 'Air Mass' (1993) Light Show, Hayward Gallery, London 2013
Published by Hayward Publishing ©Southbank Centre 2013

Fig. 119: **Ann Veronica Janssens** 'Jamaican's Colours for Mademoiselle Léone' Kunsthalle, Bern (2003) Anne Veronica Janssens 8' 26" published by MACMusée d'art Contemporain on the occasion of the exhibition 8' 26" at MAC, Marseilles (8th November 2003 - 8th February 2004).

Fig. 120: **Olafur Eliasson** 'Room For One Colour' National Gallery (2017) Photos Jo Joelson

Fig. 121: **NVA** 'Speed of Light' Arthur's Seat, Edinburgh (2012) Photo Alaisdair Smith,
courtesy NVA/Alaisdair Smith

Fig. 122: **Gustav Metzger** 'Liquid Crystal Environment' (1966-2018) Collection du Musée d'art Contemporain, Lyon. Photo Blaise Adilon, courtesy MAC Lyon

Fig. 123: **Mark Boyle & Joan Hills** 'Exploding Colour and Light' from a Sensual Laboratory, liquid light environment, (1967) Photo John Claxton in: *Journey to the Surface of the Earth Mark Boyle's Atlas and Manual* published as part of an exhibition at the Haags Gemeentemuseum 16 May - 12 July 1970 edition Hansjorg Mayer Cologne, London, Reykjavik

Fig. 124: **Mark Boyle & Joan Hills** 'The Soft Machine in the Sensual Laboratory Liquid Light Environment' (1967) *Journey to the Surface of the Earth Mark Boyle's Atlas and Manual* published as part of an exhibition at the Haags Gemeentemuseum 16th May - 12th July 1970, Edition Hansjorg Mayer Cologne, London, Reykjavik

Fig. 125: **Bow Gamelan Ensemble** 'Damn Near Run Thing' (1988) Photo Ed Sirrs,
courtesy Anne Bean and Richard Wilson

Fig. 126: **Radiohead** 'A Moon-Shaped Pool' (2017) Photo Andi Watson, courtesy Andi Watson

Fig. 127/128: **Radiohead** 'A Moon-Shaped Pool' (2017) Photos Andi Watson, courtesy Andi Watson

Fig. 129: **Jason Bruges Studio** 'The Shard' New Year's Eve (2014) Photo courtesy Jason Bruges Studio

Fig. 130: **Katie Paterson** 'Ancient Darkness TV' (2009) Photo Peter Mallet, courtesy Haunch of Venison, London

Fig. 131: **Haroon Mirza** 'Chamber for Endogenous DMT (Collapsing the Wave Function)' (2017)
From the exhibition For A Partnership Society at the Zabudowicz Collection, Photo courtesy Haroon Mirza

Fig. 132: **Sketchbook and Notebooks** ©Jo Joelson 2016-2019

Fig. 133: **Mark Titchner** 'Light More Light' (2003) Photo courtesy Mark Titchner ©Mark Titchner

8.0 APPENDICES

8.1 TIMELINE

Timeline of Practice-based PhD Programme (October 2016- December 2019)

October – December 2016 – Iceland Winter Residency – production of *The Darkest Day* film

January 2017 – January 2018 – Interviews with artists and designers for the *Library of Light* book (for full list see Chapter 8.2, Appendix).

January 2018 – *The Darkest Day* Film screening at List í Ljósi – the annual light festival in Seyðisfjörður, East Iceland

February – October 2018 – Transcribing & editing Interviews, writing texts and sourcing images for the *Library of Light* book

November – December 2018 – International Fellowship Iceland. Research conducted at The Living Art Museum Archive, The Archive of Artist-Run Initiatives, and The Performance Archive – hosted by Nýló / The Living Art Museum, Reykjavik. Interviews conducted with Sverrir Gudjonsson, Ragnar Helgi Olafsson, Karlotta Blondal.

January – March 2019 – International Fellowship, New York. Research conducted at Dia Art Foundation. Attendance at the Nancy Holt Symposium, and Nancy Holt exhibition; visits to the La Monte Young and Marian Zazeela's Dream House, New York and interviews conducted with La Monte Young, Marian Zazeela and Joshua White (Joshua Light Show).

March 2019 – Development of Radio programme and broadcasts on Resonance 104.4fm (including pre-recorded Interviews with:

April 2019 – Launch of the *Library of Light* book published by Lund Humphries at Art Review with live panel discussion at ArtReview with artists Robin Bell, Rana Begum, Liliane Lijn and Editor-in-chief Mark Rappolt.

April 2019 – Writing Residency at Vatnasafn / Library of Water, Iceland (hosted by Artangel).

May 2019 – Development of creative writing following Iceland residency

June – December 2019 – Thesis writing

January 2020 – Thesis submission

8.2 PRACTICE PORTFOLIO

Book, Broadcasts, Talks Conducted as Part of Doctoral Research

See PDF of *Library of Light* Book to accompany this thesis.

Link to Jo Joelson / Library of Light – takeover of Lund Humphries Instagram:

<https://www.instagram.com/p/B3gd7thgkn1/>

<https://www.instagram.com/p/B3loSy2h8oH/>

<https://www.instagram.com/p/B3oZvNoheqS/>

<https://www.instagram.com/p/B3q57ASB44I/>

<https://www.instagram.com/p/B3tepfihvgP/>

<https://www.instagram.com/p/B3wHaTUBJiO/>

<https://www.instagram.com/p/B3xYKPFhWkS/>

<https://www.instagram.com/p/B3zFVfDBiPL/>

<https://www.instagram.com/p/B319W28hORV/>

Radio Broadcasts – Resonance 104.4FM (SESSIONS 1-3)

LINK TO FRIDAY 5 APRIL – 10-11PM

<https://www.mixcloud.com/Resonance/bad-punk-5th-april-2019/>

**COLLABORATIONS IN LIGHT AND SOUND
on BAD PUNK**

RESONANCE 104.4FM



FRIDAY 22 MARCH – 10-11PM
WITH LAURA BUCKLEY, HAROON MIRZA AND JACK JELFS

FRIDAY 29 MARCH – 10-11PM
WITH JOSHUA WHITE AND WILLIE WILLIAMS

FRIDAY 5 APRIL – 10-11PM
WITH RAGNAR HELGI ÓLAFSSON, SVERRIR GUÐJÓNSSON
AND KARLOTTA BLONDAL

Link to London Fieldworks Film– THE DARKEST DAY

A collaboration between Jo Joelson, Bruce Gilchrist and Jökull Snaer.

<https://vimeo.com/248305652>

RESEARCH-RELATED TALKS:

Panel Discussion at ArtReview London with Mark Rappolt, Rana Begum, Liliane Lijn, Robin Bell at the Library of Light Book Launch – April 5th 2019.



In conversation with Robin Bell at Lost Origins Gallery, Washington DC – Saturday October 19th 2019.



OCT 19 Refractions: Book Talk and Performance
Public · Hosted by Robin Bell and 3 others

Details

12pm Gallery Opens

1pm Robin Bell will talk to Jo Joelson vis Skype about her book Library of Light which features work by Robin Bell
<https://www.lundhumphries.com/products/80853>

3pm - Jerry Busher will perform and musical set that will be a reaction to "Refractions"
<https://jerrybusher.bandcamp.com/releases>
https://en.wikipedia.org/wiki/Jerry_Busher

INTERVIEWS CONDUCTED FOR THIS RESEARCH:

David Batchelor – 27 February 2018
Rana Begum – 7 June 2017
Robin Bell – 19 December 2017
Jason Bruges – 10 November 2017
Anne Bean and Richard Wilson (the Bow Gamelan) – 11 July 2017
Karlotta J. Blöndal – 16 November 2018
Laura Buckley – 29 June 2017
Mário Caeiro – 24 May 2017
Paule Constable – 30 August 2017
Ernest Edmonds – 30 November 2017
Angus Farquhar – 2 March 2017
Rick Fisher – 19 August 2017
Susan Gamble and Michael Wenyon – 24 April / 14 August 2017
Sverrir Guðjónsson – 14 November 2018
Jon Hendricks – 5 July - 3 August 2017
Susan Hiller – 13 June 2018
Michael Hulls and Russell Maliphant – 3 May 2017
ISO Studio – 5 December 2017
Cliff Lauson – 11 September 2017
Chris Levine – 7 December 2017
Michael Light – 15 June 2018
Joshua White (aka Joshua Lightshow) – 8 February 2019
Liliane Lijn – 1 February, 8 April, 10 June 2017
Rafael Lozano-Hemmer – 5 July 2017
Manu Luksch – 14 November 2017
Mark Major (Speirs and Major) – 12 July and 29 November 2017
Helen Marriage – 23 May 2017
Anthony McCall – 29 March 2017
Gustav Metzger and Adrian Fogarty – 12 February 2016
Haroon Mirza – 18 October 2017
Haroon Mirza and Jack Jelfs – 27 February 2019
Ragnar Helgi Ólafsson – 16 November 2018
Yoko Ono – 24 June 2017
Katie Paterson – 17 April 2017
Andrew Pepper – 13 July 2017
Mark Titchner – 26 January 2018
Andi Watson – 19 March 2018
Willie Williams – 20 November 2018