Anticipated retrospection: manifesting pastness in moving image, an art practice enquiry

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Abstract

This thesis addresses temporal experience in moving image from the perspective of artists' film and video and asks: 'if material qualities are implicated in memory as pastness, how can this be made apperceptible using art practice?' The study contributes to the understanding of temporal and material experience in contemporary art practice, finding that materiality is entwined with pastness dynamically. In disrupting anticipated temporal and material flow, conflicting temporalities are exposed as present and apperception made possible.

The moving image is a growing part of visual culture and with increasing access to both current and historical material there is a vast reserve to draw from. Early film and its reception, in particular the Rough Sea film, is a pivotal component in this research both as a means to consider how experiences of moving image materiality were shaped but also as reference points for later experimental approaches to making and viewing.

Reflexive spectatorial and archival research is interwoven with critical, theoretical and philosophical review. The active viewer of structural/materialist discourse is recuperated as a basis for a contemporary critical position on materiality and moving image spectatorship. Selected works by artist-filmmakers are analysed as forms of practice research that inform the investigation.

Material qualities such as interval and colour are examined as familiar and habitual aspects of moving image with involvement in senses of past. The limitations of isolating them are addressed through the two works. One, a video work created from appropriated archival film footage of sea questions temporality sequentially within the spatial mnemonics of the cinema. The other, a multi-screen film and video installation, explores temporality in a non-

cinematic space through the concurrent and disruptive. Both works show that experience of the material conditions of moving image has significance in memory and are therefore crucial to an examination of pastness.

(299 words)

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Introduction

The thesis comprises the written component and DVD documentation of two moving image artworks made for exhibition; *Sea c.1897-2011* and *Sea breaking*. The writing is in nine parts and operates in parallel to the practice element; examining underlying concepts, unpicking the question, contextualising the practice and reflecting the multiple methodology.

The question, 'if material qualities are implicated in memory as pastness, how can this be made apperceptible using art practice?', engages with temporal experience and moving image materiality. It arises from my art practice and as a response to transformations in moving image experience. Over several decades of working with various forms of moving image I have accumulated a collection of films, videos and sound installations. As this collection has slowly grown, material qualities such as colour, texture, noise and flicker, once inconspicuous in their newness, have become more noticeable. Time and the successive layering of technologies have introduced differentiation. In parallel, through research on archive films at a regional film archive, I observed that a sense of past, or pastness, was conveyed through the material qualities of the films rather than through what was depicted. This was especially the case where the footage was of the sea and coastal areas because these films tend not to include depictions such as buildings, vehicles or people, which could indicate a particular time. Through both my own work and the archive films, material qualities were increasingly implicated in temporality through senses of past.

The association of material qualities and temporality re-engaged issues of moving image and particularly of filmic materiality which had been debated vigorously in the 1970s in the U.K., but which were left somewhat unresolved. Moreover, as some of the footage I viewed had been transferred

from film to video questions of memory in relation to the specific qualities of a medium were raised; another aspect of those earlier debates. The enquiry then developed as to how the implication of material qualities in senses of past could be made available to contemporary viewers as apperceptible (perception with awareness of perception) through art practice. In other words, how does a person understand a film as old to them through something material like colour and can an artwork reveal this to them? It is important that a critical position on temporal experience is developed through art practice rather than solely theoretical or philosophical considerations. This thesis offers a critical position, which is made available for experience as two moving image artworks articulated through the written element. In this way the study contributes to contemporary art practice understanding of temporal and material experience.

Changes in technology, production and exhibition, as well as the spaces of viewing make the field of enquiry a dynamic one in which art practice both takes part, and critiques. Experimental film and video discourses have traditionally emphasised production with argument around material, process and context. The historicisation and canonisation in recent years of art that involves moving image together with debates concerning archiving, conservation/preservation and digitisation have seen renewed discourse around the aesthetics of process, materiality and reception, to which this research also contributes.

Contemporary film and video art practice is inherently cross-disciplinary, drawing on diverse sources and other practices. It is now common and uncontroversial to see art works involving moving image as projections, on monitors in galleries and in other exhibition spaces. There are contemporary artists who use archival moving image in their work, for instance Deimantas Narkecivius. *Into the Unknown* (BFI Gallery, 2009) was made from archival propaganda films and explores how film can be a deceptive document of history and memory manipulated. The footage he used originated on film,

but it was shown as a video projection in a gallery style space so the historical content was the concern. There are contemporary artists who investigate memory and moving image, for example Lindsay Seers or Kerry Tribe, but neither have a particular focus on the materiality of the film or video that they use in their work. An artist such as Tacita Dean, who uses the materiality of film purposefully in a work such as *FILM* (2011), does so with a commemorative and arguably nostalgic, reifying impetus. Ken Jacobs has been investigating temporal experience through his work in film and video over many years often with a directly optical involvement with the spectator. His work is within the area of enquiry and is discussed in Part Six; however, this study in general has a more nuanced focus on pastness and moving image materialities.

Some rigour is needed towards the use of moving image material in an artwork to clarify what is sometimes obfuscated through language and terms which confuse. Informally the term *film* is interchangeable with *video* and because in this research the differences between them are significant, *film* or *video* are used where they apply to the media in particular and *moving image* for the generality. In this field the terminology has been various and sometimes contentious with terms *artists' film* or *film and video art* encompassing often distinct approaches to work by the medium and technology used to make them. Catherine Elwes considers 'artists moving image' currently as fusing into 'a rounded discipline' (Elwes, 2012, p.6) bringing together disparate histories, theories and practices. The term moving image also highlights movement as fundamental to the experience of film and video, which the terms film and video alone do not express.

Methodology

There are multiple, related and concurrent methods used in this research linked through practice, producing a thematic interconnectedness. The thesis reflects the multiple approach through discursive writing interwoven

with threads of spectatorial and archival enquiry, analysis and critical review cross-referenced with philosophical concepts and examples of artists work in the field.

Philosophical concepts of temporality underpin this research and Part One reviews ideas to do with the experience of time, particularly on how perception and memory relate. Husserl's notion of memories of perception, Bergson's distinction between perception and memory, together with Leibniz's notion of apperception and Merleau Ponty's idea of bodily experience all inform areas of enquiry in this research.   The theoretical approach to the question stems mainly from the writings of artist filmmakers associated with structural/materialist film discourses in the 1970s and 1980s outlined in Part Two. The notion of an apperceptive spectator associated with that period is recuperated in this thesis to test work that interrogates the possibility of viewing as an active, aware process. The notion of materiality and medium specificity is reviewed and tested through the practice and then revised as having renewed relevance when memory is taken into consideration.

Spectatorial enquiry, in paying close attention to what appears and the circumstances of its appearing, is phenomenological, qualitative and empirical. It has been an enduring part of my practice and is a form of creative inquisition, drawing and building upon memory and perception. Spectatorial enquiry is a form of *autopsy* in its literal sense, 'the act of seeing with one's own eyes' (as Brakhage used in his film of that title). In this research I have used my own spectating and memory as a framing link with which to set one form of spectating against another. At times it has been a necessarily introspective part of the enquiry which then becomes turned outwards through interaction with theory and through the practice. In navigating the plurality of locations and situations where the moving image is found the research is not restricted to one particular era or a particular form (for example single screen films). The ocularcentric nature of the terms

spectator and viewer do not exclude sound or an embodied approach, nor do they undermine the importance of the situatedness of the experience and the link between location and expectation.

Any moving image artwork is fundamentally temporal and needs to be shown and made available to people other than the artist to be realised fully. The two works that form part of this thesis were experienced by viewers in particular spaces and conditions; one in a cinematic space and the other in a blacked out gallery style space. With the single screen work and the installation others will not have the same sense knowledge as myself. In order to put this to the test a group of peers were invited to experience the works. After both works were shown an informal seminar discussion tested out propositions of experience through dialogue. This was led by myself and recorded and transcribed and then used to critically review the work and form part of the thesis.

In research which could potentially range over a period of more than a century, huge amounts of archival material are available. A subtractive approach through a focus on images and sounds of the sea (explicated in Part Three) narrowed this range considerably. Early film in the research offered not only spectatorial research through viewing early film now, but was also examined as a period of pre-institutional reception with parallels to be made with experimental film approaches. To examine how these films were received reports of early film experiences were also collected, mainly from newspapers and periodicals held at the British Library.

Early Rough Sea films were also a reference for practical experiments and formed the foundation for the two practice works of this thesis. Spectatorial and archival research into early films of the sea was undertaken through the British Film Institute National Archive as well as online with the U.S.A. Library of Congress. These two archives hold a significant number of the early films of the sea. I obtained video copies of several films made by British

filmmakers Mitchell & Kenyon, including *Rough Sea at Roker* (1901) and *Waves at Southport* (1902) as well as three from the Edison Manufacturing Company in America including *Surf at Monterey* (1897). These works were used for initial practice investigations and experiments by recreating and appropriating them. The particular qualities of Rough Sea films with their framing of the sea, a focus on the movement of waves and a static camera position were then used as the basis to search for footage from a much wider range of films made at later dates. The films were sourced from U.K. regional film archives, which collect, preserve and allow access to moving image material related to the region, ranging from the South West of England to Scotland. The material found was used to make a single screen work which juxtaposes footage with similar subject matter made in different time periods called *Sea c.1897-2011*. The material selected came from a range of films broadly categorised as domestic films, documentaries and travelogues. All were originated on film and video transfers were used in making the work. A total of eight archives (six U.K. regional archives, the BFI National Archive and the Library of Congress) provided approximately eight hours of film footage which was edited down to the 33 minute work. The selection process was based primarily on finding material with correlations to the early Rough Sea films through the framing and movements of the sea and the exclusion of the human figure. Films of the sea taken from boats or ships were also included as they had been a feature in early filmmaking, particularly with the Edison films. The material from the 38 films used in the work showed thematic similarities which formed the basis for the five sections of *Sea c.1897-2011* (further explained in Part Nine). I also researched archival recorded sound of the sea in the British Library Sound Archive, however the amount of material available compared to the imagery was limited.

As practice-based research I have drawn on my own work in moving image since 1980 to elucidate aspects of the enquiry, both through works made but also from my own experience as an artist. My approach is to make work

which does not position viewers, but which allows them to place themselves in relation to the work spatially and temporally. Locatedness, duration and temporal dislocation are key elements in the work which often takes the form of video and sound installation. The strategies developed through my practice, of reflexivity, spectatorial enquiry, visual and aural inquisition, experimentation with technology, the situations of spectatorship and the spaces of reception, inform all aspects of the research. By experimentation I mean a divergence from normative practices following an often intuitive proposition and which may produce results or not. At times these strategies were tools for analysis of archival material or the work of other artists and were used to test out some of their propositions through practice. Works by other artists were also used as forms of existing research to further elucidate and articulate the complexities in question. They include Gustav Deutsch, where in Part Five temporal concepts which arise in the found-footage film are outlined. Two works by artist Ken Jacobs are used to discuss flicker as a background materiality which can be manipulated in Part Six. Where experience takes place was an aspect which became emphasised as the research progressed and is discussed using examples of my own work and that of artists such as Chris Welsby in Part Eight.

The single-screen video work for a cinematic space *Sea c.1897-2011* and the multi-screen film and video installation work *Sea breaking* manifest the research findings and are to be seen as in conjunction with the written component of the thesis. The two DVDs on the following pages are documentation of those works. They are presented at the front of this thesis to accentuate that this is practice based research rather than an indication that they should be viewed in a particular order.
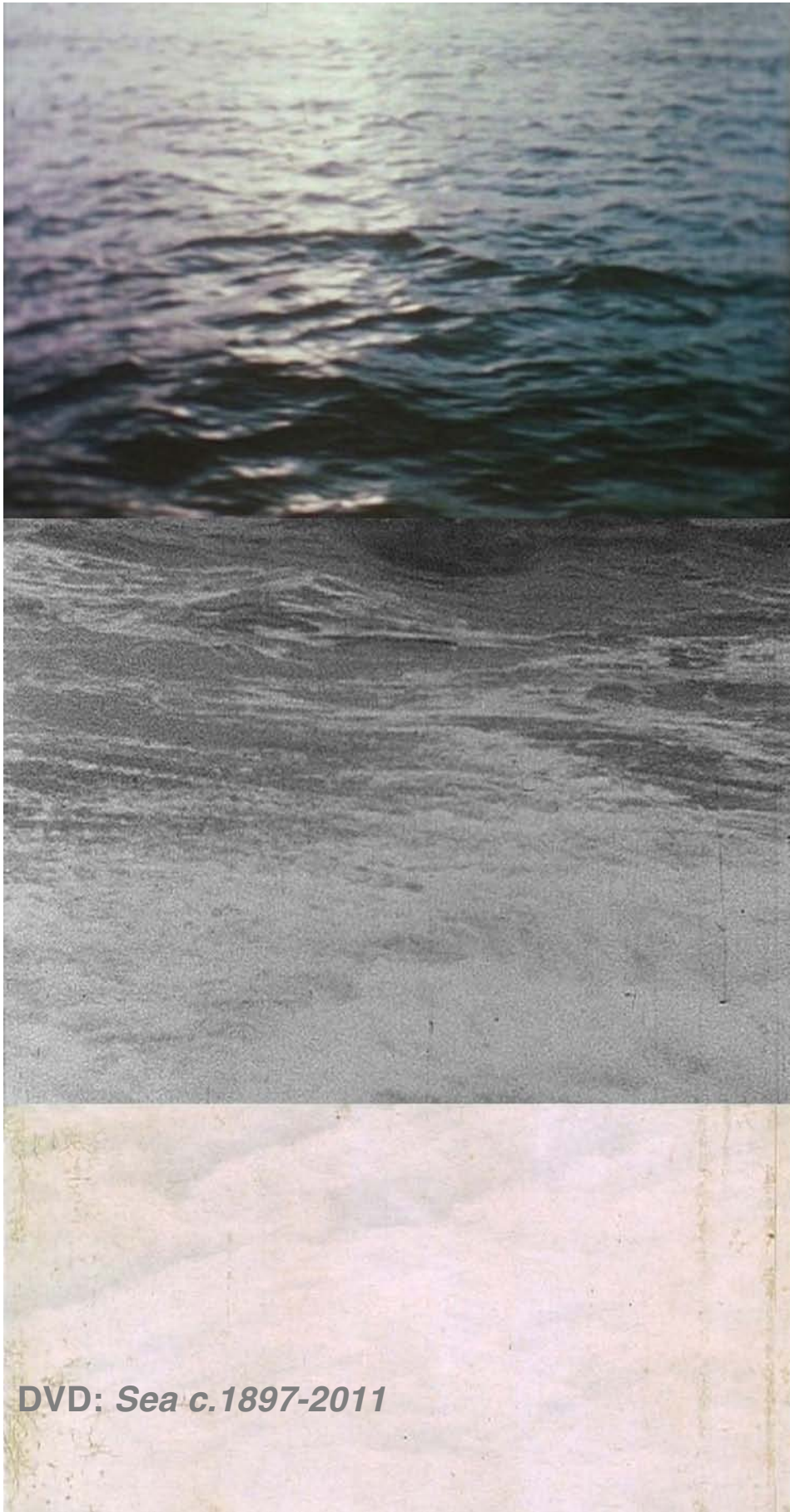
DVD: *Sea c.1897-2011*

DVD: *Sea breaking*

Part One. Temporality

Part One reviews some concepts of temporal experience, in particular how perception and memory interrelate and have bearing on the research question.

Temporality is part of the materiality that I deal with in my art practice. In the work it manifests as duration, movement and process, and is intrinsic to the experience of the work, an example of which is *Surroundings* (2008), a twin screen video installation (see appendix F, DVD). Temporality is not the same as chronological time, a linear notion belonging to clocks, calendars and dates, which imbues and orders everyday living. Chronological time does not underlie temporal experience but imposes structures through measurement. Film and video intermingle temporal experience with measurable time making possible experimentation with it and investigation of it. The practice in this research had to lead a way through multiple layers of temporal experience; that of my own observation and recollection in the making and in the showing of the work to other people.

How to grasp these temporalities in the practice but also in writing is part of the problematic of practice research where practice and writing as forms of knowledge permeate each other. In reviewing the contexts for this research I found, perhaps unsurprisingly, that my own approach to temporal experience was implicitly influenced by what has already been articulated, especially by philosophers such as Edmund Husserl and Henri Bergson. The following is a summary of the notions which both inform the research and are tested by it.

Time Consciousness

Concepts of time have been entwined with ontological and epistemological concerns over centuries and there exists large amounts of literature relating

to time and temporality, primarily in philosophy. In the 5th century St Augustine wrote the often quoted: 'What then is time? If nobody asks me, I know; If I want to explain it to someone who asks, I don't know.' (Brann,1999, p.117). The question of subjective time, of how time is experienced and how to examine something in the process of occurring, (thinking in time) was a large part of the work of Edmund Husserl, the founder of, what he termed, 'Phenomenology' in the late 19th century. Husserl investigated consciousness of time through examining how things appear in perception by using rigorous methods and language. It was a radical approach in which assumptions were deliberately put aside to give a descriptive account of what brings experience to light as a source of knowledge. In examining phenomena and the manner of their appearing, Husserl went beyond an empirical procedure. The mode of enquiry was therefore as important as what was being inquired into, a relevant notion for practice research.

Husserl asserted that in perception there is 'intentionality'; that consciousness is always consciousness *of* something. For Husserl, time consciousness is fundamental to intentionality. He developed the method of the 'reduction' in which previously held suppositions, that he called the 'natural attitude', are bracketed as a way of holding them at bay. In this there were phases of the reduction, a stripping away of presuppositions in order to reach a transcendental essence (Moran, 2000b, pp.11-12). Husserl can be criticised for an apparently solipsistic enquiry and pursuing descriptive essence to the point of aporia, but his work showed the complexities in considering the richness of temporal experience, and he developed a means of articulating this. In *The Phenomenology of the Consciousness of Internal Time (1893-1917)* (1991), Husserl used a melody to examine how a temporal object could disclose time consciousness. To greatly simplify, as it is a complex work, Husserl finds temporal modes: immediate anticipations (protentions), primal impressions (the now) and retentions (a just past). They are all involved at any given moment. The retentions and protentions give a thickness to the present with a 'running off' or adumbration as the temporal object sinks back, modified into a recent past. There is flow and shape to

this model where the horizon or the diffuse edge of experience forms a background with the flow of 'ever new nows' at the centre. For Husserl, the modifications of the present into the recent past are not the same as recollection. This differentiation is important to consider as during this research the relation of perception to memory and recollection has been a complex one to evaluate in experiencing film and video works.

Memory

In his phenomenological and hermeneutical account, *Memory, History, Forgetting*, (2004) Paul Ricoeur discusses the distinction that Husserl introduced between retention and recollection (p.31-32) and asks what it means for something to 'endure'. In Ricoeur's analysis, Husserl's thesis '[...] is simply that perception is not instantaneous, that retention is not a form of imagination, but consists in a modification of perception. The perception of something has a duration' (Ricoeur, 2004, p.33). When the melody is remembered, in recollection, it is past and no longer in perception but 'reproduced' though still linked to perception. In his later writings, Husserl thought that reproduction (remembering) was modification and that memory was 'modified consciousness'. The act of remembering itself is not past and exists in the present but it is also a memory of a perceiving. He wrote:

> But how, then, do I come to the assertion: What I am now remembering I did perceive in an earlier now? How do I come to the assertion that what is past *was present*? Past = having been now or having been present. It is not enough that perception somehow becomes modified into re-presentation of what was perceived; on the contrary, just as the perceived event or object turns into a past object in memorial consciousness (while remaining the same object), so too there must correspond to the perception of the event an (actual or possible) memory of this perception. (Husserl, 2005, p.248)

In this research, memory of perception would seem to be involved both in recollecting moving image and sound and in the present of watching and listening. The dynamics of this perceptual pastness with material qualities

form a large part of this enquiry.

Bergson, who was a contemporary of Husserl, also deals in his philosophy with the relationship of the present of perception and memory but it takes on a different shape; where memory is forming contemporaneously with perception rather than following it. Bergson wrote: 'Every moment of our life presents two aspects, it is actual and virtual, perception on the one side and memory on the other. Each moment is split up as and when it is posited' (Bergson, 2002, p.147). Bergson goes on to say that this virtual image has 'the mark of the past', without a date, but a past 'in general'. Knowing something as having the 'mark of the past' is reflexive. According to Bergson, in recollection there is both a tendency to imitate perception (rather like Husserl's 'reproduction') but it is also distinct from it, otherwise it would not be known as a memory. In *Matter and Memory* he wrote:

> But our recollection still remains virtual; we simply prepare ourselves to receive it by adopting the appropriate attitude. Little by little it comes into view like a condensing cloud; from the virtual state it passes into the actual; and as its outlines become more distinct and its surface takes on colour, it tends to imitate perception. But it remains attached to the past by its deepest roots, and if, when once realized, it did not retain something of its original virtuality, if, being a present state, it were not also something which stands out distinct from the present, we should never know it for a memory. (Bergson, 2004, p.171)

The pastness which is central to this research involves a memory of perceiving but also an awareness of that as a memory; because to see and hear moving image and sound, as having pastness, is to know it as distinguishable from the present in some way but also to be made aware of that distinction as one that is happening (in the present). This sets up something of the complexities which Hollis Frampton, artist filmmaker and writer, indicates when he wrote in the 1970's that one of his central concerns in his work was: 'The malleability of the sense and notion of *time* in film. Investigation of the temporal plasticity proper to an art that subsists at once within the colliding modes of memory, absolute "presentness," and

anticipation' (2009, p.226). Frampton's words seem in keeping with Husserl's idea of temporal experience though with Frampton these 'modes of memory' don't slide from one to another but collide in the moving image.

Bergson separated memory into two forms (Bergson, 2004, p.86-105). One is habit memory, based on repetitive action involved in every-day activities like using a kettle or riding a bike in which actions are reproduced. The other is the 'spontaneous' memory of recollection, which is called up and actualised in perception. The habit memory indicates a spatial, bodily aspect of memory which needs to be taken into account in relation to senses of past. The dark of a cinema is something which could be habitual, with the familiar, bodily habit of sitting down and concentrating on a screen.

Merleau-Ponty gives a reading of Husserl's time consciousness in *Phenomenology of Perception* but explored the experience of temporality as given through the body in the world and the act of perception as reciprocal with the environment. Don Ihde writes that Merleau-Ponty showed that, 'In an existential phenomenology it is the body-as-experiencing, the embodied being, who is the noetic correlate of the world of things and others' (Ihde, 2007, p.43). I take this as important, considering that as moving image and sound are experienced bodily within the world, the 'taking place' of image and sound is also involved in remembering. In her book on phenomenology and film experience, *The Address of the Eye,* Vivian Sobchack uses Merleau-Ponty's phenomenology to propose that film has a body which echoes our own: 'Watching a film we can see the seeing as well as the seen, hear the hearing as well as the heard, and feel the movement as well as see the moved' (Sobchack, 1992, p.10). This is a notion of film as experience but also for experience. Sobchack criticises classical and contemporary film theory saying, 'both classical and contemporary theory have provided us only partial descriptions and abstract formulations that have detached cinematic signification from its origin in concrete sense and significance' (Sobchack, 1992 p.20). For Sobchack, film theory has not taken into account the various embodiments that exist: of the filmmaker, the film and the spectator. Film is

experienced through multiple senses, not as an illusion at a distance but as an extension of the spectator's embodiment. Signs, therefore, are not the only communication and the spectator is a partner in the production of the work. In her essay, *Scene of the screen,* she writes of the pervasion of media (photographic, cinematic and electronic) as constituting a radical alteration of our existential 'presence' to the world (Sobchack, 2004 p.153). She also finds that cinematic and electronic technologies are different from each other 'in their concrete materiality and particular existential significance. Each technology not only differently *mediates* our figurations of bodily existence but also *constitutes* them' (2004, p.136). The various technologies and ways of viewing the moving image are now hybrid and convergent, further dispersing, fragmenting and destabilising experience.

Anticipated Retrospection

The first two words of the title of this thesis, *Anticipated Retrospection*, were used by Merleau-Ponty who defined prospection as 'anticipatory retrospection', the future anticipated through past experience. The two words together put temporality into motion (and motion is put into temporality) rather than a series of successive static instances. In *Phenomenology of Perception,* Merleau-Ponty wrote: 'Looking ahead would seem in reality to be retrospection, and the future a projection of the past' (1962, p.414). In his later work, Merleau-Ponty finds language analogous to perception (Moran, 2000a, p.405). *Anticipated Retrospection,* like the words 'projection of the past' is a convolution in language, a movement with no static points, but without recourse to metaphor or depiction. There is a reversibility and intertwining of the tenses which suggests the ambiguities inherent in the articulation of temporal experience of moving image and sound. In one of his later unpublished notes, a short description of listening to music, Merleau-Ponty again uses the phrase:

> [...] the impression that this movement that starts up is already at its endpoint, which it is going to have been, or [that it is] sinking into the

> future that we have a hold of as well as the past – although we cannot say exactly what it will be. Anticipated retrospection – retrograde movement *in futuro* - it comes down toward me entirely done. (Merleau-Ponty, 2001, p.18)

In terms of grammatical tense, 'going to have been' is the 'future perfect continuous', and is another way of saying 'anticipated retrospection'. The tenses are part of the articulation of time but not necessarily temporal experience. Martin Heidegger, a pupil of Husserl, wrote in *Being and Time*: 'The future is *not later* than having-been, and the having-been is *not earlier* than the present. Temporality temporalizes itself as a future that makes present, in the process of having-been' (Heidegger, 1996, p.321). In a convolution of the tenses, which is deliberately difficult to disentangle, Heidegger puts time into being (in language). It is *Dasein* (being-in-the-world) to Heidegger that unifies temporality and makes it meaningful. *Dasein* is future leaning, in anticipation is directed towards what is to come, whereas Merleau-Ponty, in the previous quote, seems to imply that the future comes towards him. To Heidegger temporality is not separate from being but is bound up with the beginning and ending of being, with finitude.

Heidegger wrote an influential essay on technology, saying, 'The essence of technology is nothing technological' (Heidegger, 2003, p.279). Sobchack takes that to mean that 'technology never comes to its particular material specificity and function in a neutral context to neutral effect' (Sobchack, 2004, p.137). In other words, it must be placed within a cultural, political and aesthetic context. Dermot Moran writes that to Heidegger phenomenology 'must be attentive to *historicity*, or the *facticity* of human living; to *temporality*, or the concrete living in time; and furthermore it must not remain content with description of the internal consciousness of time' (Moran, 2000b, p.20). Moran goes on to say that 'Heidegger claimed that all description involves *interpretation*, indeed that description was only a derivative form of interpretation' (2000b, p.20). It is not enough, therefore, to be descriptive of experience uncritically, but reflexive description is a starting point from which to examine experience.

The background of awareness and apperception

Leibniz introduced the term 'apperception' in the mid-eighteenth century to differentiate the mind's awareness of perception from the activity of perception: 'Thus it is good to distinguish between *perception,* which is the internal state of the monad representing external things, and *apperception*, which is *consciousness* or the reflective knowledge of this internal state [...]' (Leibniz, 1989, p.208). This act of reflection posits a self, a conception which is possible through apperception and departed from the Cartesian dualism of body and mind. Leibniz put forward that we are always sensing the world, perceiving continuously but not always consciously aware. In his preface to the *New Essays* he wrote: '... at every moment there is an infinity of perceptions in us, but without apperception and without reflection...' (Leibniz, 1989, p.295). The example he gives is of the noise of the sea:

> In order better to recognize [*juger*] these tiny perceptions [*petite perceptions*] that cannot be distinguished in a crowd, I usually make use of the example of the roar or noise of the sea that strikes us when we are at the shore. In order to hear this noise as we do, we must hear the parts that make up this whole, that is, we must hear the noise of each wave, even though each of these small noises is known only in the confused assemblage of all the others, and would not be noticed if the wave making it were the only one. (Leibniz, 1989, p.295)

Leibniz calls this 'confused' perception, in the sense that the sounds that make up the sound of the sea are indistinct and undifferentiated. To Leibniz tiny perceptions connect to the 'infinite' and unify experience, the past and the present. 'It can even be said that as a result of these tiny perceptions, the present is filled with the future and laden with the past' (1989, p.296). The tiny perceptions form a confused background until there is a heightening which makes them distinct. Leibniz gives the example of someone who lives near to a mill or waterfall being initially very aware of the motion and sound at first, but after a time becoming less aware and then perceiving it as in the background. Attention can be drawn through a change; for example if the mill were to stop for a moment, it would become noticeable. That which is in

the background of awareness becomes an area which can be explored in relation to pastness and explains something of the vagueness that 'a sense of past' implies.

In cognitive psychology habituation is a complete kind of recognition which has come about through repeated stimulus and is one of the ways that attention is structured (Snyder, 2000, p.23-25). This is useful in articulating further the notion of the background of awareness: 'Aspects of our environment to which we have habituated move into the background of awareness, but are still very much a part of the unconscious context of ongoing experience' (2000, p.24). Snyder says, 'it is hard to remain aware of that which we already know'. To become aware of what is already known is reflexive and apperceptive. Although the term apperception is currently more associated with psychology and means the assimilation of new with past experience, the issue of an apperceptive spectator, one who was aware of her own perceiving, was part of the debates in artists' film in the 1970s and 1980s. An interest in a reflexive spectator was a refutation of the passivity and dulled consciousness that the conventional cinema was accused of producing. Artist filmmaker and writer, Peter Gidal wrote:

> A film practice in which one watches oneself watching is reflexive: the act of self-perception, of consciousness *per se,* becomes one of the basic contexts of one's confrontation with work. The process of the production of *film-making,* and the filmic practice of film-viewing *as production* become interlinked. (Gidal, 1976, p. 10)

Apperception, for Gidal, is awareness of perceiving but with a political dimension through connecting the processes of watching and making film.

The tiny perceptions of Leibniz distract and can disperse contemplation. In *New Essays on Human Understanding* he wrote:

> We too have minute perceptions of which we are not aware in our present state. We could in fact become thoroughly aware of them and

> reflect on them, if we were not distracted by their multiplicity, which
> scatters the mind ... (Leibniz, 1982, p. xxxvi)

The scattering of the mind by distracting multiplicity can be related to Walter Benjamin and the experience of film. Distraction to Benjamin is not a lack of attentiveness, rather a 'different, more flexible mode of perception' according to Caygill (1998, p.115). Benjamin wrote that through film there was a 'deepening of apperception' (Benjamin, 1968, p.235). His use of the term apperception is more psychological rather than the metaphysical of Leibniz. Benjamin meant both that the apparatus of film could penetrate where the eye could not, altering the way we perceive, but it could also bring about new textures of experience. He compared this to psychoanalysis, where the unnoticed is made analyzable and what is hitherto hidden is revealed. To Benjamin, the film prepares the spectator for modernity and distraction:

> The distracted person, too, can form habits. More, the ability to master certain tasks in a state of distraction proves that their solution has become a matter of habit. [...] Today it does so in the film. Reception in a state of distraction, which is increasing noticeably in all fields of art and is symptomatic of profound changes in apperception, finds in the film its true means of exercise. The film with its shock effect meets this mode of reception halfway. (Benjamin, 1968, p.240)

Through film the spectator is distracted but, habituated to distraction, becomes increasingly absentminded and in this lostness finds other modes of receptiveness. Film fosters this form of attention, (and the attendant distraction) which Benjamin sees as both part of and preparation for modernity and a fast-paced world. The spectator is subject to new sensory impressions over which she does not have control but through which she gains insights.

To Benjamin, film is a new way of representing reality but also a novel form of collectivised reception.   He writes that 'technology has subjected the human sensorium to a complex kind of training. ...In a film, perception in the form of shocks was established as a formal principle' (Benjamin, 1968, p.175). With distraction now habituated the background noise is partaken in

by the spectator in a way that it was not before the film. Through film there is an aesthetic experience in which the self as subject has become available in new ways, collectively, politically and ontologically. Temporal experience for both Benjamin and for Leibniz is not had from an unchanging position, but is one of flux.

Recollection and pastness

In discussing temporal experience, perception and memory, I have not dealt with the memory that comes without being sought and has a distance in time. The unexpected recollection is exemplified by the involuntary memory of Proust which he described in *Swann's Way*, the first volume of *In Search of Lost Time*. When he tastes a cake, the Madeleine, dipped in tea, it is immediately and strongly evocative of something which he tries to compel his mind to find the source of. In trying to find access to his past, which prompted the sensation, all his attentiveness is focused on a mind which cannot answer so direct a demand.

> What an abyss of uncertainty whenever the mind feels overtaken by itself; when it, the seeker, is at once the dark region through which it must go seeking and where all its equipment will avail it nothing. Seek? More than that: create. It is face to face with something which does not yet exist, which it alone can make actual, which it alone can bring into the light of day. (Proust, 2005, p.52)

The word 'create' suggests a distrust of subjective introspection, but it is a part of the imaginative aspect of memory and experience – the mind is not a recorder of information. When the memories suddenly return the taste of the cake has opened out 'the vast structure of recollection' (Proust, 2005, p.54). Although Proust was referring to the potential of taste and smell to reach distant memories, 'the vast structure of recollection' suggests a sense of the space that lies between sensation and memory, an intangible, fluid archive, in which differing forms of memory weave in and out. In her book, *Proust and the Sense of Time*, Julia Kristeva uses the phrase, '*felt time*' [her italics]

(1993, p.7) to categorise the way that Proust brought together perception and emotion in an ontological exploration which she compared to that of Bergson and Heidegger. For Kristeva's Proust, sensation, bringing together past and present, is '[n]either a reality nor mere solipsism, it exists at the interface of the world and the self' (Kristeva, 1993, p.53).

The word pastness in this thesis refers to a sense of past (which I have already acknowledged as vague) and which shares something of the liminality of Kristeva's 'felt time'. Although it is in the realm of the subjective I would like to retrieve it from association with the sentiment of loss. This kind of pastness is often associated with Barthes and the '*That-has-been*' which he said was the essence of the photograph (1993, p.76-77). Rancière criticised Barthes for reducing 'the photograph to the Latin *imago*, the effigy' (Rancière, 2009, p.113) in relation to a photograph of Lewis Payne. Rancière notes that by concentrating on the image as effigy other more indeterminate characteristics are ignored in this picture, including the 'texture of the photograph' which 'bears the stamp of times past' (2009, p.114). The connection of pastness with materiality can be felt outside of the figurative, familial meshes of Barthesian, '*That-has-been*'. These senses of past, as I have suggested, emerge from the habituated background of the experience of moving image and sound.

Victor Burgin, in his book *The Remembered Film,* writes of another kind of recollection, a treasured memory of his encounter with film as a child:

> Here is what I believe is my earliest memory of a film:
>
>> A dark night, someone is walking down a narrow stream. I see only feet splashing through water, and broken reflections of light from somewhere ahead, where something mysterious and dreadful awaits.
>
> The telling of the memory, of course, betrays it. Both in the sense of there being something private about the memory that demands it remain untold (secreted), and in the sense that to tell it is to misrepresent, to transform, to diminish it. Inevitably, as in the telling of a dream, it places items from a synchronous field into the diachrony of

narrative. What remains most true in my account is what is most abstract: the description of a sequence of such brevity that I might almost be describing a still image. [...] How can I be sure the memory is from a film? I just know that it is. Besides the memory is in black and white. (Burgin, 2004, p.16)

In Victor Burgin's account of his earliest memory of film as a young child memory is interwoven with temporal disconnections, the place of remembering, materialities and the gap between articulation and knowledge. There is a non-specificity in his account with few factual details of the film except that he went to the cinema with his mother; what he finds 'most true' is 'most abstract', a veracity tightly bound into his self. Burgin's sequence-image memory is not the same as actively trying to recall a film. The sequence-image is he says, part of a small personal archive in which this memory of film has a particular affect and appears discrete and unconnected, whilst something actively recalled is recollected in a different manner or not at all. As with Proust, here is a sense that the personal archive is unsearchable and separate to what can be recalled at will and what it might yield up depends upon personal life experiences but also on what has been forgotten. The surprise or disturbance with these memories is the revealing of something that seems known all along. Burgin writes that the sequence-image is 'neither daydream nor delusion' (2004, p.21), but rather a moment which takes hold through association with an affective past, snatched and held onto out of a temporal flow.

Annette Kuhn draws on Burgin's own remembered film experience of what he called the 'sequence-image', to describe a form of cinema memory where remembered scenes of images from films are often vivid and embodied. She says there is a 'fragmentary, non-narrative quality of such memories' (Kuhn, 2011, p.89). Intense and resonant, they can re-evoke bodily sensations. The fragmentary nature of the memory, its brevity and vividness diminished through the telling of it suggests, according to Kuhn, the preverbal, implying it would 'operate on the side of the inner world and the phenomenological' (Kuhn, 2011, p.89). Putting such memories into words opens possibilities of

misrepresentation, making the bearer protective of this fragment of their interior world. The sequence-image of Burgin has become unconnected to the narrative flow that it once formed part of, and has a discrete brevity and affect. The recollection of a film experience long gone is connected to the space of the cinema. Burgin 'just knows' and part of his certainty is attached to 'black and white', a material knowledge in his remembering. This is a pastness where a memory of materiality is connected to a particular time gone and can come to mind irrespective of any sign denotive of an historical past that may or may not occur within the image and sound.

Husserl, Bergson and Merleau Ponty, in articulating temporality often did so through some kind of introspection, analysing their own sensory responses and experience. Memories of perception and the distinctions between perception, memory and recollection are important in considering the multiple temporalities in moving image experience. In this research these notions clarified that the emphasis is on memory and the act of viewing rather than the recollection of a film once seen.

Part Two. Materiality

In this part moving image and materiality are introduced through structural/materialist film theory in the U.K. in the 1970s and 1980s.   I outline some aspects of the debates, particularly from Peter Gidal and Malcom Le Grice, two prominent artists associated with structural/materialist practice and theory. I also draw on my own experiences as a student and artist at the time.

Materiality and practice

My initial notion of materiality was derived from a mid-1970s art school education; a medium-centred approach, broadly termed 'modernist', was a waning (though not spent) influence. American critic Clement Greenberg's writings exemplified the modernist, essentialist attitude to materiality where the medium with its specific material qualities was thought of as critical to the work and its meaning. Exploration of material, experimentation and the quest for self-expression formed part of my art education but there was also encouragement to question the tenets of modernism. Despite being in the painting department I did not paint but made installations with various materials such as aluminium foil and began to experiment with projected light using hand-made 35mm slides and then 8mm film. My approach initially was to try to work with the formal properties of slides and film that could be manipulated, such as light, colour, contrast, size and so on. As my practice developed, however, it seemed that time and movement were also manipulatable elements and the space that the work took place in was also critical. In other words, I found it increasingly problematic to locate materiality solely in the substance that made up a work but also to separate the work from a spatial context.

Drawn into film through my early experiments, from 1980 I made several 16mm single screen film works, (see appendix A) which were generally

shown in cinematic spaces. There was a rich aesthetic lineage from which to draw of avant-garde artist filmmakers who had already experimented with the form and material of film, for example Fernand Léger, Viking Eggeling, Hans Richter, Man Ray, Duchamp, Moholy-Nagy, Maya Deren and more, who were influences on my work.

From the 1960s, throughout the 1970s and into the 1980s, 'artists' film' or 'experimental' or 'avant-garde' filmmaking in the U.K. centred around (though was not exclusive to) the London Filmmakers Co-op, which had a commitment to production, distribution and screening of work. Artist films and filmmaking were also supported by the Arts Council, a critical factor in what could be an expensive business. In using film as a medium I found myself introduced to an industry with the commercial protocols, technical procedures and the laboratory work that went with it. Many artists, including myself, saw their work in film as outside of and in opposition to, the production values and standards of the commercial film industry and tried to maintain a level of autonomy over the process by doing as much as possible themselves. The showing of artists' films, the means of funding and the relationship to the film industry were all issues that informed the debates at the time, but the aesthetic and theoretical context was primarily drawn from art.

Experimental film and materiality

In the U.K. the theoretical framing for experimental film was made mainly in the 1970s and 1980s by artists Peter Gidal and Malcolm Le Grice, who both wrote and published. Film as a medium, film as material and materiality were central concerns. Gidal and Le Grice also traced a lineage from Avant-garde filmmakers and modern art movements such as Minimalism and Abstract-Expressionism.

In his essay, *Theory and Definition of Structural/Materialist Film,* published in 1976, Gidal outlined his position in a polemical manner. Gidal challenged conventional modes of representation in film and refuted what he termed 'dominant cinema', or the mainstream film industry, with hidden processes of production and a spectator rendered passive through identification. He wrote: 'The dialectic of the film is established in that space of tension between materialist flatness, grain, light, movement and the supposed reality that is represented. Consequently a continual attempt to destroy the illusion is necessary' (1976, p.1). His films attempt an anti-illusionistic structural and material rigour where the processes of the film's production are not concealed and as a result the spectator's awareness of her own part in the film's unfolding is made possible.

Duration is part of materiality and key for Gidal: 'In film, duration as material piece of time is the basic unit' (1976, p.8). Narrative film distorts temporal relations with a spectator, replacing duration with illusionistic time. In his book, *Materialist Film* (1989), Gidal wrote that 'the concept of materialism cannot be covered by the concept and concrete reality of physicality. The attempt here is by fits and starts to elucidate a materialist process' (1989 p.15). Gidal aimed for a continual interplay between filmic material-physical support, the momentary illusions produced, and the spectator's subjectivity. To Gidal, '[i]mportant is the concept of a non-static, not memory-less, viewer' (1989, p.18). The artist/filmmaker takes part in both producing and challenging the dynamics of this interaction, but aims to not overly control or dominate. Gidal saw some recognisable, depicted element as necessary in order to have the dialectical tension and the problematising that he sought. He was critical of some abstract films with an approach to the material of film which might objectify or bring about associations because '[t]here are myriad possibilities for co-optation and integration of filmic procedures into the repertoire of meaning' (1989, p.119). In other words, work which might highlight the material or processes of film does not necessarily avoid representation but can be integrated with it. Important to this concept of

materiality is that any integration or assimilation has to be resisted through processes of making and viewing which problematise.

Gidal's insistence on 'duration as material piece of time' bears some relation to a Bergsonian approach. For Bergson, duration is qualitative rather than quantitative and is to be thought of in terms of mobility, as something in the process of becoming. In *Matter and Memory,* Bergson disputed the dualism which broadly speaking polarised the physical with the 'spiritual' or the immaterial, a separation of world and mind which Bergson challenged in the way he located matter.

> Matter in our view is an aggregate of 'images.' And by 'image' we mean a certain existence which is more than that which the idealist calls a *representation*, but less than that which the realist calls a *thing* — an existence placed halfway between the 'thing' and the 'representation' (Bergson, 2004, p.vii).

Bergson uses 'representation' in a particular way, to mean a perception-image. Hovering between a concrete 'thing' and a 'representation', matter assumes a dynamism. To Bergson the body is also an image at the centre of images and memory 'is just the intersection of mind and matter.' I find there is a dynamism shared with the materialist process which Gidal sought to elucidate, between the materiality of film and the spectator's memory. In moving image, materiality and memory are entwined with a dynamism which itself changes.

Gidal limits his own filmmaking to that of a single screen cinematic space and 16mm film, and in his thought-provoking and sometimes opaque rhetoric is arguably dualistic himself as his writing is ideologically dependent upon the rejected 'dominant cinema'. There can also be something of a disconnect between Gidal's theory and the experience of his work, which may not be surprising as he thought there was no straightforward exchange between theory and practice (Gidal to Payne, 2001, pp. 4-5).

Medium specificity

Like Gidal, Le Grice wanted to empower viewers by reducing or challenging illusionism and in this, material was treated not just as substrate but widened to include the spectator. 'Engagement in the problematics of, meaning, signification, structuring and material process etc. extends the rudiments of awareness of substance into material reflexive attention' (Le Grice, 2001, p.170). Reflexive attentiveness with an awareness of the film as material problematised representation. Le Grice worked directly with film processes, such as optical printing and a well-known example is *Berlin Horse* (1970). He also used multiple projection and live performance, making works such as *Horror Film* (1971). Le Grice took into account the space of the exhibition and the film projection as event, widening out the debate to further confront the orthodoxies of the conventional film/spectator relationship, but in his writing he often returns to a concern with film (and later, video) as material.

Le Grice's early experimental filmmaking was influenced by painters such as Jasper Johns and Robert Rauschenburg (Le Grice, 2001, p.298) and he drew from a modernist tradition but questioned one of the tenets of modernism, that of medium specificity. This notion assumes that a medium has inherent and steady characteristics and boundaries and that the qualities intrinsic to the medium are fundamental to the meaning of what is produced. Those boundaries were challenged by artists like Le Grice who made, what he calls, 'cross-media' experiments in the 1960s, stretching the boundaries of one medium through another. But he writes that those still 'began from exploration of the potentialities of the raw material of the medium' (2001, p.301). Following the experiments of expanded cinema, where the event of projection might include live performance and non-traditional ways of showing film, media specificity was further undermined as a foundational concept with the boundaries between media blurred. However, with the advent of video, first analogue then digital, media specificity as 'raw material' was impossible to sustain. Le Grice worked with early video and digital technologies, experimenting with programming and digital manipulation and

finding that although his aesthetic position was built on material processes, media specificity as the basis of the work 'cannot survive' (2001, p.307).

With medium specificity's unsustainability, materiality as a term, which could encompass both film and video with some certainty, became undermined. Jackie Hatfield, in an interview with Le Grice in 2006, wrote:

> In a material sense, video is a latent image, its materiality in flux, necessitating continual theoretical or philosophical review. Video is and always has been a technology of combination, and in its current guise, a chameleon-like element, one of many in the array of constantly changing digital 'new media'. A philosophy based upon video's materiality therefore would be built upon shifting-sands. (Hatfield, 2006, p.81)

Digital video further challenges the idea of any clear boundary between media through the copy. It can translate film through transfer and re-engineer a film's particular temporality (see Part Four. *Practice analysis of two Rough Sea films*). Medium specificity as a set of stable characteristics isolatable to a medium is then impossible. Film has its own particular temporality, but a digital video copy of a film can be considered as having a hybrid temporality that combines the filmic with video. Le Grice wrote that video is 'an interim stage, a hybrid between the mechanics of film and the electronic of digital media' (2001, p. 303). I would take a slightly different view, that the digital *copy* of film is the hybrid. The copy brings uncertainty, where the spectator maybe unsure of what she is viewing, but this is dependent upon having a memory of film.

The issue of medium specificity is still debated. The Artists Moving Image Research Network held a seminar in January 2011 called *Rewriting History: Interrogating the Past and the Question of Medium Specificity*. The seminar considered the relevance of medium specificity in a historical context and when currently 'many practitioners seem unconcerned with the specific nature and the processes of the film or video medium [...]' (AMIRN, 2011).

The passing of film into a 'niche format' the role of the archive and artists' intentions were examined, reframing anew what had been an old debate.

Laura Mulvey wrote that the arrival of digital technology, coinciding with the centenary of cinema, created a 'dialectical relationship' between old and new technologies which could 'create innovative ways of thinking about the complex temporality of cinema and its significance for the present moment of time/history' (Mulvey, 2004, p.143). On the one hand, work cannot be treated as autonomous with only its own physical basis as its materiality, but on the other hand, the issue of where materiality lies is still pertinent through the impact of one medium on another. Whilst digital video appears to unsettle the physical basis of film, it can also facilitate an investigation into the materiality of both. The 'dialectical relationship' of digital video with film has an effect on film that is retrospective, which, I would suggest, shifts materiality from an emphasis on a medium to the spectator and her memory.

Le Grice again reflected on medium specificity in 2006:

> In one respect the notion of medium specificity can survive the digital. Whatever technology is used in recording, storing, restructuring or presenting sequential images and sound, there must be some interface with human perception - the eye, ear or other sense. This interface is both material, a perceptual encounter, and cultural, part of a discourse. Here the notion of specificity remains valid. In any encounter, the form of experience for the spectator depends on the output medium used in the final stage of a work. (Le Grice, 2006, p.235)

He goes on to say that this must be seen in relation to the expectation of the spectator who brings her own assumptions to bear on this interface, which may not be related to the medium. His point about the material interface is echoed by Vivian Sobchack, in her essay, *The Scene of the Screen: Envisioning Cinematic and Electronic "Presence"* :

> [...] we would not be able to reflect on and analyze either technologies or texts without, at some point having engaged them *immediately* -

that is, through our perceptive sensorium, through the *immanent mediation* and materiality of our own bodies. (Sobchack, 2004, p.138)

None of this is straightforward as moving image works now often have multiple outputs and varied ways of viewing them. For example, many of Le Grice's own films (and those of Gidal) are also available on DVD (from LUX) and some can be seen as small size videos on YouTube. The issue of the specifics of a medium has relevance in memory because the experience of work in one medium will have an effect when viewing it in another. For example, having seen *Berlin Horse* as a film there will be a memory of it together with an expectation which will affect how the video copy is seen. Questions then arise as to what the work concerns if the artist claims the work asserts film specifically as medium and material, but makes it available as a video.

Materiality and meaning

In *Material, Materiality, Materialism* (written in 1978), Le Grice wrote that at its simplest, materiality relates to the substance of the film strip as object of physical processes. Another filmic materiality he called 'optic functioning':

> This area of exploration which shifts the question of materiality from the film-material to the material functioning of the viewer, in a primitive sense is made possible by the location of film's frame/projection rate at the threshold of optical discrimination. (Le Grice, 2001, p.166)

The examples Le Grice gave of optic functioning were the 'flicker' films of Tony Conrad, Paul Sharits and Peter Kubelka. In flicker films, film material and the material functioning of the viewer become mingled, conjoining at the threshold between them. The passive spectator of the cinema is activated through the flicker film in a reflexive or apperceptive way where the spectator can become aware of the processes of their own perceiving. Part of the attraction of the flicker film to artists such as Tony Conrad and Ken Jacobs (whose work is examined further in Part Six) is in dealing with a pre-verbal

consciousness where what is depicted, the iconic element or the content, does not dominate. The optic materiality of the flicker film appears to oppose or at least undermine depiction by means of interruption or negation, or a number of other strategies such as rhythmic repetition.

Work concerned with the 'substrate' and its physicality, however, does not necessarily avoid meaning and can produce its own signification. Peter Gidal put it this way in his essay on Structural/materialist film:

> The assertion of film as material is, in fact, predicated upon representation, in as much as 'pure' empty acetate running through the projector gate without image (for example) merely sets off another level of abstract (or non-abstract) associations. (Gidal, 1976, p.2)

Peter Wollen, in '*Ontology' and 'Materialism' in Film,* writes a critique of modernist essentialism in film, finding that a reduction to substrate leads 'to the exclusion of any semantic dimension other than reference-back to the material of the signifier itself, which becomes its own unique field of signification' (1982, p.197). It is interesting to note that he later writes of 'interruptions or destructions of the process of signification' (1982, p.203) as 'noise' (taken up later in Part Six). A narrow treatment of materiality solely as substrate with manipulatable properties can lead to questions of 'reference-back', as Wollen puts it. However, not taking into account film or video's varying materialities makes them vehicles for representation and denies the individuality of the spectator. In negotiating these contradictions it is not so much a question of finding centre ground between these opposing positions but one outside of both, and in this study is found through considering memory.

In summary, the debates of the 1970s still have relevance in considering materiality as a continuing problematic; a critical approach which has a bearing on contemporary experience of moving image. However, concentrating on moving image media specificity can also ignore the importance of process, space and memory. In this recuperation of the active

spectator, memory, anticipation and where the moving image experience takes place are taken into account. In this research a route through the 'shifting-sands' of moving image materiality is to examine the way that film and video might affect each other: in memory, in contemporaneous juxtaposition and technologically through transfer. Images and sounds which are recognisable yet not indicative of a time period were needed, which is explicated in Part Three.

Part Three. Navigation: sea and time

The practice element of the research is centred around images and sounds of the sea which are used to examine temporal experience. The reasoning for using the sea is outlined in this part. This is followed by a discursive examination of how writing and filming the sea might affect experience using pieces of writing by Italo Calvino on looking at a wave and Hollis Frampton on film and temporality. Following Frampton's assertions about temporal flow and consciousness, an early film of a waterfall is taken as an example to analyse. A practice-based analysis on filming the sea then explores how a camera might be an instrument of navigation.

Moving water

There is an affinity between the movement of water and the moving image, particularly waves. Deleuze noted the connection between water and film in his book, *Cinema 1,* when he wrote about, what he calls, the French School's 'predilection for running water' (2005, p.79). He saw it as a kind of metaphysical treatment which produced another state of perception: 'water is the most perfect environment in which movement can be extracted from the thing moved, or mobility from movement itself' (2005, p.80). Deleuze also wrote that 'If the idea of a passive camera had occurred to them, they would have set it up beside running water' (2005, p.79). Early filmmakers did just that, frequently making films of sea, waterfalls or rivers. Waves and Rough seas were filmed from around the mid 1890s, and were popular for over a decade afterwards (see Part Four). The looping quality of waves with their repetitious nature made for a particularly perceptual encounter with movement which can be manipulated through moving image.

Dating and depiction

Film, video and audio of the sea, where there is nothing else depicted, are not easily datable.   This makes possible the foregrounding of some of the material qualities of the medium whose temporality can then be explored. There are some difficulties to take account of, such as the way that certain material qualities of the images and sounds can be used as signifiers of past (noted earlier and examined further in Part Six); for example scratches on film. It is important that the sea is depicted and recognisable as sea but there is a balance to be struck between foregrounding material qualities and depiction. This balance was tested out through practice and through examining found footage film concepts and work by Gustav Deutsch (in Part Five).

Not metaphor

The sea is not used as a means of representing time in any way in this research not only because time is unrepresentable but because it would be contradictory in a study of the experience of time and materiality. Using the image of the sea as a metaphor for time or consciousness is disputed in this research. Peter Gidal finds metaphor a 'decoy' which denies materiality and wrote that 'just because the abstract is unrepresentable is no reason to use metaphor as a stand-in for it' (1989, p.78). However, in dealing with the unrepresentable there is still the problem of articulation in language to discuss it, and here Italo Calvino's notion of writing non-linguistic phenomena (in this case a wave) is useful.

The use of metaphor in writing about artwork can divert away from what might be there for experience, eluding it. The sea as a metaphor for time and consciousness continues to occur in contemporary sensibilities; an example being *At Sea*, (2003) a four screen video installation by Chris Welsby. *At Sea,* Welsby writes, links adjacent images of '... lighthouses, channel

beacons and endless expanses of fog and featureless ocean' (2006, p.34) to appear, at times, as a spatial continuity (but which is made up of different video shots taken in Canada). Welsby says he seeks time and space for the viewer to engage with the work:

> In *At Sea,* both filmmaker and viewer participate in the creation of a fictional seascape, in the representation of a subject that is too large to be apprehended in its entirety. It is my hope that this 'bringing forth' of an unknowable subject, in this case the incomprehensible vastness of the ocean, may be read as a metaphor for the process of cognition. (Welsby, 2006, p.35)

Welsby says that he does not see consciousness as separable from the natural world, but part of a process of interconnected systems and he seeks to involve viewers in those processes through his work (2006, p.30). There is a contradiction though in saying that viewers participate in the creation of the work through their presence to it (which implies that the work takes place in the direct experience of it), and writing that it is to be 'read as a metaphor', which removes it from direct experience and places it into an epistemological grey area. Is it possible to convey the ungraspable, the unrepresentable without metaphor? I would assert that it is, but attention is needed as to what it is that is actually taking place in the temporal, spatial and audio-visual experience of a work. Experience can be examined without analogy and an example is that of Ricoeur in his book, *Memory, History, Forgetting*: 'I remember the expanse of a certain seascape that gave me the feeling of the vastness of the world' (2004, p.40). Although this sentence deals with a similar area as that of Welsby's remarks on his work *At Sea*, it opens up onto experience rather than diverts away from it.

Writing the sea

Italo Calvino asks how the sea can be read. In his book, *Mr Palomar,* Calvino examines how experience can be written, particularly the experience of something that resists writing. The result is almost prosaic but revealing in

a reflexive way for the reader about the process of observing, writing and reading. In the first section, called *Reading a wave*, Mr Palomar is on a shore:

> The sea is barely wrinkled, and little waves strike the sandy shore. Mr Palomar is standing on the shore, looking at a wave. Not that he is lost in contemplation of the waves. He is not lost, because he is quite aware of what he is doing: he wants to look at a wave and he is looking at it.
> [...]
> In other words you cannot observe a wave without bearing in mind the complex features that concur in shaping it and the other, equally complex ones that the wave itself originates. These aspects vary constantly, so each wave is different from another wave, even if not immediately adjacent or successive; in other words there are some forms and sequences that are repeated, though irregularly distributed in space and time. Since what Mr. Palomar means to do at this moment is simply to *see* a wave, that is, to perceive all its simultaneous components without overlooking any of them, his gaze will dwell on the movement of the wave that strikes the shore, until it can record aspects not previously perceived; as soon as he notices that the images are being repeated, he will know he has seen everything he wanted to see and he will be able to stop.
> (Calvino, 1983, p.4)

Calvino suggests that repetitive movement in time makes time and keeps an observer observing, with a crucial aspect being the level of variation. In this piece, aspects of perception – the background, the 'aspects not previously perceived', are part of what Palomar wants to 'simply see'. But he cannot perceive everything, the 'all' of the wave, because it cannot be accessed as a totality. Palomar expects his gaze to 'record', but his mind is not a recorder. He wants to read complexity out of a singular event, which is unrepeatable, a phenomenological reduction which won't work and he relies on one sense – vision. At the beginning of the piece he says he does not want to 'contemplate'. Contemplation becomes a kind of inward looking loop, a mesmerism that Palomar resists, wanting to find an end point, which is an impossibility. Unable to gain knowledge from looking, by trying to understand through attention rather than absorption, Palomar leaves the beach 'even more unsure about everything'.

The urge to see something complex repeat so that you can stop observing it and set it aside, as it were, is related to language and the inability of language to encompass something that will not be articulated. In an interview, Italo Calvino said *Mr. Palomar* responded to a problematic, that of 'non-linguistic phenomena'. He said '[t]hat is, how can one read something that is not written, for example, the waves of the sea?' (Calvino to Lucente, 1985, p.248). He was also interested in depicting complex phenomena through writing, saying that '[m]y line is certainly different from that of writers who want to create a mimesis of complexity through language that is like a boiling cauldron, through a representation that is complex in itself [...] (1985, p.253). What Calvino makes available through the lucid examination of complexity is something that the reader can engage with actively. As a piece of text it can bear many readings as Calvino does not give answers; rather questions are opened up, such as how language can articulate experience without transforming it.

Film/waterfall/process

The movement of water, such as the wave that Mr. Palomar tries to observe, does not have a discernible beginning or finish, rather it is a process with characteristics in which pattern can be detected or forms repeated in space and time. Hollis Frampton, artist filmmaker and writer, also connects water, consciousness and language:

> A waterfall is not a 'thing', nor is a flame of burning gas. Both are, rather, stable patterns of energy determining the boundaries of a characteristic sensible 'shape' in space and time. The waterfall is present to consciousness only so long as water flows through it, and the flame, only so long as the gas continues to burn.
> (Frampton & Jenkins, 2009, p.142-3)

Frampton, a 'metahistorian' of film and something of a polymath, sought to anchor film critically within the arts as well as philosophy and science. Frampton starts to come close to unpicking how consciousness and moving

water might be analogous through his writing. A waterfall, according to Frampton, is not detachable from the conditions which form it rather it is process in space and in time. The water, falling, has boundaries which produce a 'shape' which can be named 'waterfall', but it is the movement through this shape which is perceived and therefore what is present to consciousness is temporal flow. The passage quoted above forms part of a piece of explorative writing, which ranges around the axiomatic in thought and film, a pursuit of the essence of film. Frampton goes on to ask:

> What are the irreducible axioms of that part of thought we call the art of film?
> In other words, what stable patterns of energy limit the "shapes" generated, in space and in time, by all the celluloid that has ever cascaded through the projector's gate?
> (Frampton & Jenkins, 2009, p.143).

Film also is not a 'thing' then, but another temporal flow with inevitable conditions that surround and limit what is available to the senses. Film is bounded by two 'inevitable conditions', writes Frampton. The first is the frame, which he says has 'the force of a metaphor for consciousness'. It is notable that Frampton writes that the frame has the 'force' of metaphor not that it *is* a metaphor for consciousness. The second is what he calls the 'plausibility of photographic illusion', which he describes as the 'automatic reflex' to compare the projected image to 'a "norm" held in the imagination'. Later he equivocally adds a third condition, that of narrative (Frampton & Jenkins, 2009, p.143).

With Frampton's 'shapes', that of a waterfall and the 'cascade of celluloid through the projector's gate', the two temporal flows of waterfall/film conjoin in a simile (almost a metaphor but not quite) when he calls film a 'cascade' of celluloid. The two forms of temporality seem interchangeable, but if the two were collapsed through film of a waterfall would there be a move from an emphasis on thought and temporality in language to the experience of it? Interweaving and possibly paradoxical senses of temporality could then become apparent from what is available to the senses.

Figure 1. Edison Manufacturing Company (1897) *Waterfall in the Catskills*

One of the earliest examples of a film of a waterfall is *Waterfall in the Catskills* (1897, 55ft) by the Edison Company (figure 1). In this short film of less than one minute the camera is fixed, though unsteady and the image is of vertical streams of white water falling, framed by dark vegetation and rocks. The waterfall is cut by the framing so the moving water appears to have no starting or ending points. It could be on an endless loop but is limited by the length of the film and the frame, Frampton's first condition, which he says 'partitions what is present to contemplation from what is absolutely elsewhere' (Frampton & Jenkins, 2009, p.143). So long as the water is moving, waterfall, film, temporal flow and contemplation exist.

Frampton's second, 'inevitable condition' of film, that of the plausibility of photographic illusion, becomes more uncertain because this 'condition' was specific to photochemical projected film. If the film is transferred and viewed in some other way this must be taken into account. *Waterfall in the Catskills* in 1897 was a 35mm black and white film, which is no longer in existence. The short film has endured in another form viewable today because to protect copyright, paper prints were made (it also, in common with other Edison company films, has the copyright written on a frame). The paper print was preserved, unlike the film whose copyright it protected, and was later re-filmed by the Library of Congress, viewable once again as film. It was also made available publicly as a small video on their website. *Waterfall in the Catskills* has had a journey of transfers (from 35mm film/paper/film to various video formats) over a period of more than a century. Viewed on a computer

screen, the image, though small, looks like a waterfall and is intriguing even with all the jumble of other visual information and text that accompanies it.

To reflect on Frampton's second inevitable condition, what is the 'norm' held in the imagination that might be compared to the image seen? It is highly likely that a contemporary viewer will have seen more waterfalls in various moving image forms than waterfalls in the landscape. The image is identifiable as waterfall but is also recognisable as having been filmed. Therefore, the comparison may not only be to the 'norm' of waterfall as an image, but of one moving image materiality to another; for example that of film to digital video. When the waterfall on film is transferred to another medium, other 'shapes' of temporality are made sensible but they do not lend themselves to axiomatic thought, being more contingent and uncertain.

Moving waters such as waterfalls and seas are a means to grapple with questions of consciousness, movement and experience of time, but are not progressed, as Calvino shows, with metaphoric allusion. With moving image and sound of the seas or other moving water such as the waterfall, a technological, material involvement is added, with a complexity which has absorbed artist filmmakers such as Hollis Frampton.

Practice analysis: experimental navigation with a camera

Early films of the sea formed a central part of this practice research and I started by producing related test works using film and video. This was initiated through analysing two Mitchell and Kenyon films (see Part Four, Practice analysis) and by inquiring into the bodily relationship of the camera operator with the seascape and how that might be affected by the camera. At first I used 16mm film and experimented with hand-cranking the film so as to make a similar relationship to camera and waves as the Mitchell and Kenyon films. Later, I also experimented with various cameras and formats of film and video, mainly shooting the sea from either a cliff or a beach and at one point from a boat.

To refer to Calvino, these practical experiments also became a question of how to 'read' the sea with a camera. In which case how would the camera influence my reading of the sea? At around a mid-point in this process, the camera took on something of an instrument of navigation. As I looked at (only) the sea and sky through a lens, my back to the land, the camera became a mechanism not just of recording, but one which positioned me in relation to that movement and space. It was very different to being in front of a landscape or townscape with a camera. This seemed to be because without the obstruction of land, the horizon has an emphasis which dominates the positioning of body and camera even if the camera operator keeps the horizon out of frame. It seems to fix the body through the handling of the camera as well as through the lens. I noticed that the horizontality was a level which I kept trying to keep, making sure that the line of the horizon mimicked that of the frame. I then questioned why I resisted it being at a different angle and, as a response, tried various strategies to avoid keeping the horizon level, such as recording whilst turning the camera around 360 degrees by hand. I then turned it level again in the editing process so that it appears as though it was the frame that moved, emphasising the instability of

the handling and revealing a bodily presence behind the camera (see appendix G DVD).

Through the lens the horizon became a line which had to be related to the frame of the camera. In Frampton's thinking, the frame 'partitions what is present to contemplation from what is absolutely elsewhere' (Frampton & Jenkins, 2009, p.143) and in that sense both the horizon and the frame share as Frampton would put it, 'the force' of a metaphor. The horizon appears as a line beyond which the world has to be imagined, but which moves with me so that it is always delimiting. As the camera operator I am further delimited by the frame, relating the two limits of horizon and frame.

In filming the sea, the camera becomes a structuring device, an instrument which locates a bodily reaction to the horizon. I found this echoed another device, the sextant. The sextant uses a lens and mirrors to look at the horizon and determine an angle between it and an object in the sky (usually the sun) and is generally used to calculate a position on a nautical chart in navigation. In further experimentation I attempted to incorporate a small video camera into a home-made sextant without success. However, it was more a process of thinking something through by doing, rather than producing a usable result.

Once the footage is shot, the camera's role as a tangible instrument finishes, although there are correlations with the projector. In projection the technological presence of the projector is often hidden or at least subdued. The frame is again a dominating element with a partial equivalence to the horizon in that the spectator is placed by it, something explored in both *Sea c.1897-2011* and *Sea breaking*. When the projector is present and visible in the space of projection, this relationship can alter as the projector becomes another instrument of navigation, with the placement of the spectator crucial in the arrangement. Both works, *Sea c.1897-2011* and *Sea breaking,* take on this idea of spatial navigation but in different spaces of reception; the former in a cinematic and the latter in a non-cinematic space.

In summary, these are practice methods of investigating and informing the issues articulated earlier in this part, that is, how the sea can be used to explore temporality. The camera, as an instrument that locates the operator, became emphasised during the process of filming, something that could only be found through practice. Lens and sea have a dichotomous relationship, one where as the operator facing an empty sea I was accompanied by an awareness of technological presence and influence through which the horizon highlights the frame.

The films that prompted these experiments, those of Mitchell and Kenyon, are *Rough Sea* films made around the turn of the 19th to 20th century. They were part of a sub-group of popular actuality films of that period, which Part Four investigates.

Part Four. Every now (and) again: Early film and Rough Seas

This part explores reflexive awareness in early film spectating through contemporary accounts and the historical perspectives of Richard Abel, Tom Gunning, Yuri Tsivian and others, with a particular focus on Rough Sea films. This was not a search for origins but to ask how film was received before it became habitual, and what senses of time there are when early film is viewed now. An analysis of two early films, by recreating and appropriating them, follows.

A period of diversity

The term 'early film' is widely used but it is a homogenizing term, belying the diversity it contains. Production and presentation of moving image in the early film period was heterogeneous. The spaces and places of early film reception were diverse: theatres, halls and shops, travelling shows and fairgrounds.   The equipment was not yet standardised and there was no one name for this phenomenon – *animated photographs*, *living pictures*, *magic pictures* are a few. Richard Abel writes that 'early cinema' (which he defines as around the mid 1890s to the mid 1910s in Europe and North America) 'was inextricably bound up with other forms and practices of mass culture, ... and that it was a hybrid medium which only gradually coalesced into something more or less distinct as *cinema*' (Abel, 2005, introduction). The diversity of the films produced can be glimpsed in film archives around the world, housing the existing small residue of a once huge quantity of films.

Archives are recognising the importance not only of preservation, but of screening copies of these films to current audiences. The Oberhausen Short Film Festival in 2010 is an example, with a programme called *From the Deep: The Great Experiment 1898-1918,* and had over one hundred films from that period from thirteen different archives around the world (Lewinsky &

Kuyper, 2010, p.83-110). The programming did not reproduce any original presentations, but sought to demonstrate something of the formal and thematic features of the period within the constraints of budget and availability. The spectators, spaces and modes of reception are different, but screened once more, the facility to surprise and the feeling of being directly addressed when watching these early films is palpable. They appear inventive and even radical, compressing historical distance. This could be for a number of reasons: they have an unfamiliarity (many of the films shown at Oberhausen 2010 had not been seen publicly for almost a century); as 35mm prints, some freshly made for the festival, they were projected carefully and had a clarity (and sometimes vibrant colour) which is startling; and it is possible to link them to the discourse around avant-garde and experimental filmmaking.

The connection between early film and experimental filmmaking, whether as antecedence or inspiration, has already been put forward by writers such as Tom Gunning and others in books such as the *Cinema of Attractions Reloaded* (Strauven, 2007). The short form of the early film, often a direct address to an unfixed spectator, a play on the materiality and form of the medium, a presentation to the senses, a questioning approach and the performative possibilities of showing film are also concerns which can be identified with experimental filmmakers. The early film viewed now, through the layered, intertextual experience of early 21st century memory makes it possible to see these films as being experimental even if they never were intended to be at the time they were made.

Early film accounts

Early filmgoers were 'medium-sensitive spectators' (Tsvian, 1998, p.217). Their reactions to an unfamiliar form of temporality, film, were often reflexive responses to what it was they thought they were seeing, hearing and experiencing, within a context of rapid technological and cultural change.

Gunning writes, 'early cinema developed within an atmosphere of intermediality and could be seen as the culmination of several different media' (Gunning in Abel, 2005, p.467). The different media included: the photograph, dioramas, panoramas, cineoramas, lantern shows, kinetoscopes, zoetropes and other proto-cinematic forms, which might have prepared the first audiences. Film projected to audiences in the 1890s was presented publicly as the latest marvel amongst many. This intermediality, according to Gunning, formed the contexts in which early cinema was received (2005, p.467). Little contemporary description has been written outside of reports and articles which appeared in the newspapers and periodicals of the time (see appendix B), so what there is must be treated as partial and many of the people who went to see these early films, especially the itinerant forms, are unlikely to have been literate.

Gunning sees two interwoven strands in the written accounts; scientific reports that emphasised realism and 'uncanny' reports which stress the bizarre and the strange, although they sometimes occurred in the same piece of writing. He writes: '[i]n noting the novel perceptual aspects of moving pictures, the uncanny mode also supplied some of the earliest phenomenological accounts of cinema' (2005, p.468). However partial they are, these accounts are useful documents to consider as written descriptive responses to film. Reviewers (often anonymous) write not only of a visual but also an embodied, haptic experience. They are not yet the individual spectator with disembodied eyes and ears of later cinema. In the account of the Lumière brothers' first UK public screening in the *The Sheffield and Rotherham Independent* the reviewer writes:

> You enter a hall which is darkened, and where you can sit in comfort without screwing up your eyes and peering (in a very uncomfortable position as was the case with the kinetoscope) into two tiny holes. At the end of the hall is a large white screen upon which the pictures are thrown, and the illusion is so complete that you appear to be looking through a window at something actually occurring in the next street. First of all you are shown a factory. The gates open. Then the girls pour out, laughing and (apparently) talking.
> (*Sheffield and Rotherham Independent*, 1896, p. 2)

Scale and distance were important elements in the impression of reality ('no more peering into two tiny holes') and the size of the screen was large enough to implicate the spectator as present bodily to the film. 'Life-size' was a frequent term in posters for the films of that time. In some accounts imagined smells and sounds are introduced to emphasise how compelling the illusion was to the reader: '[...] a train is seen in the distance. It comes nearer and nearer. You see the steam from the funnel and valves, and you can almost imagine you hear the puffing of the engine' (1896, p.2). In another review of a Lumière programme: '[t]he waves roll in quite naturally to the shore (inevitably, since they are photographed from Nature, and one has always to be recalling this) you expect to smell the briny so complete is the illusion [...]' (*The Wrexham Advertiser,* 1896, p.2). The anonymous reviewer for the *Sheffield and Rotherham Independent* also relishes their awareness of the illusion and concluded that the exhibition is 'remarkable evidence of what science can do to deceive the senses' (1896, p.2). With the wave films, nature appears to conspire with the illusion of movement for the spectator, who is aware of it and participating in it.

The Rough Sea or Wave film

In April 1896 Thomas Edison presented the Vitascope for the first time in public at Koster and Bial's Music Hall in New York, with a programme that included a British film by Acres and Paul called *Rough Sea at Dover* (also known as *The Wave*). It was acclaimed as the best film:

> ..... but it was the waves tumbling in on a beach and about a stone pier that caused the spectators to cheer and to marvel most of all. Big rollers broke on the beach, foam flew high, and weakened waters poured far up the beach. Then great combers arose and pushed each other shoreward, one mounting above the other, until they seemed to fall with mighty force and all together on the shifty sand, whose yellow, receding motion could be plainly seen. (New York Times April 26 1896)

It is movement that is being celebrated in this review, a velocity which seemed to reach into the audience. The notion that the frame could not contain the movement, which could break out of it towards the viewers, is familiar as a trope of early cinema history, but, nevertheless, it is a strong element of those early descriptions. I would suggest that the movement of water for early viewers presents a paradox of real motion but illusory space which can overflow the frame. Yuri Tsivian says that this type of response disappears when consciousness of the screen is suppressed from the early 1910s. Prior to this, the viewer was conscious of the screen and its borders, many accounts including it in their descriptions. Tsivian quotes a letter from Stasov written in 1896, describing a Lumière film, *A Boat Leaving Harbour*:

> Imagine that you suddenly have the open sea in front of you, no shore at all: the shore is the bottom edge of the picture right in front of where we are sitting ....And the waves are getting bigger and bigger all the time, they are rolling in from far out and coming on right up to you ... on and on, leaping up and crashing down, and the lines of surf are breaking right against the front edge of the picture. (Stasov in Tsivian, 1998, p.155)

In *A Boat Leaving Harbour,* the placement of the camera frames a sea with a small rowing boat. Seen at first in side view in the foreground, the boat turns to travel out to sea. A jetty with people on it juts into the picture, unconnected with the land. The level of the camera together with the trajectory of the boat emphasise the edge of the frame. To Stasov, the boundary between water and land, the shore, has become the picture frame – 'the shore is the bottom edge of the picture'. It is also a boundary between movement and stasis, a confrontational closeness 'right up to you'. The movement appears endless – 'on and on' until it is broken by the frame.

Figure 2. Lumière, L. (1895) *A Boat Leaving Harbour*

Stasov's description is of a spectator's self-reflection, which is possible where the screen is acknowledged, producing a sense of space between the screen and the spectator. This disappears in later narrative film, where the sense of space between becomes a space beyond, a diegetic space. Senses other than the audio-visual become uninvolved and the spectator is absorbed within the space beyond the screen, 'lost in a fictional world' (Gunning, 2004, p.869). Where there is awareness of the screen a sense of being present is possible, again something which engaged many avant-garde and experimental filmmakers.

Many of the Rough Sea or Wave films did not have people in them and the movement of the sea was the focus. The reviews quoted are full of descriptive words to do with motion and action: tumbling, crashing, rolling, breaking, dashed, poured, pushed and so on. The movement words emphasise both illusion through the movement and the experience of movement. A contemporary commentary on Lumière's *La Mer* or "Bathing in the Sea" 1895 comes from Ester Singleton:

> [It] was the only picture of the sea that I have seen that is satisfactory because it gives the motion. It was, indeed, difficult not to imagine yourself looking at the rolling waves that stretched out miles and miles ahead of you and near the beach the great wrinkled, streaked billows lifted themselves in the heaving mountains and curled into white foam and dashed into nothing, succeeded by the next heaving billows.
> "Life in Picture Films" *Washington Post* 1896 (Mathews, 2005, p.51)

Prior to around 1910, Rough Sea films were a very popular genre and repeatedly filmed by various filmmakers and companies. William Fowler notes, in his paper on Rough Sea films that in the period between 1895 and 1906, '[...] thirty one films were made that could be described, whether by their title or their description, as "Rough Sea films"' (Fowler 2004), and this was in Britain alone. A description from *Moving Picture World* (an early trade journal in the U.S.A.) shows that Rough Sea films were still valued in 1909, and with the aspiration to be compared to art and painting:

> A HEAVY GALE AT BIARRITZ (Urban-Eclipse)
> We have before commented upon the immense attraction which sea pieces have for moving picture audiences. The sea is popular with us all. The sea, too, has its moods, as some of the greatest of the world's painters have discovered.[...] we are glad to see that the makers of moving pictures are getting alive to the fact that in the moods of the sea there is a wealth – one might almost say a limitless wealth – of material for moving picture subjects. [...] The waves roll in, they break, they dash, they thunder; they create clouds of sea mist; one, indeed, could almost feel the atmosphere of the very spume which the sea forms when smashing down on a rockbound coast.
> (*Moving Picture World*, July-Dec 1909, p.719)

The description shows that even fourteen years after *Rough Sea at Dover*, Rough Sea films still had appeal, albeit one based on the popularity of earlier, similar films. Along with the usual emphasis on movement and the perceptual allure of looking at waves, *A Heavy Gale at Biarritz* was described by the writer as a 'nature study' in contrast to 'the trashy manufactured stuff' (1909, p.719).

Pictorial context

Imagery of the natural was already pictorially understood through the landscape tradition of painting. In *Moving Pictures: American Art and Early Film,* Nancy Mathews proposes that the context for early films of landscape, was pictorial (2005, pp.1-3). In 1896 *Rough Sea at Dover* was projected onto a curtain which had a painted frame around it. The illustrations on

posters of the time advertising 'moving pictures' show the projection screen as a canvas with a gold frame, linking the 'fine views' to art (Mathews, 2005, p.146-148). There was the connection to the 'panorama' (large scale panoramic paintings, mounted on scrolls and moved) and 'moving pictures' of filmed landscape and seascape scenes (Mathews, 2005, p.49). The scale of the projected film was important as it gave a sense of life-like size, and as many landscape paintings were of a large scale too, this connected with the prevalent idealised notion of landscape as monumental, with the spectator an individual onlooker, awe-struck and insignificant.

For Georges Méliès, an early film pioneer, the cultural context was theatrical. He describes, in his autobiography (written in the third person), his efforts to film the sea in 1896 producing '15 glorious shots':

> Having filmed in the studio a number of short comic or artistic scenes, Méliès wanted to take some sea views on the spot, in order to enhance his program with some scenic views, or documentaries as we call them now. [...] A storm was raging, as Méliès had chosen on purpose a period of bad weather so as to obtain more attractive effects. [...] Nothing of that kind had ever been seen before; the assault of raging waves on the cliffs of Sainte-Adresse, the foam, the seething waters, foam sprayed into the air, the eddies and spindrifts which were flitting about – as banal as all this might appear today, it fascinated the public then, as it was used to standard representations of the sea in the theater which was realized by means of painted canvas surfaces shaken by kids crawling underneath it.
> (Méliès in Leyda, 1977 p.309)

Méliès calls the films 'banal', but at the time he was writing (the book was first published in 1945) he may not have wanted to align himself with something that may be thought of as out-dated. He writes as though he needs to distance himself from their apparently simplistic appeal. The embodied reaction to Rough Sea films would have been considered unsophisticated by the 1940s. However, the fact that the Rough Sea and Wave films could also be attached to established and more respectable cultural traditions such as painting may have aided their relatively long period of popularity.

Contemplation

As well as shock, astonishment and attraction as a response, absorption and contemplation was possible. Charles Musser argues for a contemplative spectator, as against Gunning's astonished one, saying that early film programmes were often looped so that people watched the same film over again (Musser, 2006, p.163). Tom Gunning's well known *Theory of Attractions* (Gunning in Abel, p.178), posits a curious, aware spectator whose involvement with the screen was very different to that of viewers of later, narrative dominated cinema. Musser proposes that the looping of the film with the chance to see it over again several times meant that an audience, which was at first astonished became more reflective on further viewings. Spectators would be able to contemplate and explore the image. As an example he uses Edison's *Waterfall in the Catskills* (1897), which he says had a mesmerizing effect, but the contemplation was of a detached kind as the water was not coming at and confronting the spectator, and the distance of the camera from the water meant that detail was reduced. In contrast, *Rough Sea at Dover* (1895) was filmed as if to confront the spectator. When shown by Edison at Koster and Bial's in 1896, *Rough Sea at Dover*, less than a minute long, was looped and repeatedly projected. The repetition would consolidate a memory of the film, but each time the viewing is an experience which is comparative. Although the movement within the film contains very similar elements, the waves are not identical nor the detail easily predictable, so repetition can still engage the spectator. It is an absorption which is almost mesmeric as there is a circularity of duration that has no resolution. This would have been heightened in the films in which the human figure is absent, where the address of the film would then be directly to a spectator who is unfixed by the empty image and able to occupy the space for herself.

Perceiving Motion

> The whole essence of the screen is movement. Sitting in the semi-darkened room, we hear the ticking of the projector, and are constantly reminded of the passage of time. It creates a special mood; it makes us aware of our existence in time.
> (Meyerhold in Tsivian, p.121)

From the early accounts it appears that movement is what takes hold of the film spectator more than anything else. Siegfried Kracauer, in *Theory of Film: The Redemption of Physical Reality,* wrote that: 'Movement is the alpha and omega of the medium' (1997, p.158). He asserts that movement in film has a '"resonance effect", a 'physiological stimulus', saying '[...] representations of movement do cause a stir in deep bodily layers. It is our sense organs which are called into play' (1997, p.158). Bergson, in his book *Creative Evolution,* published in 1907, criticised the cinematograph and its apparatus for immobilising movement, cutting up durational flow and making it move again through mechanical means. He saw it as similar to the processes of the intellect rather than intuition. Gunning suggests that Bergson's notion of the cinematograph as a distortion of 'moving reality' is because it 'derives from the *film strip* in which motion is analyzed into a succession of frames, not the *projected image* on the screen in which synthetic motion is recreated' (Gunning, 2006, p.42). Gunning cites an early text by Christian Metz saying that:

> Metz claims that the motion we see in a film is real, not a representation, a claim I take to be close to Bergson's discussion of the way movement cannot be derived simply from a static presentation of successive points. (Gunning, 2006, p.43)

The notion of cinematic movement as a series of still images joined by the spectator in the production of an illusion of motion was reinforced by the idea that the perception of movement in film can be explained solely by the theory of persistence of vision (Anderson, J & B, 1993). This theory is typically described as the retention of images for a fraction of a second, so that rapidly

changing slight differences can be perceived as movement. Joseph and Barbara Anderson have exposed persistence of vision as a pervasive 'myth':

> First "persistence of vision", the term, the concept, the myth, must be given a place in the history of film scholarship, but can no longer be given currency in film theory. The time has surely come when only the creationists among us will cling to the myth of persistence of vision as an actual explanation of how movies come to be. Second, and more important, the concept of the passive viewer implied by the myth, the one upon whose sluggish retina (or brain) the images pile up, must be replaced by an enlightened understanding of how viewers actually interface with motion pictures. (Anderson, J & B, 1993, p.3)

The Andersons put forward that the perception of movement in film and video is more complex and as yet not fully understood and that if motion is processed in similar ways in both film and the world, then the viewer has to be acknowledged as one who actively seeks perceptual information and is in movement themselves, rather than a passive recipient. This echoes Gunning's contention that 'The nature of cinematic motion, its continuous progress, its unfolding nature, would seem to demand the participation of a perceiver' (Gunning, 2006, p.42).

The motion that is perceived within the frame, that of photographically depicted objects which appear to have trajectories across time, is one form of motion. There are a number of other movements to consider in early film. The projector light flashing which gives rise to flicker, the irregularity of the registration of the film and the handcranking of both the camera and the projector giving rise to judder, are all movements which take place in the background, repetitive and habituated unless they are too difficult to accept or attention is called to them. Together, these movements weave in and out with rhythms that cut across, regular or irregular but with repetition, becoming habitual and forming a background of awareness. When there is a noticeable change in this rhythm, memory is disturbed and awareness is heightened (see Part Six).

To conclude that movement (in film or any other moving image media) is purely illusory is to deny its fundamental place in experience. The fascination of early film turned upon the paradoxical experience of motion as both real and impossible at the same time, which came about through their embodied reception of film. As spectators, they retained an awareness of themselves in relation to the screen, actively and often knowingly participating in the illusion.

Practice analysis of two Rough Sea films: Spectating early film later

Rough Sea films often have no visual indicators of a time or place, so the question can be asked as to how a sense of past could come about from these films. As a response to this question, two films of the sea made by Mitchell and Kenyon in 1901 and 1902 are analysed in detail and through practice.

In 1901 Mitchell and Kenyon produced *Rough Sea at Roker* and in 1902 *Waves at Southport*. Both films are held in the BFI National Archive. Mitchell and Kenyon were itinerant filmmakers who worked mainly in the North of England. They produced many actuality films for travelling fairground exhibitors, who commissioned them to make films of the locality that the show was held in. These actualities included factory gate films, processions, sporting events and leisure activities and directly linked the production of the film to the reception of it through the appearance in the films of the potential audience. The two Rough Sea films seem unusual for Mitchell and Kenyon in this respect, as no people figure in them. They may be a commercially-minded response to the popularity of other Rough Sea films and are amongst a large number of local films commissioned by Ralph Pringle, a showman exhibitor.

In *Rough Sea at Roker* and *Waves at Southport,* the framing and placement of the camera in relation to the beach and the waves is particular and there is about them, (to quote Noel Burch in his description of early film) a 'rigorous frontality' (Burch, 1990, p.16). This positioning of the camera, directly frontal to the waves, is deliberate – tests I have done show that it is not easy to set this up as waves can come in at angles and beaches shelve. The camera operator cranked the 35mm film by hand and would have been watching and

Figure 3. Mitchell & Kenyon, S. & J. (1901) *Rough Sea at Roker*

Figure 4. Mitchell & Kenyon, S. & J. (1902) *Waves at Southport*

waiting for the right moment to expose a minute or two of film. The presence of the camera operator is made visible in the occasional variation of speed in the film cranking and, particularly in *Rough Sea at Roker,* through the frame moving slightly but to a regular beat. There was a connection between the hand and the eye and the movement filmed; a rhythmic correlation.

In *Rough Sea at Roker*, the placement of the camera seems low and the frame is cut across with horizontal bands of white varying to dark grey sea which move towards the camera, breaking on the beach (see figure 3). A jump cut, occasional over-exposed frames and spots of white and black add to the movement of the waves and the flicker. Film stock at that time would have been orthochromatic, where the photographic emulsion is sensitive only to blue and green wavelengths. In both films, areas of the sea seem dark, which may be due to the orthochromatic stock, and the contrast with white foam is increased. In *Waves at Southport* the camera frames only the sea and there is no horizon, so the concentration is on the detail of the breaking waves (see figure 4). It is hard to tell where the camera is in relation to the beach, which emphasises the movement within the frame.

My practice analysis of *Rough Sea at Roker* and *Waves at Southport* took the form of recreating and also appropriating them. On a beach with a similar shoreline (in Bigbury, Devon), I used a Bolex 16mm clockwork camera with the wind-up handle as a crank. I intended to test the action of shooting the film as well as to produce film footage. The action of turning the handle mimicked the rhythm of the waves, connecting the action to the seascape in a way which contrasted with shooting with a video camera, which felt more distancing. The movement from the turning of the handle is visible in the footage and the coordination to produce a film which is smooth and regular can only come about through practice.

Rough Sea at Roker and *Waves at Southport* were also the basis for experimentation through digital editing processes, using a telecined version from the BFI (see appendix G DVD). Their appropriation as films was

mediated through technological transfer. In querying their temporality I wanted to know if I was seeing them as 'old' even when viewed on a screen or projected as a digital copy of a video of a film. The material qualities which were so apparent in the two films such as the frame rate, contrast ratio, scratches and specks, seemed to transfer over into the video. But the frame rate was of particular interest as the hand cranked films would have produced a rate at probably around 16 frames per second or less, which is then transferred to video's frame rate of 25 fps. In an examination of the frames using a video editing programme, 13 successive frames of *Wave at Southport* converts to 25 frames of video. In *Rough Sea at Roker*, just over 10 frames of film became 25 of video. This was done in the transfer process (called 'pulldown') through duplicating and motion interpolation, so that the duplicated frame became a kind of inbetween frame, combining the previous and next frame. It is a form of animating the interval between the frames of the film to fit the temporal requirements of video. In an experiment in which I removed the duplicated frames, through superimposition and a slight adjustment of scale, the temporal patterns of the transfer are exposed (see appendix G DVD). The method used in this experiment is akin to those used by artist filmmaker Ken Jacobs (whose work I discuss in Part Six).

The copying process of film to video produces a hybrid temporality which is not subtle when revealed. The video copies of the films have their own particular material tempo, but one which has to be related back to the film. Just how related this might be is dependent on the spectator's memory and each spectator will have their own moving image memories to draw from. As a spectator now I bring my own remembered experience of film to watching the video copy of the Mitchell and Kenyon films. However, as an embodied memory, with more than just memories of scratches and splices, it involves the space where it was seen. If materiality is to be thought of as beyond narrow media specificities, the space of reception has to be included.

To summarise, in the early film period, not yet stabilised into a set of conventions, early spectators had embodied and often attentive reactions

with an awareness of screen and illusion.   In watching an early film projected now there can be a sense of historical distance but also its collapse, the pastness of the film seemingly conflicting with the present of the screening. It is new to the viewers who have not seen it before, yet full of a past which seems inaccessible. These collisions can be exploited through the found footage film and memory, materiality and depiction explored. Part Five examines these aspects of found footage.

Part Five. Persistent Material

In this part the found footage film is investigated as a means of exploring materiality and memory. Two works by Gustav Deutsch are analysed and the articulation of the shifting temporalities of moving image is discussed further.

Sea c.1897-2011 (*Sea*), which forms part of this thesis, resulted from the multiple threads of archival, historical and spectatorial research led by practice. It is a 'found footage' work which appropriates film footage from other makers. *Sea* tests areas of temporal uncertainty, raising what is past about what is seen and heard and how pastness might be known and connected to material qualities within the cinematic space. The early Rough Sea films, as Part Four explicated, are, in their apparent simplicity, an exploration of movement and of filmic temporality. *Sea* juxtaposes segments of unrelated, archivally sourced films of the sea and some contemporary film footage made for it, all originating between the dates of the title. The contexts of these films are already detached several fold, before being given another context in a new work. In *Sea* the individual clips, extracted from their original sequences by, for example, being cut just before the moment that a person walks onto the frame or the camera pans to find a car passing by, find new contexts through previously unseen similarities.

In the databases of the six regional film archives that I searched through the donated family film collection had parity with local newsreel footage and little known regional filmmakers in an eclectic mix. In searching for footage in the contents of databases in U.K. regional film archives, the first connector to the found footage is the word or words typed into them. The varying descriptions of the films contained within the database are the key to their finding so that there is already a layer of textual interpretation. Somebody watched the footage and noted key words or made descriptive phrases which went into a

database or listings of works held; words which become in the first instance, what is 'found'.

Found footage

Work using found footage or recycled film or collage film has a long antecedence since the 1930's when Joseph Cornell re-worked a little known movie called *East of Borneo,* to make *Rose Hobart*. Editing it to concentrate on the actress, replacing the soundtrack, slowing and tinting the image, Cornell produced an evocative and surreal film. Filmmaker Standish Lawder writes of 'decontextualisation' in found footage filmmaking:

> Stripped of its original context, the shot becomes veiled with layers of speculation, subjective evocation and poetic ambiguity. Questions of intentionality and meaning become slippery. The true significance of the a priori original image hovers just off-screen; we cannot be certain exactly why it was filmed. (Lawder, 1992, p.113)

The clips used in *Sea* come from a range of footage, from travelogues, to documentaries, to family films. Some are 'orphan', in that they have become separated from the details of who made them and why. The found footage film further loosens the ties to originating contexts as clips are cut out and put together in a way that is unlikely to relate to the filmmakers' intentions. However, the attachment to their provenance and moment of registration is never quite lost, which Lawder called 'tenacious immutability' (1992, p.113).

Once re-contextualised the disjunctures typical of found footage filmmaking start to arise. In much found footage work depiction predominates but in unexpected ways, revealing something about the process of making and viewing film. Lucy Reynolds writes of Bruce Connor's *A Movie* (1958), a well-known example of the found footage film, that the montage of diverse elements can produce a subversive, disjointed and ultimately reflexive cinematic experience, which undermines conventional approaches.

> Thus found footage filmmaking has the potential to set up a critical position between the viewer and the image; revealing the illusory nature of the cinematic image and undermining its insistence on the narrative device as the principle conveyer of meaning in cinema. (Reynolds, 2006, p.17)

The found footage filmmaker can excavate archives, elevate the mundane and scrutinize what is normally passed by, an approach typified by Gustav Deutsch. In his film opus *Film ist. (1-6)* (1998) and *Film ist. (7-12)* (2002), which he combined in 2004 into a DVD *Film ist. 1-12,* he spent over two years searching archives for material, much of it from East German scientific and educational films. Each film he appropriated is put on a par with another, levelling all as 'film'.

Material/material from *Film ist. (1-12)* by Gustav Deutsch

Deutsch's work, *Film ist. (1-12)* (2004), is a series of found footage works in which he explicates the question of what film is, putting seemingly disparate film clips together to produce strange meanings and to expose underlying cinematic essences. A comprehensive, archaeological, thematic work of twelve parts, *Film ist.* translates in English to 'Film is.', with the deliberate use of the full stop. Deutsch says it is a 'reflexive claim: Film merely exists without further definitions' (Deutsch, 2004, p.3). Of the twelve 'chapters' *Material/material* is the fourth and is eight minutes long.

There are two sections to *Material/material.* The first section consists of a sequence of regularly changing still images, mainly of people in a variety of indoor settings and poses. The imagery is decomposed, bits are missing, there are splodges of random colour that don't belong, surface scarring, and speckling and mottling. The sound is a mechanical beat timed with the change of image, which alternately slides upwards out of frame or cuts to another. The regularity and repetitive sound contrast with the chaos within the images. Each still appears to repeat once, maybe more, but is never quite the same. The structure becomes familiar and with it expectations of

Figure 5. Deutsch, G. (2004) *Material/material* In: *Film ist. (1-12).* [two consecutive frames from the first section]

seeing a repeat image which might show more. The face of a woman which was missing in one frame might be visible in the next, as a brief memory of the previous frame seems to overlay the present in an effort to 'fill in' the missing fragment (see figure 5). Some frames have no discernible photographic imagery and appear abstracted, scraps of information as the emulsion is so deteriorated. There is only enough time to glean a little and brief associations arise, such as the face of a woman which could belong to a Renaissance painting. Some frames have white marks, including numbers and letters, which puzzle and decoy the attempt to make a whole out of the parts. The question of when it took place might be answered through the people, the style of their hair and clothes, and the décor, which appear as links to a specific time. However, this is repeatedly obliterated by the blotches and gaps in the image, a decomposing intervention. The compelling, dated imagery of people vies with the graphic disintegration for attention. In a text on his website, Deutsch says of the film he appropriated for the first part of *Material/material*:

> "My cleaning lady used this film to clean the floor tiles", said the salesman on the flea market in Sao Paulo, as he handed me a small roll of film. A working copy containing two frames from each scene of a feature film used to determine exposure times. The cleaning material had attacked the emulsion with enthusiasm. (Deutsch, 2010)

Deutsch retrieves the unwanted and maltreated film to present temporality and perception as material processes. He plays with a spectator's need to know and her attempts to make sense, suggesting that all is material, but with it comes awareness of the operation of more than one form of memory, meeting but not matching. The sequence of arbitrary marks of deterioration, which separate away from and then join the photographic illusory image, is a coalescing and splitting of elements which never completely disconnect.

The second section of *Material/material* is in black and white with a tinted section at the end. Several white circles against black interspersed with
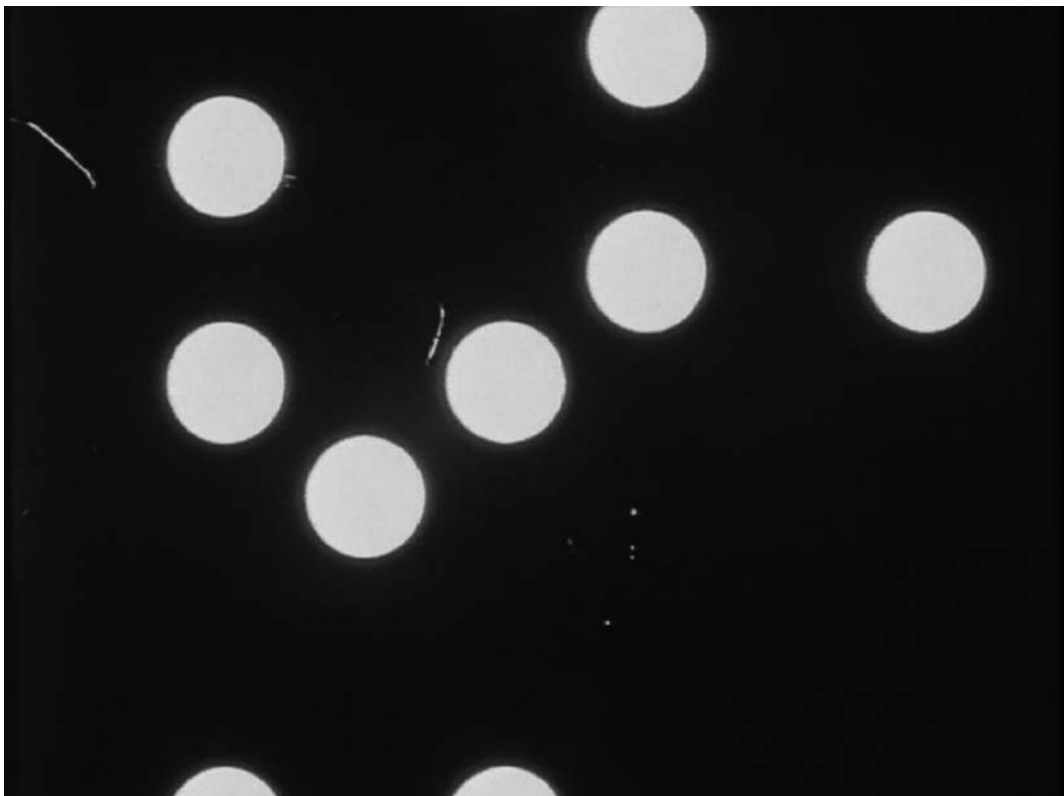
Figure 6. Deutsch, G. (2004) *Materia/material* In: *Film ist. (1-12).* [two frames from the second section]

white hand-drawn arrows, numerals and letters appear animated to the sound of a regular, quick mechanical beat, a kind of animated semaphore of holes. Then a black and white image appears as though underneath the white holes. The image is of a woman sitting, apparently a frame from a film, animated to the mechanical beat (see figure 6). Speeded up, the film of the woman shows her talking (silently) and the white holes become a manic spotted overlay. Changes in speed, decelerating, give time to explore the image; to note that the woman appears to be in something like a railway carriage and may be talking on the phone. Accelerating again, this section ends. When the speed is slow there is a decision to make; to look at the image of the woman or the white circles that make a crazed semaphore on the screen as it is not possible to concentrate on both at once. Deutsch, on his website writes:

> "I have an optical way of looking at the world. Things which cannot be seen posed for me problems of transparency", said Konrad Zuse, the inventor of the first functioning computer. As a control system for the machine he invented in 1938, he used retired 35mm film into which he punched the coding. Zuse's film, with a binary code superimposed on the iconic image, anticipates the process which has led to the melding of all medias (including film) in digital code. (Deutsch, 2010)

The black and white found film is subject to two mathematical processes, a set of codes, literally cut out of its material and the temporal re-structuring through the acceleration and deceleration. In the first part of *Material/material* the image competes with the random spontaneity of deterioration, but in the second part the image vies with its material absence in the visual realisation of the code.

In the first section of *Material/material,* the deteriorations in the image are integral to the work but do not dominate it. In contrast, Bill Morrison's film, *Decasia* (2002), displays the decorative qualities of the decomposition and putrefaction of film, in this case nitrate, whose picturesque disintegration can be extreme (see figure 7). The fantastical corrosions of the nitrate fight with

Figure 7. Morrison, B. (2002) *Decasia: The State of Decay*

actors, animals and landscapes in *Decasia* until there is a necrotic sense of the perishable body infusing the work*.* With the first section in *Material/material* the imagery fights with the decompositions of film for attention, but the stillness of the images combined with the repeating, rhythmic soundtrack and the mental effort that the viewers need to make, keep them present to the work in a way that *Decasia* does not. Morrison repeats each frame twice or more in *Decasia* so there is a slowness to the movements, which, together with the multi-layered, dense soundtrack of de-tuned pianos and orchestra by Michael Gordon, foregrounds the pictorial instabilities of nitrate as romantic decay.

Shifting temporalities

In both *Material/material* and *Decasia* there is visual fascination with the images which have been damaged or affected materially that the changes in speed draw attention to. The manipulation of speed brings to mind the 'aesthetics of delay' of Laura Mulvey, who finds that repetition and pausing film can give unseen details an auratic, almost fetishistic quality. She notes a

'kind of voyeurism at stake when the future looks back with greedy fascination at the past [...]' (2006, p.192). Deceleration highlights the materiality of the work but also affects narrative movement: 'When the presence of the past, the time of registration, rises to the surface, it seems to cancel the narrative flow' (2006, p.187). As Reynolds said, with the found footage film, narrative is undermined by work that reveals cinematic illusion (Reynolds, 2006, p.17).

In her essay, *Passing time: reflections on cinema from a new technological age*, Laura Mulvey wrote about the complexity of finding 'grammatical forms of expression' to articulate the shifting temporalities in cinema, particularly in respect of changing technologies. For Mulvey, new technologies can reinvigorate old ones but also complicate the photographic attachment to a moment in the past. The problematic of the articulation of temporal concepts and in particular the temporalities of the moving image, is their often paradoxical, unstable and uncertain state.

> If the still photograph pushes language beyond its limits so that the ability to articulate a temporal concept breaks down grammatical forms of expression, giving rise to a feeling of giddiness like a *trompe l'oeil* effect, this is even more so in the case of the cinema. The content, the iconic element in a specific image, begins to recede and is replaced by the heavy weight of temporality itself materialized in all its uncertainty. (Mulvey, 2004, p.148)

Multiple temporalities in the moving image push language 'beyond its limits' as a means of articulation, pushing at the bounds of the 'iconic element' or photographic illusion. Mulvey is responding to being able to pause and repeat a video copy of a film, taking control of her spectating; an intentional intervention. A departure from what was intended to be seen by the maker, the pause and repeat reflects the de-contextualisation of the found footage method.

Repetition, especially of a shape which cannot be quite grasped in its totality, such as a wave, has a way of revealing something about the balance between materiality and depiction and can produce reflexive reactions.

> When the waves hit the barrier again and again, with varying degrees of intermittent shape formed by the negative/positive image, we are led to studiously *see* each nuance of change. [...] The loop effect, which can never be ascertained with certainty, makes for a gap in our knowledge: we do not know, and we know we do not know, whether the wave-loop is a repeat of the previous montage segment. Is it similar or is it the same? The *it* recedes from status as document and referent and putative signifieds, as the materiality of the film-loop endures. (Gidal, 1989, p.126)

Gidal was writing about a film by Le Grice called, *Yes No Maybe Maybe Not*, an element of which was images of waves splashing against a barrier. The waves were negative and positive and superimposed, creating an intermittent gray image. Gidal considered the film produced a 'conscious reflexivity'. The repetitious movement, which is never quite discernible as difference, highlights perception, materiality and duration and dissolves assumptions of meaning in Le Grice's film. In both quotes, Mulvey and Gidal use the word 'recede' as though the iconic element of Mulvey and the '*it*' of Gidal were ebbing away as temporality materializes for Mulvey and the materiality of duration 'endures' for Gidal. For both, articulation in language has reached a limit with a reflexive uncertainty.

The found footage film can dislocate, distance or highlight the 'iconic element' at the same time as film's materiality by setting into flux any attachment to origins and purpose. It can also produce a temporal fluidity, enabling a spectator's apperception where she can become aware of her own spectating. This temporal fluidity and the threshold at which depiction begins to recede is tested out with the work *Sea c.1897-2011*.

Part Six. Flicker: episodes of absence

In this part flicker in film is examined as a material quality, one which is usually in the background, habituated and unnoticed. It is also a material quality which artists such as Ken Jacobs have used to explore consciousness and reflexive awareness. There are theoretical parallels between flicker and noise which are useful to examining its detachability.

A short history of flicker

In projected film the succession of frames renders movement perceivable; essential are the gaps between – an absence of images. About forty percent of the time watching film is spent in darkness (Doane, 2002, p.172). In projection, light flashes are thrown through each frame of film onto the screen. The frame is held briefly while light is projected through it, which is then blocked by a shutter whilst the next frame is pulled down. Without the interval of darkness and the pause to hold the frame in place the film would appear as a blur. Early film cameras and projectors (at first interchangeable) were manually operated or hand-cranked. The frame rate per second that was produced was quite low in frequency as well as variable, resulting in a noticeable flickering.

For the early film spectator flicker, judder and vibration were recognized features of film reception, distracting but not daunting. In fact they had a kind of cultural cache; vibration, for example, was in vogue around the turn of the century in connection with science, arts and literature as well as theosophy and the occult (Tsivian, 1998, p.108). In a review of the Lumière programme at the Nizhni-Novgorod Fair in Russia in 1896, writer Maxim Gorky described his first encounter with film. For Gorky, aspects of film were already familiar, probably through the photograph, but it was the 'strange flicker' passing through the screen which activated the uncanny for him.

Gorky wrote:

> When the lights go out in the room in which Lumière's invention is shown, there suddenly appears on the screen a large grey picture, 'A Street in Paris' – shadows of a bad engraving. As you gaze at it, you see carriages, buildings and people in various poses, all frozen into immobility. All this is in grey, and the sky above is also grey – you anticipate nothing new in this all too familiar scene, for you have seen pictures of Paris streets more than once. But suddenly a strange flicker passes through the screen and the picture stirs to life. [...] It is terrifying to watch but it is the movement of shadows, mere shadows. (Leyda, 1983, p.407)

For Gorky, film is directly implicated in consciousness, a grey dream, ghost-like and phantasmagoric. The flicker stirs immobility to life, a galvanization of another world. The reception of film as dream-like was concurrent with enthusiasm for its modernity. Vkadunur Stasov saw a programme of Edison films in St Peterburg in 1896 and wrote: 'The thing isn't perfect yet, of course, for the figures and objects and the background often blink and shake ... but how can the idlers speak against this magnificent achievement!' (Leyda, 1983, p.18). Judder, flicker and vibration were technological problems which would be solved.

> The animated photographs, [the Cinematographe] which are now so popular, were received with loud applause. They were fairly clear, but the vibration was, as usual, noticeable. Experiments are being made to do away with this drawback, and no doubt the pleasing pictures will eventually be improved.
> (*The Bristol Mercury and Daily Post*, 1896, Issue 15127)

The 'pleasing pictures' were improved: 'The elimination of flicker [...] became more or less universal around 1909 when the existing stock of projectors had been replaced and the multi-bladed shutter [...] had become the norm' (Burch, 1990, p.77). A 1911 advert for Power's Cameragraph No. 6 projector shows that importance was attached to reducing flicker (and noise), stating that: 'It is superior to all other machines in it's absence of flicker, steadiness of picture, ease of operation and freedom from noise' (*Moving Picture World*, 1911, p.594).

Flicker was not totally eliminated though, only made imperceptible through increasing the frequency of flashes of light from the projector by using the multi-bladed shutter. The mechanisms of film production and projection were developed on a trial and error basis with adjustments made with regard to human perceptual limits as well as the economics of film (De Lauretis & Heath, 1985, pp.29-34). The introduction of sound hastened standardization of speed and frame rates. Sound fluctuated noticeably at low and inconsistent speeds (audio awareness being more acute comparatively than vision, which accepts the fluctuations less problematically). Twenty-four frames per second became the industry standard in the mid-1920s, the two bladed shutter creating a flicker rate of forty-eight per second and the three bladed producing seventy-two. Flicker is imperceptible above the flicker fusion threshold. This threshold is reached when intermittent light is seen as continuous but is dependent upon a number of factors: the area of the visual field, the area of the retina stimulated, light intensity, wavelength, duration and the viewer's individual sensitivity.

Flicker has become apparently imperceptible in the digital high definition video, the speed of replacement of one image by another too fast to see discontinuity. In the history of moving image technology and reception, there is a shift from perceptibility and discomfiture to imperceptibility and disorientation.

Surging Sea and *New York Ghetto Fish Market* by Ken Jacobs

Over half a century after flicker was minimized in projection, artist filmmaker Ken Jacobs maximizes it to make work which inquires into the experience of temporality. To Jacobs, all elements of filmic process and audio-visual experience are material and workable. Jacobs' work explores forms of temporality and illusory space, dissecting the filmic apparatus and revealing perceptual mechanisms to consciousness. The engagement with time, space, process and material in his work has antecedents in painting. Jacobs

studied with Hans Hofmann, an influential painter and teacher who was a key figure in the development of Abstract Expressionism in the U.S.A. Hofmann used the term 'push and pull' to describe movement and depth in the picture surface, a dynamism of contrasts which could be experienced temporally. Jacobs said in an interview: 'Cinema is a form of thinking. Painting is a form of thinking' (Jacobs to Kreisler, 1999). For Jacobs, painting extends into an 'unfixed time' through memory and film can become a single image in the mind, but both 'seize the mind' and shape it.

The way film shapes and seizes mind is a central concern for Jacobs, although he has an ambivalence towards it. The treatment of filmic space as a potentially single image, not only frame by frame but in the memory of film 'once you see a film it collects in your mind' (Jacobs to Kreisler, 1999), enables him to probe and introduce space and time into that singular frame and between frames. Jacobs wants to present the spectator with multiple, overlapping and conflicting temporalities, releasing them from a reductive form of one dominating temporality. In this, the tiny timescales of the flicker are an essential element. His work often excavates cinematic history as well as film itself, using early and found film, stereoscopic slides and customized projectors. Jacobs has invented his own editing method of creating illusory space and 'perpetual' motion called *Eternalism*. In 1999 he made his first work with digital video. Analogue video was of little interest to him, but for Jacobs the computer enables precision and control. Any moving image debates about digital versus film do not appear to absorb him. This is perhaps because although his work delves into the materiality of film or digital video in a way specific to that media, the processes of perceiving and the mind of the spectator are more at issue.

With Jacobs' work, perception is not divorced from ideology. His focus is not only to alert the spectator to her perceptive apparatus but also to show that it is not separate from cultural and political context. For example, his short

Figure 8. Jacobs, K. (2006) two stills from *Surging Sea of Humanity*

video called, *The Surging Sea of Humanity* (2006), uses a stereographic card taken at the Chicago World's Fair in 1893. It shows a vast crowd, stretching back into an outdoor space, with the rounded shapes of hundreds of bowler hats worn by the mainly male crowd giving texture to this sea of people. *Surging Sea of Humanity*, like another short video work using a late 19th century stereoscopic card, *Capitalism: Child Labor* (2006), has a strong socio-political edge to it which is understood visually. The stereoscopic cards are arrested glimpses of moments of industrial and cultural change in Western modernity in which movement is revealed in repetition.

In *Surging Sea of Humanity*, (see figure 8 top) the uniform of the dress code turns the wearers into repeating patterns where an individual in the crowd can be picked out by a disturbance to this pattern, be it a gesture or a facial expression. The digital manipulation that Jacobs employs exploits this repetition by treating the images as flat planes, superimposing and distorting them, creating new patterns. Depth and space are produced without progression, except through selections made within the image and the perceptual patterning; an impossible space – with movement but without development. Jacobs exploits the interstice of the stereo photographic image, the gap between the two eyes in binocular vision. Slight displacements and a changing axis turn the sea of people into a slow moving whirlpool, the vortex dragging the shapes of the heads into a patterned whirl. The moments at which the image changes from a pattern of sliding shapes to a defined face, or faces, is a pivotal point of ambivalence and one that Jacobs continually plays with. At the centre-point of the whirl individuals are discernible but when the images are slowly turned upside down, seeing people in the landscape of shapes is thwarted. Seen the right way up, what are repetitious bodies at one moment are discernible as individuals the next; the implication being that each one of these shapes was a human being at his or her own centre of things. When Jacobs dwells upon this, as he does with the man in the image who seems to be pointing directly out of the picture, it is a social observation but one also underlined optically, by his flickering method of *Eternalism*.

Figure 9. Jacobs, K. (2006) *New York Ghetto Fish Market 1903*

In *Surging Sea of Humanity* the emphatic flicker is not as strong as it is in another video work of 2006, which was made from an appropriated Edison film, *New York Ghetto Fishmarket 1903*. One of several titles at the beginning explains: 'Not only is the scene history but the film itself bears a history in its scratches and splices of its own escape from extinction as a paper print at the Library of Congress for a half century ...'. In *New York Ghetto Fishmarket*, (see figure 9) Jacobs enlarges and repeats sections, bringing to light hidden details. The pulsating flickering does not work against the perception of the images of people in the market but paradoxically seems to emphasise this. The small details of gesture, form and movement become intensified through a method of perceptual disruption and repetition. A hand pulls a shawl, wraps a fish, a head turns, and shoulders move to avoid collision. Without the examination that Jacobs conducts of this footage, the spectator is unlikely to have noticed these small movements and gestures in viewing the unaltered film. There is an

impression of seeing the fishmarket as though it was under the perceptual pulsating and flickering. The pastness of the image, once exposed over a century ago, has a strange persistence at odds with the presentness of the viewing but somehow in concert with it, a characteristic ambivalence for Jacobs. This produces a shifting balance between the material qualities and the material conditions of perceiving the work as well as what is depicted, the tenacious image of the market in 1903. There is a temporal correspondence, a *now*, as well as *then*, rather than *this was and has gone*, weaving multiple temporalities briefly into a moment of present experience. The spectator is left to make her own way in this temporal maze. Jacobs' radicalism is to politicise the perceptual, putting the spectator into a position of ontological reflexiveness but in relation to the structures at work in the world as well as their own subjectivity, loosening the hold of dominant modes of viewing.

Perhaps the most powerful example of Jacobs' use of the cinematic interval of darkness is not film, at least not as it is usually comprehended, moving by at 24fps, but live, expanded performances which Jacobs calls *The Nervous System*. Two adjacent analytical projectors project two identical prints frame by frame (operated separately) with an external shutter producing a range of pulsing and flickering. As well as colours and shapes, which may be produced in the mind, the manipulations sometimes result in the experience of illusory three-dimensional effects of depth which can be quite startling. Jacobs and another, usually his wife Flo, perform with the projectors, changing the speeds, tilting and sometime placing additional lenses in front. Of the *Nervous System*, Jacobs said:

> It's possible to create continuous movements with these two frames from the same film, one frame out of synch with the other, to merge them and make them do all kinds of things, make them move this way or that way, or up or down. And also, in many cases, to bring them into three dimensions. (Jacobs to Kreisler, 1999)

With a *Nervous System* show, as a spectator, your own perceptual mechanisms perform a dance with time and space, a reflexive and

exhilarating if demanding experience. Jacobs, in *Notes on the Nervous System,* writes:

> The throbbing flickering (which takes some getting used to, then becoming no more difficult than following a sunset through passing trees from a moving car) is necessary to create "eternalisms:" unfrozen slices of time, sustained movements going nowhere... (Jacobs, 1989, p.24).

The *Nervous System* is not easy to watch and each spectator has her own range of tolerance. Most of Jacobs' work comes with the warning: 'This work contains throbbing light. Should not be viewed by individuals with epilepsy or seizure disorders'. Epilepsy and seizures are complex occurrences. According to the Epilepsy Society photosensitive epilepsy 'is when seizures are triggered by certain rates of flashing lights or contrasting light and dark patterns' (Epilepsy Society, 2012). Photosensitive epilepsy can be triggered by sunlight on water or through trees or blinds, as well as projected light and TV or computer screens. The key factors involved are: the rate of flicker of the light, the intensity of the light source and the area the light occupies in the field of vision. By manipulating the balance between them Jacobs pushes the non-epileptic into an almost hallucinogenic state, seeing things that are not there.

The relationship of epilepsy to fractured consciousness and speed is discussed by Paul Virilio in the *Aesthetics of Disappearance,* (2009) where he writes of the picnoleptic whose momentary lapses in consciousness de-synchronize time like the jumps in a Méliès trick film. The breaks in the experience of the picnoleptic are like the absences of light in film, where the viewer is unaware of the gaps. Virilio writes: 'The development of high technical speeds would thus result in the disappearance of consciousness as the direct perception of phenomena that inform us of our own existence' (Virilio, 2009, p.114). Jacobs' work informs the spectator ontologically, prising open the filmic break or interval temporally and spatially, destabilising and problematising rather than evaporating consciousness.

Flicker and Noise

As noted earlier, a link between flicker and noise was drawn in 1911 by the advert for Power's Cameragraph No. 6 projector which claimed: 'absence of flicker, steadiness of picture, ease of operation and freedom from noise' (*Moving Picture World*, Oct-Dec 1911, p.594). In film projection, both noise and flicker were seen as interferences in smooth reception.

On a theoretical level, Jacques Attali writes that noise: 'is a resonance that interferes with the audition of a message in the process of emission' (Attali, 1985, p.26). This is comparable to Peter Wollen's idea of noise as 'interruptions or destructions of the process of signification' (1982, p.203). Attali postulates that noise only exists 'in relation to the system within which it is inscribed'. He relates this to the concept of noise in information theory, where 'noise is the term for a signal that interferes with the reception of a message by a receiver, even if the interfering signal itself has a meaning for that receiver'. Furthermore, the association of noise with 'destruction, disorder, dirt, pollution,' means that it is seen as an obstruction or even an attack on structured messages (Attali, 1985, p.27).

Noise and flicker both interfere, interrupt, and are associated with perceptual discomfort. Noise exists as part of a system and so does flicker. However, noise is not a perceptual necessity for audition whereas flicker is essential to the perception of movement in film. The drive to eliminate both suggests an ideal notion of a pure signal, one that is no longer degraded by noise or flicker. Though they have the potential to disturb and hinder and are both therefore unwanted, noise or flicker as constituents of the background are also expected to be there, but as an unremarkable part of the transmission. When they become noticeable, they move from the habituated background to become manipulatable qualities, whether for removal, reduction or addition.

An example is in the digital restoration of film where unwanted elements of digitised material are known as 'artefacts', objects for removal. In restoration

flicker becomes an unwanted change in image intensity and can be removed where technology allows. An advert for a popular piece of film restoration software offers to 'kill flicker':

> DaVinci Revival is the world's best film restoration software with incredible features to repair all types of film damage, as well as powerful network rendering for unlimited speed. Remove problems such as film grain, dust, dirt and scratches, eliminate scratches, kill flicker, fix registration and weave problems, and repair warping from bad film splices. (Black Magic Design, 2012)

In the process of digital restoration of film the effort to improve the reduction of flicker or temporal brightness variation is ongoing and there are a number of studies (Forbin, 2009). What is being restored, when old film goes through the process of digital restoration, appears to be an idealised initial clean condition, one which is unlikely to have been experienced for long before a print gathered the marks of its showing.

The software for the restoration of film, removing flicker, visual noise and artefacts, has an equivalent in software which applies those elements as effects. Flicker can be removed but it can also be added, and with it a tenuous association with an age, or a retro style. Software developers of visual effects, Boris fx, market the 'Continuum Film Process Unit', which includes the 'film damage filter':

> Film Damage simulates the appearance of old film stock. You can add scratches, grain particles, hair or fibers, and dirt, dust, or water spots. Film Damage also allows you to simulate camera shake and a flickering image. (Boris fx, 2012)

The simulated interference then produces meaning. As an effect, 'film damage' has no attachment to a moment of registration but is a set of parameters to manipulate (the rate of flicker and the luminosity of it for example). The result is a stylised, textural overlay, intended to signify old film. These effects can be simplistic, particularly when the repetition of the effect is noticeable (the same scratch repeating for example).

Commercial film production has become a hybrid procedure where film shot is digitized, colour corrected and graded before being printed back onto film for screening. Restoration of film is linked to current production processes and can also mix film and digital, where an archive film may be digitized, restored digitally and copied back onto film (Fossati, 2009, p.73). To my own eyes a restored version of a film I have seen before can feel too clean because my memories are of seeing it projected as a less than pristine print. It follows that memories of perceiving are tenuously disturbed by a changing relationship of materiality to depiction. I recognise the film, but not aspects of its materiality and in memory the two were connected. This is a subtle area as memories of perceiving will change and are not stable, although there may be anticipations as to what will be experienced. As a spectator I am not disturbed every time I see a different print or copy of a film (in whatever format), but I do notice it.

With any film flicker is an integral part of memories of perception (whether noticeable or not), woven into memory in such a way as to be disorientating when it is disturbed. When flicker is digitally detached from an originating image, whether through removal or addition, memory is potentially unsettled depending on the spectator's own viewing history and experience. For artists such as Ken Jacobs, flicker, as the interval of film, is a tiny absence that relates (un)consciousness to materiality. These absences can be used to reveal the temporal perplexity to the spectator; a reflexive, apperceptive experience.

Part Seven. The colour of background noise

In this part I examine colour as a complex material quality, which can occur as a background of perceptual flux and which can stray outside of the rational. I briefly discuss colour, film and volatility. An outline of how colour works in *Sea c.1897-2011* and *Sea breaking* is then followed by an example of colour, language and installation in David Hall's work *1001 TV sets*.

Colour is an area of complex materiality; manifest yet obscure, present yet intangible. Colour can be both separated from moving image and intrinsic to it. It is potent as part of the experience of moving image yet occupies the habituated background. By background in this case I mean the sets of colours that are habituated throughout the film, which come from the use of particular colour film stocks, such as the various forms of Kodachrome or Technicolor for example. These sets of colours are a materiality which could identify a film as from a particular historical period. As a background, colour is not noticeable unless it changes or disturbs, when it seems odd or out of place. The background of colour in the experience of film I differentiate from the use of colour *within* the image as symbolic, expressive, denotative.

Film Colour

In the history of film colour little is known about early colour film reception and not much survives from early colour experiments. There is an assumption that the earliest films were all black and white because the available film stock was monochrome but colour was there to be seen from the outset. 'The great majority of the films produced between the beginnings of cinema and the outbreak of World War One were endowed with color' (Usai in Abel, 2005, p.198). For example, there were two films with colour in the 1896 Edison screening at Koster and Bial's in New York. Colour in early film was applied, usually painted on to the monochrome film by hand, frame

by frame.   Other applied colour techniques followed such as tinting and toning. The idea of realistic colour was pursued and there were many experiments with colour film; colour was re-produced through the filming and/or projection process rather than being applied solely to the film:

> A further breakthrough in the quest for "natural color" came with a dramatic shift from the principle of producing color by applying it onto the film to its re-creation with the help of multiple colored lenses converging onto a single image (Chronochrome Gaumont, 1912), frames tinted alternatively with primary colors (William Friese-Greene, 1909), or colored filters rotating in front of them at a higher projection speed (Kinemacolor, 1906). (Usai in Abel, 2005, p.201)

Many of these early colour processes have left no prints and they can only be approximated now. In 2012, the National Media Museum in Bradford recreated a colour process which pre-dates Kinemacolor (the discoveries were dated to around 1901-2), but has done this digitally (National Media Museum, 2012). For mostly economic reasons early films were not preserved with their colour but copied onto monochromatic stock. The detachment of colour through copying onto monochromatic film implies that colour is not valued as an integral part of the film. Walter Benjamin, in a fragment of writing *A Child's View of Color*, says of children: 'For them color is fluid, the medium of all changes, and not a symptom'; whereas adults attach colour to form: 'a layer of something superimposed on matter' (Benjamin, 1996, p.50). The adult idea of colour as a superimposition that can be lifted away from that which it is attached to, shows colour to be regarded as embellishment and is something which occurs early on in the history of film.

Steve Neale asserts that in mainstream film colour was controlled either for spectacle or in support of realistic drama (Neale, 2001, pp. 85-94). Early colour film processes were associated with spectacle or fantasy, such as the elaborately hand-painted films of Méliès. Realistic colour was later placed in the service of the narrative. Colour required controlling because it has the potential to disturb. Neale quotes Julia Kristeva's *Giotto's Joy,* arguing that:

'colour is capable of escaping, subverting and disrupting the symbolic organization to which it is subject' (2001, p.93). Kristeva wrote: 'Colour does not suppress light but segments it by breaking its undifferentiated unicity into spectral multiplicity' (Kristeva, 1980, p.222), evocative of Leibniz's 'tiny perceptions', which get drawn in and out of clarity. In Kristeva's description of encountering the Padua blue of Giotto's frescos she writes: 'Such a blue takes hold of the viewer at the extreme limit of visual perception'. Kristeva hypothesises 'that the perception of blue entails not identifying the object; that blue is, precisely, on this side of or beyond the object's fixed form; that it is the zone where phenomenal identity vanishes' (1980, p.225). Colour can be excess, a spilling over into areas beyond or prior to language, and, according to Kristeva, can 'escape censorship' because of this. Colour can both unsettle and release.

In film, colour has a volatility which compounds uncertainty. To have an idea of when a film has been made, from its colours, would entail a memory of the colour palette; but it is part of a background materiality which is unstable as, for example, colours alter with age. Colour is changeable in the digital moving image as well, but because it is eminently controllable and alterable. Film colour and instability is a problem in preservation and restoration:

> The study of color is especially mired in archival concerns about restoration and fading, not to mention the always elusive search for definitive versions. [...] Color film thus becomes doubly vulnerable. It remains subject to the wear and tear of time, and is also prone to fading. The orange of 1960 may well be the brown of 2006.
> (Price, 2001, p.3)

In research for the work *Sea c.1897-2011* at the South West film archive an archivist, in response to a comment on the orange colour cast in a video copy of an 8mm home movie of a coastal landscape, immediately plugged in a colour corrector and altered the colour balance and asked if that was better. It is a kind of re-authoring of the film, to produce something that is somehow acceptable. The archivist was responding to the colour being singled out, as

though the colour should be returned to the background, to a semblance which does not jar and can remain unnoticed.

Paolo Cherchi Usai finds instabilities in both memory and colour: 'the question of its [film colours] instability and transformation in time applies both to the image carrier and the viewer' (2001, p.85). He writes that '[c]olour fading can be accepted as the result of a flawed technology or challenged through imperfect renewal or restoration of its presumed qualities, but neither response justifies establishing a code of aesthetic values derived from it'. He argues that because so little has survived of early colour equipment and colour film, its recreation using current processes will be inexact and therefore, 'somehow betray the technological and aesthetic rationale of its original identity' (Usai in Abel, 2005, p.201). To Usai this makes any discussion of early cinema colour aesthetics largely a 'work of fiction'. Colour once again escapes; this time from historical control, prey to the inaccuracies of changing technologies and aesthetic values.

Colour as something indeterminate, contingent and changeable, hovers as an intangible materiality, but with the potential to affect the spectator. Colour and pastness appear to be closely linked in moving image, but colour as a shifting and unstable materiality is difficult to pin down and agree in language, subjective at an individual level. As Kristeva indicates, colour can disrupt the self.
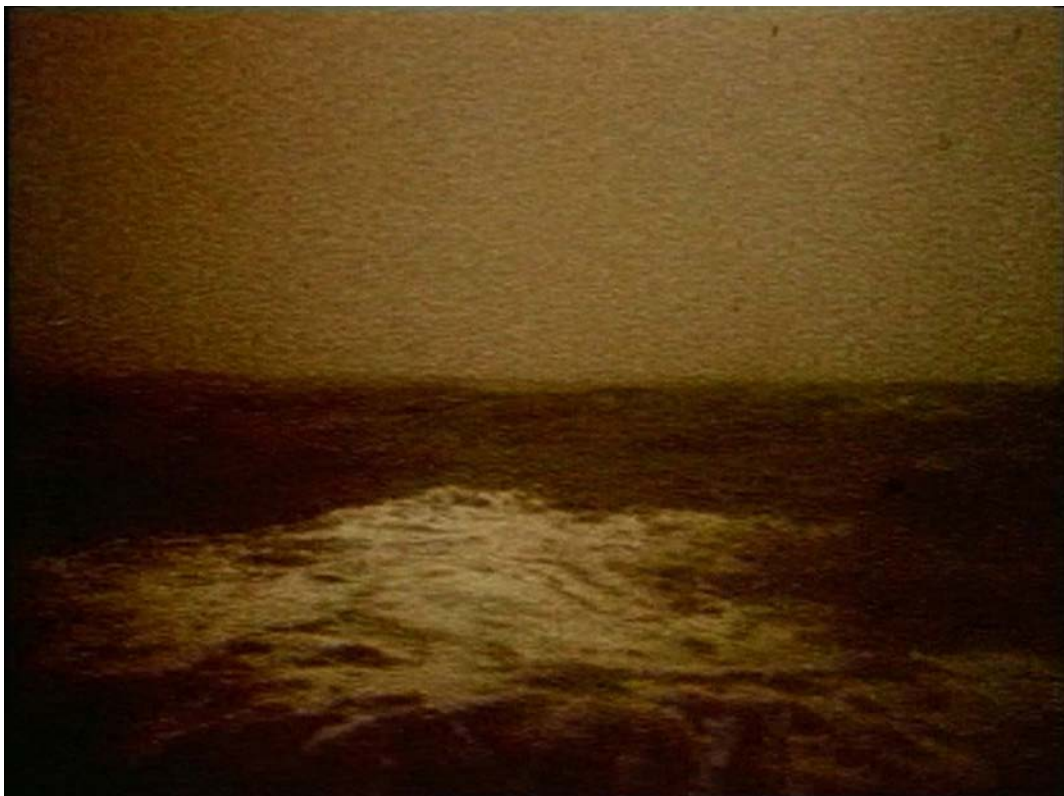
Figure 10. Millett, J. (2011) *Sea c.1897-2011*

Figure 11. Millett, J. (2011) *Sea c.1897-2011*

Colour in *Sea c.1897-2011* and *Sea breaking*

In the research colour as a background materiality, which can become drawn into clarity and investigated, came about through juxtaposing images in the making of *Sea c.1897-2011*. Many of the clips were from once black and white films, but they are not without colour as they have been transferred to colour video. Colours within each clip appear as palettes of colours, relating to the film stocks used. However, this may be a tenuous relationship with an original film stock as changes that the film may have undergone through age, process and decay are further complicated in transfer to video when colour may be transferred with varying degrees of accuracy.

Colour is always in relation to other colours, something Merleau-Ponty understood: 'The color is yet a variant in another dimension of variation, that of its relations with the surroundings: this red is what it is only by connecting up from its place with other reds about it [...] (Merleau-Ponty, 2007, p.394). Whether they are accurate to the original or not, there are sets of colours associated with the source footage, which, in the editing process, become dispersed throughout the work. Colours were not only differentiated from one clip of the sea to another, but through being part of a set with other colours within that image, which then contrasted with other sets of colours in other images. The appendix of stills (appendix C) from *Sea* is intended to give an idea of the variation between the clips; there is no claim that the printed colours are very accurate. In some clips colours were unexpected, such as pink sand or a red-brown sea (see figure 10). In others there was a very limited range (see figure 11 top), while others appeared saturated (figure 11 bottom).

In the installation, *Sea breaking,* black screens were used. The images in *Sea breaking* are interrupted by shutters which block the projectors and black screens were used so that the screens disappeared in the darkness. A black screen absorbs more light than a standard white one, but the blacks in the image appear deeper. In *Sea breaking* the colour variations of the different

formats of film and video are exposed in spatial juxtaposition. The variations
come across through the colour casts. The varying brightness of the images
in the black space also impact on the colours. The 8mm screen was made
smaller in order for the image to be brighter and in relation to the other
screens it appears saturated, whilst the 16mm screen is warm (reddish) in
value. Because the images are juxtaposed spatially the mind cannot
compensate for the alterations in colour and they appear to the spectator as
visibly different (see figure 12).

Figure 12. Millett, J. (2012) *Sea breaking*

Husserl said: 'Color is seen and nothing but seen, and yet it belongs to the
thing' (1989, p.76); however, as he goes on to say, colour 'disappears in
twilight', but the thing is still there. In moving image, colour can belong or not
belong to what is depicted in the image (in this case the same sea) but as the
picture of the installation shows, even when it appears to belong it is a
tenuous and easily disturbed relationship. The images were all taken at the
same time in the same place and all were balanced for the light as each
technology allowed, yet the result is a range of colours.

1001 TV Sets (End Piece) 1972-2012 by David Hall

1001 TV Sets (End Piece) 1972-2012 by David Hall (16 March - 22 April 2012), an installation of 1001 'aging cathode ray tube TV sets', was set in a large underground hangar-like space, P3 Ambika in London. The piece is a replay of an earlier work, *101 TV sets* (1972-1975), an installation which was made in collaboration with Tony Sinden. Then the piece was intended to test the culture of television within the culture of the art gallery. The 2012 work is scaled up, with 900 more sets and uses a commercial, historic event. The sets were tuned to five broadcast analogue TV signals until 18 April 2012 when they were turned off in London, with the result that the cacophony of broadcasted visuals and sounds became 'terminal audio hiss and a visual sea of white noise' (University of Westminster, 2012).

Figure 13. Hall, D. (2012) *TV Sets (End Piece) 1972-2012*

I visited *1001 TV Sets (End Piece) 1972-2012* after the signal had been turned off and the first impression was one of sheer visual disorientation, with the vast number of sets in a cavernous and windowless space making the eyes feel jumpy and jittery and assaulted by the emissions. The sets were almost all showing noise as there was no signal (although there was an occasional image). The sound of un-tuned TV hiss was overshadowed by

the visual mass. Language and the shifting nature of colour experience meet in confusion here ('visual sea of white noise'). The term 'white noise', according to the Oxford Dictionary of Computing, is '[n]oise occurring in a channel and regarded as continuous in time and continuous in amplitude, the noise being uniform in energy over equal intervals of *frequency*. (Note that, by contrast, white light is uniform in energy over equal intervals of wavelength)' (Daintith & Wright, 2008). This distinction between white light and white noise makes the 'visual sea of white noise' a misnomer. However, outside of a strictly technical meaning and at first glance the 'visual sea of white noise', or as it is sometimes termed 'snow', makes some sense (see figure 13). After an initial impression of a huge area of actively speckling light coming from the screens, it becomes clear that there are a wide range of colour casts. Pink, green, blue and purple are being emitted from the TV sets. However, taken on their own, a set may be seen as 'white' since each screen is showing a multiplicity of tiny colours in which one does not appear to have an emphasis. It is in juxtaposition that the TV sets become differentiated and their varying colour emphasis appears as a range of colour casts.

When concentrating on one screen the 'noise' resembles the 'little perceptions' of Leibniz, a confused cacophony, impossible to pick one out at one time as they dance in the brain, over-stimulating and exhausting. Multiplied, the TV sets, placed on their backs at strange angles, are out of their normal surroundings as single screens in a domestic space and become a disrupting mass, linked by a collection of cables which go up above them. This particular background noise of the domestic everyday is revealed as distracting, transient and from the date of the exhibition, historical. *1001 TV Sets* is a work concerned with materiality and the senses, which puts into question what is being seen and heard, but is also a critique of a culture of consumption. As viewers walk around the installation after 18 April 2012 they do so knowing that the TV sets have become obsolescent without an analogue signal and that every one may already have been replaced by a new digital TV screen in a thousand and one living rooms.

The title of Hall's work, *1001 TV Sets (End Piece) 1972-2012*, makes a point of bracketing a time period, like a life span. The dates could refer to the life span of the idea of the exhibition which had its first showing in another form in 1972, but could also refer to the limited lifespan, and therefore uses of technology. The latter date, 2012, is the year of the exhibition and the ending of the analogue broadcast signal in the area. The bracket of the two dates raises the question of futurity, of what will happen beyond the latter date with an underlying implication that the past is here, unseen. Hall's installation shows that whatever equipment is used in installation work it will have a life-span which reveals itself when obsolescence beckons. What might have once been a clear present tense for viewers will become complicated with temporal convolutions of material and time.

In its mutability, susceptibility to alteration and potency, colour in moving image is connected to pastness with a temporal fluidity. In *Sea c.1897-2011*, colour is not in the service of realism or of fantasy, but builds up a sense that colour and pastness is contingent and unreliable. In *Sea breaking* colour and darkness relate to questions of representation and truth in moving image. Challenged through a material instability, colour in moving image has a precariousness which language only adds to.

Part Eight. Temporal containers

In this part I concentrate on the question of how the use of space can influence temporal experience, discussed using examples of other artists' work as well as my own. Throughout the course of this study it emerged that the question of where something is shown has an importance which is too often belied by a concentration on what it is that is being shown. Where moving image is encountered has an impact on the experience of it and therefore on memory. The where of the encounter is in itself a complex mixture of culture, architecture, space and time. The two works, *Sea c.1897-2011* and *Sea breaking,* have intentional spaces of exhibition and the DVDs that are part of this thesis document them. The spaces that these works are intended to be experienced in are intrinsic to the work and form part of their materiality. However, that is not to say that these exhibiting spaces are limited to only one specific location, rather they require a *type* of space. *Sea c.1897-2011* could be seen in almost any cinema and *Sea breaking* in a large dark space which could be industrial or a gallery.

Cinema

A cinema is a setting which gives rise to particular expectations. On entering a cinema the anticipation is to: sit (amongst), look (towards), listen (to) and experience (remember); and in that sense a cinema is a mnemonic space, prompting memory. In her essay, *Heterotopia, heterochronia: place and time in cinema memory*, Annette Kuhn suggests that the cinema conjoins multiple temporalities and worlds. She suggests that the cinema can be '[...] in Foucault's sense of the term, a *heterotopia*: "a sort of place that lies outside all places and yet is actually localizable"' (Kuhn, 2004, p.109). This, she says, is common in memories of cinema, the mix of the local and the unbounded, the personal and the collective. In her writing on cinema-going and memory, *What to do with Cinema Memory?* (2011), Kuhn's work is

based on remembered movie-going in the 1930s, which may imply it has little relevance today, but cinema-going persists despite the plethora of other ways of experiencing the moving image. Kuhn suggests that there are three forms of cinema memory: remembered scenes of images from films; situated memories of films; and memories of cinema-going, which she sees not as distinct from each other but as a 'continuum' (Kuhn, 2011, p.87). Kuhn notes that 'it is a very striking feature of cinema memory that place operates as both a prompt and a *mise en scène* of memory' (Kuhn, 2011, p.94). The cinema as a prompt and a setting for memory has been used intentionally by artists with the possibility that the illusory spaces of the work can enter into an exchange with the cinematic space within which they are held.

An example of a work which uses the cinematic space with intention is *Wavelength* (1966-67) by Michael Snow. Contained yet complex, *Wavelength* is a classic in the experimental film canon. 'The space starts at the camera's (spectator's) eye, is in the air, then is on the screen, then is within the screen (the mind)' (Snow in Legge, 2009, p.1), wrote Snow of *Wavelength*. A 16mm colour and optical sound film of 45 minutes, made in 1966-1967, *Wavelength* is constructed as a forward motion trajectory with the sound of a rising sine wave. It interweaves filmic temporalities, material, duration and events. Unlike most of Snow's contemporaries whose films are increasingly available as DVDs, the full-length *Wavelength* is only available to view as a film projection. Snow did make a related DVD but it is a different work called *WVLNT (Wavelength For Those Who Don't Have The Time)* (2003) and compresses the 45 minutes of the film into 15 of video by sectioning it into three and superimposing the sections.

In protecting how, and therefore to an extent where *Wavelength* is seen, the space of reception becomes emphasised as an important part of the work. In the film the camera appears to travel through a room, a space in which various disconnected events occur and towards the end settles on an image of a photograph of waves on the wall. Finally it fades to white and briefly illuminates the viewers sitting in the cinema space. Snow said of the film: 'I

just wanted to set up a temporal container of different kinds of events' (Dixon & Foster, 2002, p.249). The cinema space is another temporal container bracketing the film, both a physical space through which the spectator enters and leaves and a space of memory. In between, the spectator moves through the different spaces; real, illusory and remembered in *Wavelength*.

Cinematic Space

In more recent years the cinematic space has been referenced and appropriated by artists in installation artworks. Maeve Connolly writes in her book, *The Place of Artists' Cinema* (2009), that constructions resembling a cinema have been utilised by artists who create 'a cinematic kind of space' (p.165) (a phrase which Connolly says was first used by Chrissie Iles). The cinema auditorium is approximated, or as Connolly said replicated, as part of the work, which might be shown in a gallery or a museum. An example of a work which is shown in a 'cinematic kind of space' is *The Clock,* a single screen video by Christian Marclay, shown in the Slaughterhouse Gallery (itself a temporary gallery space) in Plymouth (17 September to 4 December 2011) as part of the travelling 2011 *British Art Show 7, The Days of the Comet*. *The Clock* was presented in a space which had been laid out to replicate some of the aspects of a conventional cinema auditorium, preparing and placing viewers, directing behaviour through seating, lighting and timed programmes.

Viewers entered through a light trap having passed other art works, including video installations. Awareness of the gallery recedes and the light of the screen claims the attention. Even as a temporary, notional cinema it produces expectations and prompts memories of cinema compounded by the fact that *The Clock* is an appropriated film work, overtly drawing upon previous moving image experiences. The found footage, taken largely from mainstream and culturally familiar films and TV programmes, is cut together to reveal the tropes and clichés that have a purchase on collective cinema-

going memory. The decontextualisation of the clips emphasises the cross weaving of aspects of memory and acts of remembering, particularly as *The Clock* is orchestrated through the device of the timepiece. Marclay uses images, sounds and references to time; such as clocks, watches, ticking and verbal quotations to structure the work, which is 24 hours in duration. The projection is synchronised to the clock-time in the world outside the cinema so that, for example, a clock striking three in the work coincides with three o'clock in the time zone of the locality. The heterotopia of cinema is acknowledged; the clock time of the world outside crossing over into the temporality of the cinema, exposing their disjunction. Passing through the light trap of the temporary cinema in the Slaughterhouse Gallery, the gallery visitor becomes a spectator different to the one who briefly enters a video installation looping in a semi-darkened room. As the spectator traverses this threshold, the *mise en scène* of the cinema as well as the clips in the work is appropriated by Marclay.

Other temporal containers

Moving image installation in contemporary art galleries and museums is widespread and has a complicated, interwoven history (or histories) which, Connolly says, to an extent overlays the work of earlier expanded cinema (Connolly, 2009, p.19-28). Expanded cinema is an historical term, one which encompasses a wide range of experimentation by artists in the 1960s and 1970s with the spaces and modes of reception of moving image. Al Rees calls the term 'elastic' and 'notoriously difficult to pin down' (Rees, 2011, p.12), as it has to cover such a wide range of work. The term was first used by Stan Vanderbeek in 1965 in the U.S.A. where Gene Youngblood also published *Expanded Cinema* in 1970. Youngblood wrote of experimentation within the image, of interactivity and the expansion of consciousness. In the U.K. expanded cinema as a term tended to be used for work which opposes conventional cinematic structures. Artists including Malcolm Le Grice, Annabel Nicolson, Liz Rhodes, William Raban, Chris Welsby and others,

challenged the cinematic norms of rows of seats, concealed apparatus, an unseen projectionist, a single screen and the elongated process from the recording to the projection. What went on around and beyond the frame was activated, often including an element of performance as part of the work. William Raban writes: 'One of the most important aspects of expanded cinema has been the closure of the gap between the time of the film's production and the time of its exhibition, thus turning the projection of the work into a live event' (Raban, 2011, p.101). To Le Grice, expanded cinema was part of a broader challenge by artists to the 'constraints of existing art discourses' (2001, p.274), but one which also had roots in avant-garde film.

Throughout, there is a concern to treat the spectator as an active participant both bodily, in relation to the work, and apperceptively. The temporality for the spectator in expanded cinema is changed from a conventional cinematic illusionistic space and time to that of the present where, as Le Grice says, 'spectators individually live – it is their time, their present based on a material experience of the presentation event' (Le Grice, 2001, p.276). Ironically, with much of the work this present has become a distant past because there have been few showings and little documentation. For many works it is in the memory of the viewers or in the printed word that they have had any continued existence. More recently the Live programme at the Tanks in Tate Modern London has enabled some expanded works to be reprised. *Filmaktion* took place in the Tanks 16-21 October 2012 and included installations and live performances by Malcolm Le Grice, Gill Eatherley, Annabel Nicolson and William Raban.

As Connolly points out, expanded cinema paved the way for the film projection artwork, now an unremarkable form to see in gallery exhibitions. The equipment is usually on view so that there is a clear relationship between projector and image with the sound of the projector underpinning its presence. The presence of the projector with the strip of looping film can be a confirmation that both it and the spectator have some kind of concrete existence in the space. Whilst the visible mechanisms of presentation can

demystify how the image is being produced there is a danger of the filmic apparatus taking over as the object of interest in the work.

An example of a recent installative film work which eloquently involves time, technology and the spectator is Kerry Tribe's *H.M.* (2009). As part of the *Old Media* season investigating art, technology and its time at the Arnolfini in Bristol in October 2010, Tribe's exhibition *Dead Star Light* comprised installation works dealing with memory, subjectivity and doubt. She used the apparatus of 16mm, reel-to-reel audio and video, prominently, as intrinsic to the works. In *H.M.,* the film (in the style of a documentary) passes through two projectors positioned so that the distance between them translates into a 20 second delay between the resulting two adjacent projections. *H.M.* refers to a patient who had experimental brain surgery for his epilepsy, which resulted in persistent amnesia. His recall post-surgery was limited to about 20 seconds and he became one of the most investigated cases in medical science. Whilst the two screens provide a demonstration of the inhibiting repetition that *H.M.* endures, they also offer an opportunity for the audience to examine their relationship to the film apparatus and their own memory. The temporal difference of the projection and the visual presence of the loop connects to H.M.'s amnesia and manifests an uncertain relationship between time measurement and recollection. The way that the various elements of *H.M.* are put together make for a complexity in which the projection equipment is one part.

In my own practice, in the late 1980s, I began working in video, making single screen works as well as multi-screen video and sound installations. This was in order to experiment more directly with the relationship between sound and image but also to make work away from the constraints of the cinematic space. The move from cinematic to gallery or other spaces broke with the dark space of projection and the temporal and bodily engagement particular to the cinema. Expectations of passivity could be challenged in a broader and less confrontational way as mobile viewers had more freedom to explore around the installation work. Works of multiple screens were more feasible

and video monitors could be positioned and related to a specific space without the need to exclude light. An example is *Quartet,* an installation which I made for Video Positive in 1989, using four monitors each playing a different tape in the four corners of a gallery in Liverpool. With four musical instruments playing four notes, *Quartet* used both process and chance to orchestrate the sounds. One of my main concerns was that it should be experienced actively with the spectator themselves finding various configurations of sound and image in the space. With this type of installation temporality for viewers was one of a present tense, where they were in the space with the work, but it was a fragmented and brief one.

A later work, *Surroundings* (2008) (appendix F DVD), examined how a spectator can locate themselves in time and space in relation to a place where there are layers of history, geology and activities. Two videos for the twin screen installation (Mercer Art Gallery, Harrogate) each describe the same 180 degree panorama in the grounds of Knaresborough Castle. One screen shows the activities of the people using and working within the castle grounds whilst the other shows the same but depopulated view. Both screens are similarly cut, interweaving temporal dislocations of different weathers, light and seasonal changes. The spectator cannot see both screens at once, but has to turn to see one or the other. The installation posits the spectator as the determining element who must place themselves in relation to the work, their presence to one screen being an absence from the other. This presence/absence is multiplied through the projections. The spectator is the only person to the de-populated screen, whilst in contrast they take the position of observer to the one which depicts people; location, that of the spectator, the work and the place in relation to time, is questioned.

Chris Welsby's work, over several decades, spans from expanded cinema to digital media installation work and is often shown in gallery spaces, though there are some single screen works. The mechanics, structures and processes of moving image are interconnected by Welsby with elemental processes that occur in the landscape such as wind, tide and sunlight in the

production of the work. A 20 minute single screen work, *Seven Days* (1974), was shot over seven days during daylight hours in remote Welsh countryside with one frame exposed every ten seconds. Using an equitorial stand (a piece of astronomical equipment which rotates in relation to the Earth) the camera was pointed at either the cloud above or its own shadow on the ground depending on whether the sun was obscured by cloud or not. The result is an animated rhythm between weather and machine.

Welsby has made a number of installations using multiple projection and imagery of the sea. In *Shore Line 1* (1977), six 16mm projectors are turned on their sides to create a panorama of a seashore with a horizon which cuts across the vertical screens (see figure 14).

Figure 14. Welsby, C. (1977) *Shore Line I*

At first the breaking waves on the shore draw the eye with their complex movements; more time and closer inspection reveals that the apparent panorama is actually made from the same imagery, duplicated as six loops of (unsynchronised) film of less than a minute. *Shore Line II* (1979) uses a similar format of six projectors with loops, but the imagery is shot with the camera pointing downwards at the waves on the sand. The waves can appear to move between the screens in both these works; movement and natural complexity drawing the eye to move over the limits of the frames, briefly unifying the parts into a whole panorama, something which is also possible in *Sea breaking*. In 2000 Welsby made a multi-channel DVD installation called *Tide Line,* where he built a false wall for an unbroken line of 12 video monitors. The same image of waves breaking on the shore, a 40 minute loop, was simultaneously played on all monitors. There is a similar interest in chance in *Tide Line* as in *Shore Line I* and *Shore Line II,* but it is

not through the de-synchronicity of the projections in *Tide Line*, rather it is through the complex imagery of the waves and the position of the spectator.

Welsby maintains a precision and control through the technology he uses in his work, preferring not to work with video until digital video offered a resolution which he considered could 'record the kind of changes with which I was interested in the natural world' (Welsby in Leggett, 2004). The combination of processes of the natural world with a technological exactness makes for a dichotomy which he exploits effectively. The quality of his imagery can be highly illusionistic with the result that the materiality of his work can be subordinate to depiction even with the presence of projectors and film loops. With works *Shore Line I*, *Shore Line II* and *Tide Line,* the balance between materiality and depiction is weighted heavily towards perfecting a convincing depiction; although the mobile spectator does take part in the work, she is still subject to its illusionistic qualities. In contrast, a work such as *Seven Days*, though single screen, has a structure to it which discloses the process of its making.

In *Sea breaking*, aspects of expanded cinema are reprised as it is related to the cinematic at the same time as it questions it. There is an emphasis on viewers and their position in relation to the work as well as the element of chance and a minor aspect of live performance through the operation of the shutters. The multi-screen installation work, *Sea breaking,* counterposes the archival, single-screen, cinematic, mnemonic enquiry of *Sea c.1897-2011,* with a spatial, expanded, multiple format, and perceptual enquiry. It explores further the notion of 'temporal container' and the relationship between space and the varying temporalities involved. The installation, *Sea breaking,* aims to question locatedness both through a fragmented spatial arrangement but also fracturing expectations of technology. Both works are analysed through discussion with a group in Part Nine.

Figure 15. Millett, J. (2011) *Sea c.1897-2011*

Figure 16. Millett, J. (2012) *Sea breaking*

Part Nine. Practice analysis

(i) *Sea c.1897-2011*

Sea was developed from archival, historical and spectatorial research. The intention of the work was to test out temporal experience through a work of appropriated, transferred archival footage within the cinematic space. In *Sea* the juxtaposition of found footage seascapes facilitates an investigation into how it might be seen and heard as past. The work also tests the threshold at which depiction recedes and materiality predominates, what that materiality might be and the relationship between locatedness and temporal sense. The title of *Sea c.1897-2011* has a bracketing of historical dates in a similar manner to *1001 TV Sets (End Piece) 1972-2012*. But, whereas Hall's title gives the TV a spurious life span, each clip in *Sea* has gone through the reprieve of at least one transfer.

The work developed as material was gathered from various archives. All visual material was originated on various formats of film and the sound on tape (see appendix D for a list of the films used in *Sea*). A small amount of contemporary film footage was shot (in 2011) to introduce into the sequences a further temporal testing, using 16mm and 8mm film transferred to video. A similar approach was taken with the sound, which is either taken from the few archive films that had sound, or from a limited amount of material from the British Sound Library archive, or recorded by myself on tape and transferred. The structure of *Sea* developed from arranging thematic similarities found through the archival searches for material, which are used to orchestrate and shape the work. These became five sections, with intertitles: *coasts, seas, waves*, *skies* and *horizons* (see figure 17). Within each of the five sections the editing process is based on predominantly formal and material qualities – movement, shape, colours, textures, contrast, frame edge, flicker, grain, judder, hiss and so on.
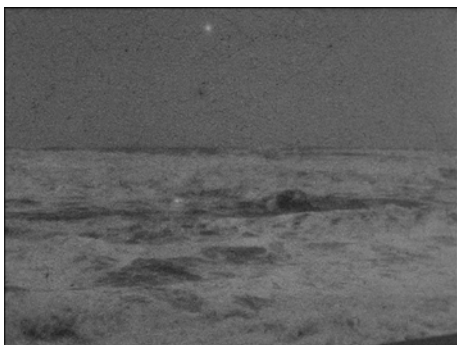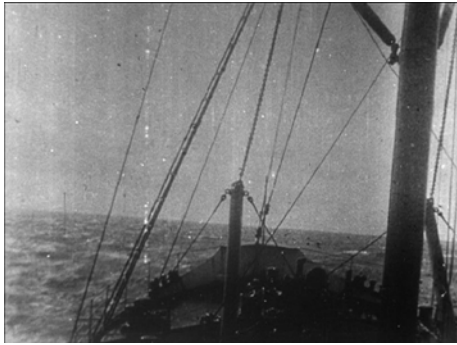
Figure 17. Millett, J. (2011) *Sea c.1897-2011*

[One still from each of the five sections. From top to bottom: coasts, sea, waves, skies, horizons.]

Sea was edited to address the spectator in a particular way with few references of scale and no people depicted. The images of the sea are constantly changing and do not allow a spectator to be drawn into one land or seascape that places them. Where there is something which might give an indication of a location, such as the outline of a cliff, ambiguity remains. In the section *seas,* the man-made does figure within the images through the boat structures, usually a prow intruding into the waves. The emphasis is not on the boat or ship structure however, but on the movement of both the rough seas and the camera. The appropriated footage, taken from largely unknown documentaries, travelogues and family films (none of which is likely to have been screened widely before), may have a familiarity but it is a nebulous one, detached from location. The sound emphasises this dislocation and does not accompany the images, but rather runs parallel to them or at times works against the images. The spectator is kept on the periphery of being drawn into the spaces in the work and the effort to link the disparate clips is an active one. Lucy Reynolds sees the spectator of the found footage film as an active agent who assembles fragmentary elements:

> It could be argued that the found footage film requires the viewer to become an archivist, transforming a passive state of perception into an active process of restoration, by piecing together new meaning drawn from personal memory, association and imagination.
> (Reynolds, 2006, p.22)

The play of imagination as well as memory in the found footage film helps to further a sense of temporal instability, where the spectator maybe unsure if what they have seen or heard is remembered or imagined as a memory. As Reynolds says, this can be an active, productive state.

Ricoeur writes, 'One does not simply remember oneself, seeing, experiencing, learning; rather one recalls the situations in the world in which one has seen, experienced, learned. These situations imply one's own body and the bodies of others, [...]' (2004, p.36). The 'bodies of others' are needed to activate the work as a proposition for experience. With both *Sea*

and the installation work, *Sea breaking,* a group of peers was invited to the exhibitions. After the group attended the cinema screening of *Sea* and the gallery exhibition of *Sea breaking*, informal discussions were recorded and transcribed (see appendix E). Bearing in mind that an informal discussion immediately following a screening or exhibition will garner initial reactions only and that there will be a level of interaction between the individuals in a group, comments from the discussion provide a useful perspective from which to analyse the work.

Immediately after a screening of *Sea*, five participants (who are anonymised as A, B, C, D and E) discussed time and temporality, locatedness, texture and sound in the work. (See appendix E, part 1 for transcript). A piecing together and a temporal ordering were commented on:

> [...] the sense of time that you get when you are watching it, imagining it as starting from older footage to newer footage and then [I] realised that actually, you often can't tell, [...] and when stronger colours come in, you feel "oh modernity" [...] it's not really aesthetic it's more temporal, but there is a sense of timelessness about it because suddenly all those differences just move in with the movement of the waves. (D)

D imagined a structure that was chronological at first but found that any sense of ordering was put into flux, which she related to colour and movement. The shifting differences produced a sense of 'timelessness'. 'Timeless' was mentioned by another, A, in the *seas* section:

> there was a stronger sense of continuity then between shots, so I felt like a lot of similar shots had been cut together, so in a sort of timeless way, [...] you were spanning different times, but you get the continuity, so that you are always on a boat, on a sea no matter where you are or what time it is [...]

Again, as with D, continuity is through the structuring of the work rather than through chronology which puts temporal sense into question, hence the word 'timeless'. This then made her think back to *coasts* which is the first section of *Sea,* retrospectively:

[...] I had thought why aren't we being told where these coasts are, every coast isn't the same coast! And then actually I thought it's all coastline and if you were doing what I thought was going on in the seas bit, I was really interested by that, that idea of linking, of making your own coastline, through cutting and pasting, of making your own landscape, literally, by cutting and pasting various film things together. (A)

Relating to Reynolds' idea of the viewer as archivist of found footage fragments, A is acting as the compiler, something which she resists until she connects it to the idea of 'making your own landscape'.

Some participants did seem to look for a progression in the work that might have a resulting resolution. The five sections as a form of structuring with the use of the single word intertitles was discussed as a form of development, both temporal and spatial, but also changes in the experience of viewing.

The text of the film in terms of the literal text, takes you out, in a chronological order [...] coast, then sea, then horizon, so as, that immediately by having those words in that order, [it] puts you in a sense of going out [...] there is that kind of furtherness, or kind of a chronology that goes along. (B)

D said she did not notice the first two intertitles and when she did, she then questioned where her eye was going as a result. '[...] it's interesting to think of how the headings change the way that you look and the experience of that.' For A the words were taken as another form of framing, of pointing the attention towards, but brought up questions such as, 'how do you decide if this is horizon, if this is waves, if this is coast?' She goes back to this point later in the discussion, saying:

Then the words, though they are good guiding, almost began to get in the way because I was really interested in that movement from coast to sea to wave, there might be another way of framing or bringing them together without the cutting off, though as viewers you might want a bit of a break sometimes ... (A)

It was part of my intention in using intertitles that the words I used would be

questioned and not ignored or taken for granted, but at the same time they do a certain amount of guiding.

The material, textural qualities of the image and what was depicted were also discussed:

> Picking up on photography ... the Barthesian lens ... the idea that we don't see the photograph, we don't see photography, we see its subject [...] because of its nature and because of the way it is edited, from found footage or archive footage - it forces you to deal with the cinematography [...] so I find myself looking at the grains and scratches and flicks as much as I am looking at the foam and rocks and seabirds. (B)

B also said:

> There was one bit near the beginning where I was wondering whether there was a certain kind of texture that I was looking at, was part of the film or whether it was the actual texture of the physical screen over there [...] I wanted to go and touch it, is that the actual white rectangle over there or is it part of the projection?

For A, the separateness and conjoining of image and texture also raised awareness of the screen:

> I was really intrigued with the graininess ... and at one stage I felt I was looking at a slide show of the film, the film itself, the texture of the film imposed over images of the sea, you know when you adjust your gaze so that you are looking at the screen rather than what is beyond the screen I found myself very much doing that.

For B, there was a heightened awareness of some material qualities (he mentions grains, scratches and flicks) which vied with what was depicted (foam and rocks). Later he talked of a 'heavy presence of media'. B also found that it produced an awareness of texture and of the physical screen. A sees both the texture and, at the same time, through the texture to the screen. Her attention becomes fluid and in the quote she speaks of adjusting her gaze to look at the screen 'rather than what is beyond the screen'. In

other words, her acknowledgement of texture and grain as separate to the image (which she says is imposed) leads to consciousness of her own looking.

The instability of the space and frame was commented on by C who said there was:

> ... just a feeling of a certain framelessness, because it's moving between these different films made at different times by different people, ... if you are watching a movie kind of film, the frame disappears because you think you are there, and there was no sense of that, but also there wasn't a sense of there being one frame, that you were constantly looking through either, it was always shifting...

The sense of there not being one frame, and a shifting, relates to the locatedness of the spectator and recalls the early spectator who is aware of the screen and frame. With C there is no constant one frame, but frames which introduce another movement. Locatedness arose in the discussion, particularly with the *seas* section:

> I thought the sea section was particularly interesting, for me, not only because you have this very heavy presence of media, you also have a much less tangible, or much more tangible, I'm not sure, sense of location; in terms of the only way to get that footage is to be on a boat, so you constantly have the bow or the stern of the boat in shot, and you get a much greater sense of being on or being in ... but also that this is only possible through this imposition of boat or ship into sea ... (B)

The footage on the sea works as a contrast to the other imagery taken from land where a sense of being grounded and looking out or beyond is present. E said that the 'horizon is so important, how we frame things up' which when the horizon was not there, 'you are orientating yourself by other means'.

The horizon becomes a disorientating feature in the films at sea. The earliest of the films in the *seas* section is taken from *European Rest Cure* (35mm, 1904) made by the Edison production company. It shows the bow of the

vessel, which is filmed from the bridge. The kinaesthetic sensation of the moving, pitching horizon and the sides of the vessel moving in and out of frame is destabilising. Spectator involvement with the film movement may cause motion sickness similar to rapid hand-held camera movement. One of the participants mentioned feeling seasick and needing to look away. Whilst the frame becomes emphasised by all the movement within it, the illusory space within the frame is destabilised, compounded by the lack of perspective at sea, making any steady reference point within the frame lost. Both temporal and spatial references are dislocated.

Film as a means of control and ordering what appears to be uncontrollable through the work was discussed:

> Also you encapsulated the order chaos, the orderliness of waves, and as they splosh out, you get this total chaos. In your film first you've got the chaotic wild seas bits and then sunsets towards the end and then you get into the whole nature thing, you can talk about nature as being totally contingent and chaotic but ... we try to order it and make sense of it.... (E)

Participant A said in response to E's comments:

> [...] what you were just saying about chaos and order, if filming is a way of ordering it, when you see the film disintegrating, it's completely thwarting that possibility or illusion, exploding that illusion, because film has its own decay.

For A, her awareness of the material decay of film counteracts any imposition of control through it. With the early film experience of Rough Sea films nature was seen as a conspirator with the technological marvel of film. In A's experience, film as a means of making sense of nature is undermined through material qualities which are themselves seen as decomposing.

The association between audio and image was also commented upon and how both looking and listening was affected by that relationship.

one of the things I noticed was a different sense of human agency or human presence in the two different media, [audio and visual] so I got a much stronger sense of human agency in the visual aspect of it, the way maybe the camera would shake at times or the editing between scenes, whereas the sound, because it *mostly* went with what you were seeing, it had almost a feeling of being close to silence [...] (C)

D said she found watching 'a similar silence, because it becomes quite meditative'. E asked if there was any sound used which had been part of the found film. When I explained that some did, but it was not synchronised in the work, he said:

it's like in photography, the picture is something that 'has been', if you've got old film, I can see how you can look at it in those terms as well, then if you are then adding a new sound on top, that interferes with that ..

C said, in reference to the interference and whether the sound went with the image:

It did at times, and it didn't. I think we are so used to having, if you watch television or film now, the sound editing is often very precise and the use of foley within sound editing, so that the sound is often more real than it would be 'for real' and there was a lack of that at times, but sometimes the sound and the visuals seemed to coincide.

Sound as exaggerated and hyper-real ('more real' than 'real') is often a component of mainstream film, particularly through the use of foley (recorded sound effects added in post production), which I did utilise for the work in order to create a variety of distances between the audio and the visual. Using apparently synched sound sporadically meant that there was never one position to get used to. C reinforced this by saying:

There were times, particularly when there was a large wave and it was spattering onto the rock quite close to where the camera was, where I expected to almost hear that almost individual splattering of water and it wasn't there.

I asked if she made the sound in her mind because when I watch it I imagine the sound and she replied 'not make but anticipate' (C). The knowledge that she was anticipating a sound that didn't happen is dislocating but reflexive.

Sea could involve haptic, embodied memories of being near or on the sea but this was not generally picked up on. There was also no mention of home movie memories, but this may have been outside of their experience. Another area not dealt with in the discussion was whether they were aware that it was film or video that they thought they were looking at, something introduced in the discussion but not taken up. This is to be expected as the work was made in a way that did not offer this up as an issue. The critical awareness of what the participants were looking at was made within the confines of a cinematic situation where it is the work screened that is concentrated on and not what is technically producing it. Also the issue of what they were looking at and hearing in relation to their own individual memories did not arise but these were their first reactions – within a group.

In summary, the discussion showed that the work did foreground material qualities in a way that conflicted at times with what was depicted. An awareness of material was related also to the locatedness of the spectator and any structuring that film is seen to impose on sea became destabilised, including the frame. The sound was another area of dislocation. In terms of temporal experience, two participants articulated it as 'timelessness'. The sense of when or where the images came from was made insecure and opened the way for the them to question that sense. Timelessness is an initial reaction to having temporal cues set into flux, where temporal certainty becomes undermined. Timelessness, I consider not to refer to a loss of time or an eternal never-ending, but the experience of being unable to fix or settle on one time through the work. *Sea* tested out temporal experience in a way that made senses of time insecure in the cinematic space. Within the particular context of the cinema and through the veil of the video copy *Sea* is an oscillating, perplexing engagement which unfastens temporal knowledge, but in a way which a spectator is able to question for themselves.

In *Sea* the originating formats of 8mm, 9.5mm, 16mm and 35mm are conformed through their translation to digital video. The group had no overt awareness of that translation, but a general one through the juxtaposition of differences, such as colour, texture and frame. As a test of temporal experience and materiality, *Sea* is limited through the hybrid materiality of the video copy of the films. To address these limitations, the second work, *Sea breaking* was made which tested out temporality and materiality in a different manner to *Sea* and in a space other than a cinema.

(ii) *Sea breaking*

Sea c.1897-2011 and *Sea breaking* developed as separate pieces testing temporal experience but in contrasting approaches to their making and showing. Whereas the material in *Sea c.1897-2011* had historic timescales related to their origin on film, the earliest being from 1897, *Sea breaking* was shot simultaneously in the same location but with five different cameras. The resulting work is a five screen, multi-technology installation in a dark space with a mobile spectator. *Sea breaking* explores temporal experience in a heterogeneous environment where technologies are mixed concurrently and are therefore spatially comparative. The objects of the projectors in the installation space take on a temporal significance, their presence another set of cues, impacting one on the other as well as mediating the seascape imagery.

Development

Sea breaking used more reductive and less diverse imagery than that of *Sea c.1897-2011,* deliberately removing a sense of place or location from the imagery. There was no recorded sound for similar reasons. Within the image of waves breaking with no horizon or beach visible there was no overt illusory perspectival space into which a spectator could be drawn, and the

camera does not move. The spectator could then only deal with movement and pattern of waves on the screen surface. The repetition of the loops was intended to spread attention over the five projections with little possibility of being drawn particularly by one, so that there would be a comparativeness involved in viewing across the screens rather than within. The imagery is still recognisable as waves breaking; however, waves have particular characteristics due to the weather, tide and geography of the shore, so the imagery is not generic. In the darkness of the installation space, with no seating and multiple projections, the spectator is able to move around and retains a presence in the space to the work rather than being drawn into piecing together fragments of found footage, as in *Sea c.1897-2011*. As a multi-screen projection piece, the focus then shifts to the relationship between the screens, between them and the space they occupy and the things in that space (such as other people, projectors, sounds).

Sea breaking itself went through a period of development with an initial installation called *Travelling wave.* The title refers to the scientific term for a wave carrying energy in a medium until it meets a boundary of another medium. In *Travelling wave*, the image of a single wave breaking whilst travelling from left to right or vice versa was pursued (see figure 18 and *Sea breaking* DVD documentation).

For *Sea breaking,* this was later re-shot with waves which broke more chaotically, producing white surf (see figure 19 and *Sea breaking* DVD). All the footage was filmed and videoed at the same time with the intention of projecting the loops in the installation in such a way that the chance of simultaneity was possible.
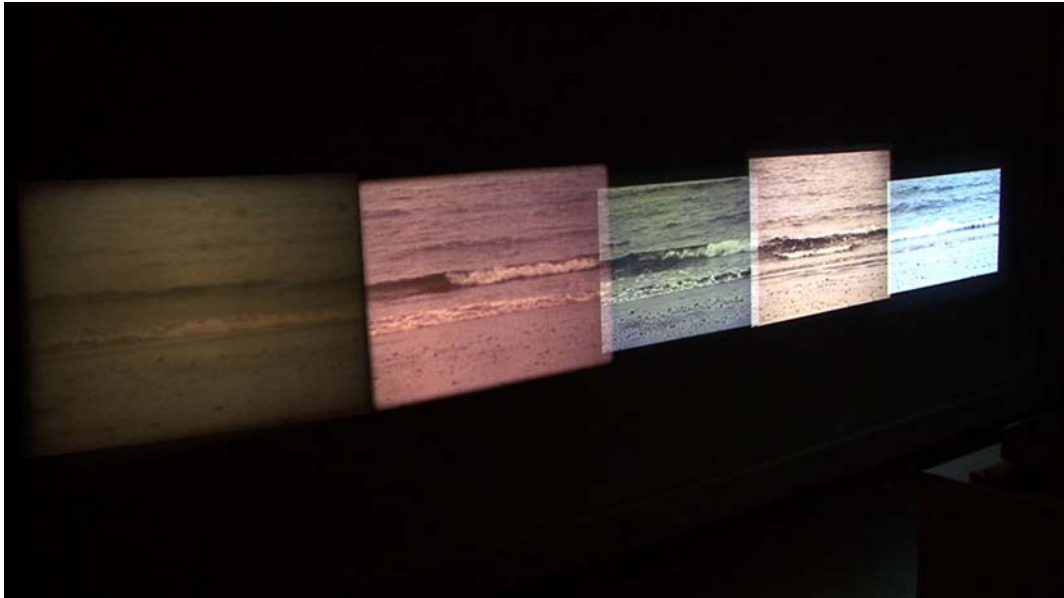
Figure 18. Millett, J. (2012) *Travelling wave*

In development and in the final work, the imagery was a means of testing out how temporal difference might be manifested; whether something could be perceived as occurring at the same time but which would cut across differences (difference in space, physically and difference in media).

The moving image material was produced using five cameras (8mm film, 16mm film, hi-8 video, Digital Video and High Definition Video) on the beach at the same time in the early morning (see figure 20). The work is not intended to be an exploration of media archaeology, neither is it dependent on those particular formats as it is the heterogeneity that is important. There is a danger that the technology used in the installation can become too dominating as a presence and that it might be read as a didactic piece of media history, but the intervals of dark and the imagery work against that.
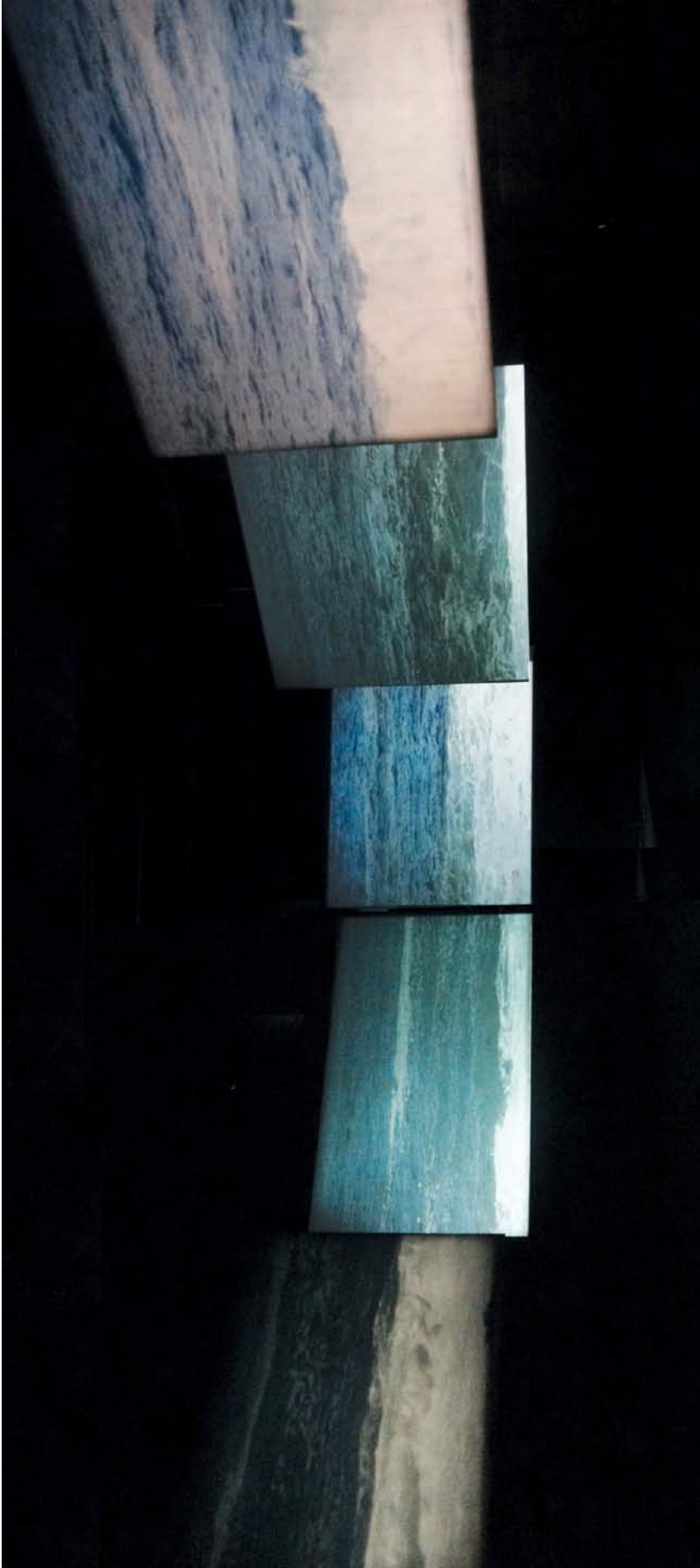
Figure 19. Millett, J. (2012) *Sea breaking*

Figure 20. Camera set up on Maenporth beach, Cornwall

The dimensions and qualities of the space became an important element of the installation. For *Travelling wave*, I used a windowless studio and projected onto a blank white wall. The projections were juxtaposed and slightly overlapping (see figure 18). The viewers had to negotiate the projection equipment in the space, which was clearly visible. Each projected an approximate seventeen second loop and went in and out of phase. In the case of the 8mm and 16mm film, the loops become more scratched and degraded with time. The test installation was performed in the sense that it was not left running and open to view at any time but was put on at certain times, within which the viewers could come and go.

There were a number of issues in this initial piece which needed resolving in further development of this work. The varying light levels emitted by the range of projectors meant that there was a big disparity between the brightest and the dimmest projectors, in particular the super 8mm, which being relative to the brightest projector was very dim and lost somewhat. Also, as all the images were projected with the same height, whatever the format, this had not taken into account the differences in brightness and resolution. The linear arrangement of the images on one wall did not make full use of the

space, but simply lined one up against another on a single plane. The fact that they were on all the time during the performance and joined to make a single sweep of images could homogenise them rather than expose their differences. The wave which broke as it travelled across lacked contrast and variation as an image, although it could be followed from one screen to another at times.

Figure 21. Arrangement of screens for *Sea breaking* installation

Sea breaking Installation

The next phase of development which became *Sea breaking* was made in a large light industrial space in Falmouth Wharves, with the projections coming off the wall and into the space. Five individual hanging screens were made, one for each projection, and each sized to fit the ratio (see figure 21). The material for projection was shot on a beach whose shape produces more energy in the breaking waves, resulting in a large amount of white surf, so there was higher contrast and variation in the images. The super 8mm image was shot closer in on the waves than the other cameras, the projection screen made smaller to compensate and therefore the image was brighter.

The screens were hung in the space in a curve so that the viewers were able to move around the space and see different configurations.

The introduction of intervals without images was a reaction to the homogeneity which *Travelling wave* had produced, but also a notion that temporal breaks could be juxtaposed with spatial ones. The absences in *Sea breaking* would then facilitate a disconnectedness that foregrounds a spectator's awareness of her perceiving. At some points viewers would be able to see projections on all five screens, but at other times the images would appear and disappear in a random sequence (figure 19 shows the installation with all five screens on, the DVD documentation shows the interruptions). Through periods in which the image was absent a more spatial/temporal experience was made possible, but also the prospect of the involvement of different levels of memory.

I wanted to test how memory would be engaged if something appeared and disappeared in a timescale of seconds (in this case approximately one half to 15 seconds). This led to the black screen, as a standard white screen would not recede into the darkness enough. Experiments with a number of non-white screen surfaces, including black fabric, led to using a smooth surface (hardboard) painted with blackboard paint. The white in the image was reflected while mid range elements tended to be absorbed, but there was not as much loss as might be expected.

At this stage I intended to introduce the absences of images through editing black into the footage. Black leader into the film loops for example, or editing in black spacing in the video. However, in projection, black is projected as an absence of light and will still produce a dull grey even on a black screen. The only way to have no light on the screen was to physically stop light emitted from the projectors. I had external shutters made using the expertise of a local artist who fabricated the shutters and made the external controller. The shutters operate independently of the projectors, using solenoids, which
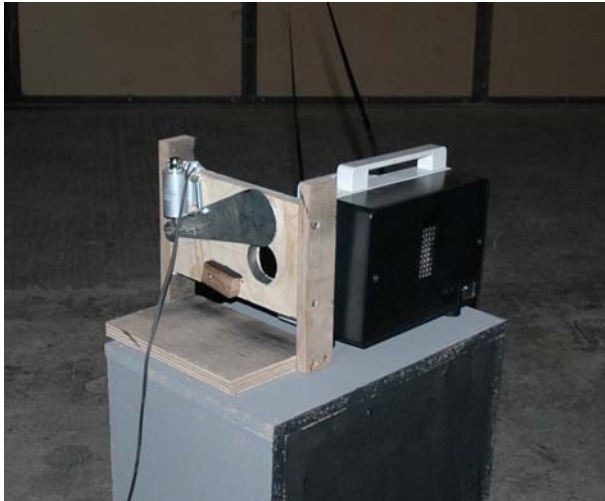
Figure 22. *Sea breaking* external shutters [Top: 8mm projector with external shutter. Bottom: video projector with external shutter]

when on, push the shutters down and are controlled by a programme which operates randomly. The shutters introduced another sound into the mix, through the clunk of the metal as they moved (see figure 22). They needed refinement in terms of how they looked and sounded, but they bring a rough and almost hand-made quality to the installation which prevents the work from being technically too pristine.

In *Sea breaking*, darkness and disconnection are critical elements in the installation. Black screens, intervals in time and the space between the screens (depending on where the spectator positioned themselves) produce different levels of interruption. An element of fascination or enchantment could occur when occasionally an image, having disappeared into the black space, reappeared almost as if it was not on a screen but floating in a space whose depth was enigmatic. The noise of the projectors and in particular the external shutters emphasised the intervals and added a contrasting metallic rawness to what might have been a more contemplative piece otherwise. The darkness and sound produced by the machines (projectors and shutters) in the installation became a more bodily experience, as the discussion afterwards showed.

Discussion after *Sea breaking*

The discussion took place immediately after the participants visited the installation in Falmouth Wharves for the first time (September 4, 2012). Of the five participants, four had taken part in the discussion after *Sea* and one of them, who could not join the group discussion, talked to me separately (both discussions were recorded and transcribed, see appendix E, part 2). All the participants went in knowing very little about it so their first reactions were particularly useful as they were responses, which I, as the artist, cannot have to the work.

The participants entered the dark space of the installation from the daylight and took some time to become accustomed to the low light levels, with first responses ones of spatial, visual and aural disorientation. One said: when I walked in I was completely bewildered [...] it took me five minutes just to figure out where to be looking and how to absorb it [...] (A). Another said:

> The first thing that hit me when I came in was the sound actually, more than anything, you can hear the sound before you even come round to see ... I felt that it's quite bewildering when you come in, you can see the screen[s] but you can't see anything else, you can just hear all this

rattling [...] it sounds like a machine that might have some raw edges that you might walk into. (C)

'Bewilder' was used by another participant and has an archaic meaning, to 'lose one's way'. In the darkness of the space the connection between the projections, what is producing them and the interruptions is not made at first. A period of relative immobility and caution seemed to be necessary for most of the participants until they felt bodily confident of moving around and investigating further. For E, the sound also took precedent at first '[i]t was forty seconds of being in there that I started to look and not just listen'.

There were periods when the projections were all on and if someone came in at that point and the shutters then started up, that had a disorientating effect, as B states:

> [...] the shutters were really disorientating and a bit upsetting because it was so calm and then quite a loud noise and a change. That started me thinking about where it had come from and how it had got here and that sort of thing, so it started off seeming quite simple, but the shutters made me think about it more deeply...

If the shutters had not been part of the piece the result would be a far more contemplative, perceptual work. The interruptions produced by the shutters and the noise they make bring about a bodily awareness of the work.

Following the initial strong reactions and after spending some time in the installation, they became more at ease and inquisitive about their environment.

> The shutters are really critical to my enjoyment of the piece. When I came in, I had no sense of how large the space was, so I had an immediate precedent effect of the audio and the visual, so the clicking was immediately coming from the screens and then when I grasped the size of the room a little bit, I started to figure out that the echo meant it was further away and it was not coming from the screen, it was coming from a machine. (A)

For A and for E, the sound was a means of spatially locating themselves; they hear the space first because there is a lack of visual information in the first minute or so when the eyes adjust to the dark. This sets up a situation where knowledge of the space is not so dependent upon vision, which then enables them to question what it is they are seeing, but also for the visual sense to be less detached from a bodily awareness.

> The complete blackout meant you are absolutely exploring the space in very different configurations, so when these two [screens] cut out the space is wider and you get a different perception of the image and then when it's just those, you are sucked in, the space changes again and you have a complete disconnect between what you are hearing and what you are seeing at that point to me ... (A)

The shutters change the space for A in a way that is reflexive, he explores the space, which alters for him and highlights the difference between his aural and visual perception of the space.

C said her responses changed over time. At first there was 'so much information that I couldn't actually take it in'. Following her initial shock at the noise and dark and after a time in the installation she felt able to walk around and between the screens and see different configurations.

> ... the more familiar you become, there is a greater sense of permission. I suppose its power, how you feel in control of your body, confident in that space and how it's going to react or interact, then you can move around and be a bit braver with what's going on.

C's time spent in the space produced a familiarity and an initial charged, almost fearful reaction was replaced by one of curiosity. At the end of the discussion she said:

> [...] it does feel like you are in the mind of the camera, because you are walking between them and they [the looping film projectors] are in front of you. Which is really interesting because you are in some sense inhabiting that camera that is your vision [....]

This is an experience which is multi-sensory in a way that is not the case with the cinema piece. Viewers can be within the installation in a way that is reflexive and active; a spatial, bodily engagement with the work.

I asked the participants whether they started to get absorbed into the screens themselves and the materiality of what they were looking at on those screens. At first C thought it was five 'random bits of sea, randomly showing' And, after some time, she thought 'they were the same bits of sea that were filmed at different stages'. I was asked if they were all the same bit of sea and replied that it was. B said she hadn't picked up on that and then said she was 'transfixed' by the Super 8mm one: 'I don't know whether it's because the colours are so intense and bright'. The colours and colour casts of the projections are noticeable and comparable when the projections are all on and they retain a clear separateness. The Super 8mm with its saturated colour, soft appearance and slower shutter speed is compelling to watch, especially when compared to the harsher brightness of the video. Seeing a multi-format work is unusual and as far as I am aware, there are no other works which mix as many as *Sea breaking*.

B then asked when the different bits of footage were from and I answered that they were filmed all on the same day. C was surprised that the apparent differences were due to the equipment. Perhaps because they were aware of the research from the previous piece *Sea c.1897-2011,* the participants did try to 'date' what they were looking at.

> [....] it felt like that was slower [super 8mm], the older the equipment the slower the image was and the less information I was getting [...] Also you get that sense of nostalgia, of it being kind of older, of a different time, but it's interesting that it's not of a different time, but it's just that equipment that does that [...] (C)

The slowness that C talks of is likely to be related to the low frame rate of the Super 8mm film and with it, the 'sense of nostalgia', which she starts to

question. After discussion, where I gave more information about the different formats, she said:

> [...] somehow I think I have made an association between memory, seeing it in your mind, and the idea that if you are seeing it immediately, your newest memory or your most recent experience is the clearest to you, [...] the darker something is, the older something is and the further away in the past and the less you can see it metaphorically, the less you can remember it.

C is starting to see the projections as forms of memory and the discussion reveals the confusion in seeing the varying technologies comparatively. There are attempts to find cues which can bring a temporal ordering, but C was beginning to move beyond that into a more introspective questioning about her own perceiving.

Sea breaking, by taking away spatial cues through darkness, placing the equipment in the space and adding more in the form of the external shutters, causes, at first, a bodily confusion. After a short time in the space the participants examined what they were looking at, relating one screen to another. They find the space changing around them and attempt to find temporal clues. Although some establish that what they are seeing on the screens is the same sea, they do not connect it to having been filmed at the same time. It is not necessary with this installation however, to inform viewers how the piece was made and whether they leave knowing or not knowing that it was produced in this way is not part of the intention of the work.

The simultaneity of the waves across the screens is only likely to occur very occasionally as the loops are not all the same length but I wanted to see if temporal 'shapes' were being recognised, rather like Italo Calvino with Mr Palomar. A said: '[...] three screens all had what felt like the same wave, at very slightly different rates. I seemed to catch it at that perfect moment where for about twenty seconds it was all the same thing'.

The discussion indicated that the presence of the projectors together with some of the material qualities of the image (like colour and graininess) overrode, for them, the possibility of seeing the projections as similar seascapes. There was a conflict between seeing it all as one seascape and the material differences between the screens. In the installation there are confrontations to sensing related to what is anticipated. When something is not what is anticipated it is bewildering and challenging.

The originating footage from *Sea c.1897-2011* took different formats of film from a range of times and places, yet is all seen on one medium, video. The time periods and eras become temporally flattened in one media, which is received by the spectator as 'timeless'. *Sea breaking* was filmed and videoed on a beach, the five cameras all running at the same time. The five loops in the installation are more or less concurrent (within a margin of 15 seconds). The potential simultaneity is lost to most participants because seeing the depictions of the sea as concurrent conflicts with separate and materially different projections, which are broken with intervals of darkness.

There was no mention of timelessness in the *Sea breaking* discussion, which I consider to be because they are mobile viewers who are in the space with the work. The temporal containers were not through the cinematic portal of a distant single screen but multiple, proximate and opposing. In the installation, viewers can place themselves in relation to the projectors which could be seen as instruments of navigation with their own temporality. *Sea breaking* is bewildering at first because sensory information and expectation conflict with nothing familiar to hold onto initially. The screens disappeared in darkness, either there or not there, breaking up any attempt at a unifying position. Through the disappearances *Sea breaking* enables a spectator's vision to be connected bodily ('inhabited' as one participant put it), in which the overwhelming temporality is that of presentness.

Conclusion

The question, 'if material qualities are implicated in memory as pastness, how can this be made apperceptible using art practice?', was engaged with through practice based research with a manifold methodology. There was a risk with the research that the practice might overly open out the question until it became another. But equally, practice can be impeded through trying to keep it within the bounds of the question. A balance is needed between those two risks and in this research it was maintained by returning to the issue at the core, that of how materiality is implicated in pastness. The advantages of a manifold methodology are that the research is not limited to one form of discourse, whether theoretical, philosophical or historical and can progress between them with interrelations found between diverse approaches. The findings are also manifold, and are presented in a compound conclusion with a central contribution.

Practice research, particularly involving what a spectator might experience, executes in some form or other, making manifest and evidencing. The two moving image works, *Sea c.1897-2011* and *Sea breaking,* both manifest the research and informed it in a way which could not be done by any other means. I have then folded back this substantiation throughout the written part of the thesis. At several points writing and temporal experience, as a concern, was raised, in particular through Italo Calvino, Hollis Frampton, Laura Mulvey and Peter Gidal who all address the issue in various ways by highlighting it but not solving it. The articulation of temporalities in writing is part of the problematic of the practice research and I have found that writing and practice operate in parallel. There is a strange chasm between them which can be bridged conceptually but no direct route from one to the other. There are benefits, however, because without that gap practice could become an instrument of the writing or the writing illustrative of the practice and neither would have therefore progressed the argument.

Early film in this research has been used as a means of gauging the changing experience of moving image temporality, both historically in terms of early film reception and as moving image viewed in a contemporary context. The period can be stated to be one which was disparate, eclectic and diverse, without idealising it. The Rough Sea film study I undertook showed that it was a sub-genre of early film which is surprisingly under-researched and they are dismissed in historical perspectives which tend to privilege narrative film. Being overtly visual they do not make an easy textual analysis. Rough Sea films need to be *seen* to be understood as other than prosaic.

Viewing early films, as the programme of *Into the Deep* at the Oberhausen Film Festival (2010) demonstrated, can be informative about the films but also revealing about current viewing attitudes. Parallels between early film and experimental film practices draw attention to aspects of the diversity of the period together with the potential for current programming. It is not necessary to attempt to replicate early film screenings, but if shown in a considered way as films they are not then reduced to historical artefacts whose content is of interest only. Screened again, they are reprised as visual works that have a contemporary existence with a paradoxical newness.

Early film reception shows that movement is fundamental to the experience of film but there are multiple movements to consider, including that which is habituated, real and illusory. It is possible to explore these movements using found or appropriated film, potentially enabling a complex area to be accessed through a work as it is being experienced. This can be both an optical experience and an ontological one through dislocating present moments and putting the spectator into a position of reflexive awareness.

To explore senses of past in moving image requires a concentration on what it is that is prompting that sense, but the necessary attentiveness can also evaporate that sense. Memory is complex and nebulous and can resist

attempts to contain it, dissolving as it is examined. The two areas of research which are especially engaged with this aspect were my own spectatorial research and the showing of the two practice research works to viewers. The spectatorial research ranged widely and inevitably drew upon a significant amount of film and video viewing in the past. As a practiced spectator I tried to analyse what was happening perceptually and in memory as I watched moving image work, whether archival film or artwork. When drawing upon a memory of a specific film by trying to recall it outside of a viewing situation the memory would often dissolve.

The spatial and temporal act of viewing has been the focus of this research rather than the remembered film, though the two connect. It is not possible to make work that sets out to reveal pastness to an individual spectator because it is from their own memory that a felt sense of past comes. Therefore, the work needed to be made in such a way that awareness comes about through problematising senses of past and materiality so that viewers are presented with questions rather than answers.

At the beginning of the research the differing temporalities of film and video and their interrelation led to further investigation into two areas: the impact on temporal experience, first, of differing spaces of reception and second, of different media when they are experienced at the same time. The two works manifest this and the informal discussions with participants give an indication of the initial responses of others to the work. The discussions are useful as responses immediately after experiencing the work for the first time but they might be limited by being initial ones. The discussion showed that viewers did have temporal awareness which involved the materiality of what they were experiencing but which also perplexed and confused them.

In *Sea c.1897-2011,* some participants responded that there was a sense of timelessness through the work, but I would argue this is not an eternal or transcendental timelessness but rather a drifting, detached temporality.   This response, I would also contend, is because the diverse range of film material

was conformed through transfer onto video. It also arose from the cinema as a temporal container which engenders a particular anticipation to sit and expect temporal cues. *Sea c.1897-2011* had an inconsistency with temporal cues which undermined any sense of a secure temporal trajectory in the work. A linear temporality was loosened from ties to time and place, but also from the screen. The participants were aware of the screen at times through the shifting balance between depiction and material qualities.

Temporal experience is not separated from bodily experience and in the installation, *Sea breaking,* the dislocated nature of the work was felt as bewildering by some participants, as though they were lost at first. Not knowing quite what to expect on entering the space, they experienced spatial and aural dislocation with intervals of darkness and levels of noise producing a sense of rawness. What was being depicted was kept reduced with little to follow except wave movements. The spectator was kept in a bodily, spatial present by being in the space with the work rather than absent in an illusory space and time. One participant said they were inhabiting their vision; as though their bodily awareness extended to a physicality in their looking. Timelessness was therefore not a response of the participants to the five screen installation, unlike the cinema piece. Though they were bodily present to the installation work it was a confusing present. Temporal cues were taken from the material objects in the space and some material qualities of the imagery rather than seeing the possibility that what was being projected was the same imagery, shot at the same time. In *Sea breaking,* the darkness of the space and the presence of the projections as almost tangible elements to navigate as well as the action of the external shutters, reprise an element of expanded cinema. The installation is a contrast to the moving image seen on a small screen or on a monitor in daylight and acts as a reminder of the range of moving image materialities. This range is rarely seen mixed and comparative in one artwork and has challenged the use of technology in my practice, through how one media affects another. An extension of the research question, arising from the installation, is how

differing media might impact on illusions of space, for example, how a landscape could be mediated through different but concurrent media.

Perceptual senses of past were explored using two particular material qualities – colour and flicker. They are part of the inconspicuous noise of moving image; in the background of awareness, easily disturbed and evasive. However, in memory, material qualities are mixed, not separated, and there are limitations to isolating them. Foregrounding them, dwelling on what they could be and where the boundaries are, divorces them from their wider context, the situation and conditions of viewing. When they become divorced from memory's contexts they can be turned into signifiers of past, which can deny individual temporal experience. However, in foregrounding them whilst acknowledging the risks of doing so, their importance to memories of perceiving is underlined and they reveal in their intangibility a persuasiveness in memory.

Through the flicker, colour and found footage research it became clear that in moving image memories of perception there is a relationship between depiction and materiality which is intertwined in memory. Where depiction recedes and materiality predominates is a threshold which can be altered and revealed in a found footage work. The relationship between materiality and depiction held in memory can also become unsettled in, for example, a digital restoration of a film. Transfer and restoration can separate a materiality once associated with the film and the resulting cleaned up version can destabilise a memory of the earlier one. Memories of perception show that memory can be medium specific and that medium specificity will, therefore, endure as part of the ongoing debate in archival film preservation as well as in contemporary art. Restoring and preserving films is necessary and digital processes are useful in doing so. However, by using them there will be a new work made from the old, which should be acknowledged.

Questions of materiality have renewed relevance as the ways of experiencing moving image proliferate and become more fractured and dispersed. An

artwork can be made available to more viewers through digital technologies but with a loss of control over how the work is shown. Such an approach will inevitably emphasise depiction and relegate considerations of how the work might be seen and heard. This is especially the case when a work concerned with a particular medium, say film, is shown as a copy on a different media such as digital video because it brings into question where the *work* is. One response is to limit how a work is shown in the way that Michael Snow does with *Wavelength.* He demonstrates, through his DVD *WVLNT (Wavelength For Those Who Don't Have The Time)*, that transfer will produce another, different work.

Recollection, as Bergson and Husserl showed, is differentiated from retention and to have a sense of past is to have an awareness of that distinction. To Husserl, the act of remembering exists in the present and involves a memory of perceiving as well as what is remembered. In watching moving image there is a further entanglement of these various modes of memory in an entwining confusion. Anticipation and retrospection both occupy the present, a *now*, which has a modulating shape for each individual spectator and will involve embodied, perceptual memories and expectations. An extension of this research, for further investigation, is the question of how the shape of the present modulates, whether it can be changed by audio visual technologies and how an artwork could reveal this reflexively.

Temporal experience of film involves a habituated background of awareness of that which is repeatedly experienced, becoming unnoticed and to which attention can be drawn. Attention requires memory, as Leibniz pointed out. However, in the current jumble of fractured, varying and disparate experiences of moving image, it is increasingly hard to have attentiveness. An artwork can destabilise anticipation, provoking awareness to make a clearing for questioning. A spectator who is aware of their memories of perception is a reflexive, apperceptive one. Although the notion of apperception and the debates around materiality and film took place almost five decades ago, there is a need in contemporary discourse to reactivate a

questioning approach to how a work is made available to the senses. Those earlier debates were an attempt at articulating a materialist process, not just an argument around manipulatable material. It was part of the debate that if a work is made in such a way that viewers have no access to its process, the means of its making, then its temporality is not accessible either. Viewers are consequently denied their part in the work and are produced by it as passive.

The unresolved debate around materiality and moving image is revived through considerations of memory and process and Bergson's notion that memory is the intersection of mind and matter has renewed weight. By being considered *as* memory the individuality of viewers and their part in the production and process of a moving image artwork cannot be refuted. Summarised as the dynamic entwining of materiality and memory in moving image through senses of past, this conclusion draws together the philosophical, theoretical and practice strands of the study.

The research question has been addressed through moving image artworks which have shown that by minimising the attachment to a moment of registration without excluding it, by problematising anticipated temporal flow through strategies of disruption, interruption and spatial interaction, material qualities are revealed as having a temporal existence in senses of past.

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Welsby, C. (1977) *Shore Line 1* [16mm six screen installation]

Welsby, C. (1974) *Seven Days* [16mm]

Appendices

Appendix A   Joanna Millett Artist C.V.

<u>Films, Videos and Installations</u>

2014	*Overflow* 2 screen video and sound installation
2013	*Aviference* 3 mins SD video
2012	*Field Recording: Goonhilly* (with Rob Gawthrop) SD single screen sound and video piece
2012	*Sea breaking* 5 screen multi format installation
2011	*Sea c.1897-2011* 33 mins HD video
2010	*Surfeit* 2 mins 20 secs HD video
2008-9	*21 Seconds of East Yorkshire* 5 mins SD video
2008	*Wall* 5 mins HD video
2007	*Surroundings* – HD video installation and 6 short video works: *Trees, Rock (face), Rock (wall, exterior), Rock (wall, interior), Water I* and *Water II*
2003	*Comings & Goings* 7 mins – SD video
2002	*Circular* 8 mins SD video
2001	*Standing Waves* sound installation
2001	*85 piano notes* SD video & sound installation
2000	*Estuary English* SD video & sound installation 6 mins looped
2000	*Grey* 4 mins SD video
1996	*Decomposition* 5 mins SD video
1990	*Quartet* single screen VHS video
1989	*Quartet* 4 screen U-matic video installation
1986	*Notes* 10 mins single screen U-matic video
1984	*A Completely Novel Series of Films ... The Miller and the Sweep* (with Rob Gawthrop) 5 mins silent 16mm film
1982	*Films in Colour* 15 mins silent 16mm film
1982	*Water Colour* 9 mins sound 16mm film
1980	*House light* 11 mins silent 16mm film

Bursaries/Commissions/Residencies

2008	*On Spurn* research group residency (summer months)
2007	Artist in Residence, Knaresborough Castle, August-September
2006	Artists Access to Art Colleges Scheme, Hull School of Art and Design
2003	Skipton Rennaisance video commission (with Chrysalis Arts)
2001/2	Chrysalis Arts Public Art Project - participating artist
2000	Yorkshire Arts Artists Film and Video bursary
2000	Artists Access to Art Colleges Scheme, Hull School of Art and Design
2000	Humbermouth Literature Festival commission (installation)
2000/1	Year of the Artist Research and Development Award

Selected screenings and shows

2014	*The Power of the Sea* Royal West of England Academy, Bristol
2013	CMR (Redruth) show *Gaslighting* co-curator with Rob Gawthrop of film screening *Contested Bodies*
2013	CAZ film programme Istanbul exchange, March, screening of *Aviference*
2012	CMR (Redruth) *John Cage Celebration* October, participating artist, screening of *85 piano notes* loop
2011	Hull International Film Festival screening of *Surfeit*
2011	Cornish Film Festival screening of *Surfeit*
2011	CAZ basement programme, The Exchange, Penzance screening of *Surfeit*
2010	The Heuristics Laboratory at Malt Cross Gallery, Nottingham screening of *Wall*
2010	Salon Bruit, Berlin, Germany sound/film evening 12 February. Screening of *85 piano notes* and *21 Seconds of East Riding*
2010	*The Incredible 10* Festival Dresden, Germany screening of *Wall*

2010	Collaboration with Sabine J Bieli on *fr-agile* video installation at Southsquare Gallery, Thornton, Bradford.
2009-10	Figuring Landscapes – touring show in U.K., Ireland and Australia, launched at Tate Modern Feb 2009 (screening *Trees*)
2008	*Surroundings* Sound installation Knaresborough Castle (21-30 March)
2008	*Surroundings* – residency show at Mercer Art Gallery, Harrogate (9 February - 13 April)
2007	Sound-Space Southill Park Bracknell (*85 piano notes*)
2004	*Experiments in Moving Image*, London (*Watercolour* and *The Miller and the Sweep)*
2003/4	A Century of Artists Film in Britain at Tate Britain (*The Miller and the Sweep*)
2002	Light Reading, 291 Gallery London (*Houselight*)
2002	Public screening with Yorkshire Film Archive in Malham, Yorks.
2001	HART Festival, and Fonicphist, Hull, (*Standing Waves*)
2001	Withernsea International Film Festival, (*Estuary English*)
2001	Red Gallery, Hull as part of group show, *100 Hours* (*85 piano notes*)
2000	Hull Literature Festival 'Humbermouth', *Estuary English* installation,
2000	Pop Music Centre, Sheffield (Lovebytes night) *Grey* installation
2000	*Safe As Milk* festival, Norway (*Grey*)
2000	Dreamcatcher International Video Art Festival Kiev (*Grey*)
1991	25 Years of British Avant-garde Filmmaking (Programme One: Landscape Film) at Tate Britain (*Views from Itford Hill*)
1989	Video Positive at Williamson Gallery, Birkenhead (*Quartet* installation)
1984	*Artist as Filmmaker* at the National Film Theatre (*Views from Itford Hill*)

Appendix B   **Newspaper and Periodical Sources**

OUR LADIES' COLUMN
BY ONE OF THEMSELVES.

THE CINEMATOGRAPH.—AN INTERESTING DEVELOP-
MENT OF PHOTOGRAPHY.—THE WOMAN'S EMIGRA-
TION ASSOCIATION.—ADVENTURES IN AUSTRALIA.
—THE LAST POP. CONCERT.—CLIFFORD HARRISON'S
RECITALS.—A DEBT OF GRATITUDE TO HIM.—
PLEASANT PLACES.—PRIVATE VIEWS OF PICTURES.
—LUKE FILDES' STUDIO.—LORD LEIGHTON.—HIS
RESIDENCE IN MELBURY-ROAD.

On looking round what to mention just now as
an object of novel diversion in pleasure seeking
circles in London I immediately think of the amuse-
ment to be secured by a tolerably long visit paid to
the Cinématographe at the Alhambra, only they
now call it the Ainematographe. Well, the rose
will smell as sweet, or the fun be as great, under
any other name, more or less, and as this amusing
instrument has made its debut in London, we hope
it may in due course take a tour round the
provinces, for in spite of all the marvels lately
revealed to us as the results of photography, this
most amusing and bewildering development of the
simple zoetrope of our childhood may fairly compete
with all the new miracles which science is daily
crowding upon us for pre-eminence. Indeed, so
amazingly realistic and animated are the pictures
presented to us, that seeing is scarcely believing;
we feel it easier to imagine ourselves hypnotised
into the contemplation of some distant passing
scene, rather than to be gazing upon the mechanical
results of photography. For the production of each
single picture from 900 to 1,000 negatives have to be
taken on a running band, and by means of the
electric light these are projected life size upon a
screen in a darkened room. In one scene a busy
street is represented, people cross back and forwards,
they meet and greet, and you wonder at not hearing
their voices, newspaper boys and hawkers solicit
attention, the passersby chat, smoke, jostle each
other, and duly apologise—all in the most life-like
manner possible. Another picture in which realism
seems to culminate, is the arrival of the railway
train. The engine first appears, slowing into the
station, the ready porters trot along to open
doors, passengers emerge, some fussy with bags and
rugs, others dignified and independent; luggage is
claimed and shouldered; and by degrees the plat-
form clears, till the guard goes round the empty
carriages, capturing newspapers or a stray umbrella.
It is a scene repeated every day at any one of the
great London termini. Messrs Lumiere, the inven-
tors of the Cinématographe—a name which will be
presently abbreviated no doubt—have many other
wonderful illusions in their collection, but perhaps
the most entertaining is that which pourtrays a
fashionable seaside resort at bathing time. The
waves roll in quite naturally to the shore (inevitably,
since they are photographed from Nature, and one
has always to be recalling this) you expect to smell
the briny so complete is the illusion, bathers, in
infinite variety, disport themselves in the water, or
take headers from the jetty; their antics are ex-
ceedingly diverting and so spontaneous that it be-
comes almost impossible to believe you are not
holiday-making at Boulogne or Ostend, or (failing
the hypnotic theory) gazing upon one of Sir Augustus
Harris's most realistic "sets."

A very interesting conversazione in connection
with the United British Women's Emigration As-

EDISON'S VITASCOPE CHEERED.

"Projecting Kinetescope" Exhibited for First Time at Koster & Bial's.

The new thing at Koster & Bial's last night was Edison's vitascope, exhibited for the first time. The ingenious inventor's latest toy is a projection of his kinetoscope figures, in stereopticon fashion, upon a white screen in a darkened hall. In the centre of the balcony of the big music hall is a curious object, which looks from below like the double turret of a big monitor. In the front of each half of it are two oblong holes. The turret is neatly covered with the blue velvet brocade which is the favorite decorative material in this house. The white screen used on the stage is framed like a picture. The moving figures are about half life size.

When the hall was darkened last night a buzzing and roaring were heard in the turret, and an unusually bright light fell upon the screen. Then came into view two precious blonde young persons of the variety stage, in pink and blue dresses, doing the umbrella dance with commendable celerity. Their motions were all clearly defined. When they vanished, a view of an angry surf breaking on a sandy beach near a stone pier amazed the spectators. The waves tumbled in furiously and the foam of the breakers flew high in the air. A burlesque boxing match between a tall, thin comedian and a short, fat one, a comic allegory called "The Monroe Doctrine"; an instant of motion in Hoyt's farce, "A Milk White Flag," repeated over and over again, and a skirt dance by a tall blonde completed the views, which were all wonderfully real and singularly exhilarating. For the spectator's imagination filled the atmosphere with electricity, as sparks crackled around the swiftly moving, lifelike figures.

So enthusiastic was the appreciation of the crowd long before this extraordinary exhibition was finished that vociferous cheering was heard. There were loud calls for Mr. Edison, but he made no response.

The vitascope is only one feature of an excellent bill at Koster & Bial's, in which, of course, the admirable art of the London monologue man, Chevalier, is a notable item. There are persons who admire and understand stage art who do not go to the music halls. For their sake it is well to say that to hear and see Chevalier in such selections as "The Nipper's Lullaby," "My Old Dutch," and "The Old Kent Road" amply atones for any irritation an oversensitive mind may receive from, say, Miss Florrie West's expression of her opinion of Eliza, and her juvenile confidences as to the information on delicate subjects imparted to her by Johnny Jones. People whose minds are not oversensitive find Miss West intensely amusing. But everybody likes Chevalier, though it is doubtful if the perfect naturalness and delicate finish of his impersonations are generally appreciated. He is not "sensational."

Edison's Vitascope Cheered *The New York Times,* 24 April 1896.

THE CINEMATOGRAPH.

Our readers may probably remember the old " Wheel of Life," and they are more likely still to be familiar with Edison's kinetoscope. An instrument which is a further development of the principle of both these inventions is now on show in London, which is as far ahead of the kinetoscope as the kinetoscope was of the wheel of life. This is the cinematograph, which may be seen any day from 2 p.m. onwards at the Marlborough Rooms, in Regent street. It is the invention of Messrs. Auguste and Louis Lumiere, and is now shown for the first time in England, although it has been attracting crowds in Paris for a month past. It is impossible to describe the extraordinary effects produced. You enter a hall which is darkened, and where you can sit in comfort without screwing up your eyes and peering (in a very uncomfortable position as was the case with the kinetoscope) into two tiny holes. At the end of the hall is a large white screen upon which the pictures are thrown, and the illusion is so complete that you appear to be looking through a window at something actually occurring in the next street. First of all you are shown a factory. The gates open. Then the girls pour out, laughing and (apparently) talking. Then a boy comes out, jumps on a bicycle, and rides off. Suddenly a pair of doors are thrown back, the crowd opens, and a brougham is driven out, and so on. Then you are shown a railway station; a train is seen in the distance. It comes nearer and nearer. You see the steam from the funnel and valves, and you can almost imagine you hear the puffing of the engine. The train comes to a stand, the passengers jump out, and the whole platform is full of life and activity. Porters rush up and down, the guard bangs the doors, and the arrivals are greeted by their friends. Then the scene changes to a garden. The gardener has a hose in his hands. He turns the cock, and you see the spray as it leaves the hose, flying all over the trees and shrubs. Then there comes a little comic relief. Somebody comes behind the gardener, tilts up the hose, and sends the water into his face, blowing his hat off. After this comes a picture of three men playing at ecarte. They are smoking, and whiffs of smoke from their cigarettes are seen in the still air curling round their heads. They shuffle and deal the cards, the stakes are paid over, the loser looks glum, and the winner slaps him on the back. But the most extraordinary and remarkable scene is the last. You are apparently looking at the sea. The long rollers come tumbling in. A party of bathers run along the springboard and take headers. The waves dash against the rocks, the foam flies up into the air, and you expect every moment to see the water pouring into the hall. There are other pictures shown, all of which are interesting, and the exhibition is of so entirely novel and pleasing a character that it will well repay a visit, affording as it does remarkable evidence of what science can do to deceive the senses.

EDISON'S LATEST INVENTION.

With It He Will Show Us a Railroad Wreck and the Pope Saying Mass.

The vitascope, Thomas A. Edison's perfection of the idea that caused the world to marvel when he produced the kinetoscope, has been dividing triumph with Chevalier at Koster & Bial's since Thursday night, and "the Wizard of Menlo Park" promises that before many days he will need an entire stage for the screen on which his latest invention shows life and color, with speech and the noise of movement the only things lacking.

The vitascope differs from the kinetoscope in its size and the size of its pictures; it differs in that its effects are almost the acme of realism; it differs in its possibilities, which, theatrical managers say, are boundless.

When the inventor wanted a subject for portrayal in the kinetoscope he had celebrities go to his laboratory, and there, in a dark room, they went through their performances before a camera, operated by electricity, in which was a film that was moved so swiftly that when the proof was put before the public the motion appeared continuous. The figures were minatures when they were completed.

The vitascope begins its operations in broad daylight. It shows their perfection in a darkened theatre. Sunlight is necessary for the taking of the pictures, darkness for their showing. Figures appear a trifle over life-size on the screen, which is about 20 by 12 feet. On the film in the machine each picture is about half the size of a postage stamp. Minuteness, accuracy, and electrical speed combine to achieve the results that were greeted with cheers at the first exhibition, in Koster & Bial's, Thursday night.

The machines are in the second balcony of the music hall. There are two of them—one for use in case something goes wrong with the other. Double locks keep inquisitors away, for "The Wizard" is not yet satisfied that his success has been complete, and he is afraid lest somebody should steal his first principles, and have the brain or the good fortune to beat him in the race. Bull's-eyes, only a few inches in diameter, but of strong magnifying power, throw the pictures on the screen. The film for the series now being given is 150 yards long, and the pictures go by the lens at the rate of 46 a second—2,760 per minute.

In only two of the pictures shown Thursday night were the colors brought out. The umbrella dancers seemed almost to be creatures of flesh and blood. Every movement was as natural as if living dancers were working their way toward salary day. Even blond tresses, stirred by the vigor of the performer's exercise, streamed out as naturally as if a little breeze were toying them.

In the picture from "A Milk White Flag" the actors and actresses made their entrances and exits and went through the pantomime of their parts perfectly and naturally, but it was the waves tumbling in on a beach and about a stone pier that caused the spectators to cheer and to marvel most of all. Big rollers broke on the beach foam flew high, and weakened waters poured far up the beach. Then great combers arose and pushed each other shoreward, one mounting above the other, until they seemed to fall with mighty force and all together on the shifty sand, whose yellow, receding motion could be plainly seen.

The color effects shown last week are only the beginnings of what Mr. Edison hopes to accomplish. The tinting of the pictures is one of the most delicate tasks that confronts him, for, when one considers the size of the pictures on his film, there can seem to be no exaggeration in his statement that to make a pink cheek a pin-point touch of color is all that can be used, and that the black stocking of a dancer is only one-thirty-second of an inch in length.

Charles Frohman saw the pictures Thursday night, and the remarks he made about them put into the mind of Mr. Edison another possibility.

"That settles scenery," said Mr. Frohman. "Painted trees that do not move, waves that get up a few feet and stay there, everything in scenery we simulate on our stages will have to go. When art can make us believe that we see actual living nature, the dead things of the stage must go.

"And think what can be done with this invention! For instance, Chevalier comes on the screen. The audience would get all the pantomime of his coster songs. The singing, words fitted to gestures and movements, could be done from the wings or behind the curtain. And so we could have on the stage at any time any artist, dead or alive, who ever faced Mr. Edison's invention.

"That in itself is great enough, but the possibilities of the vitascope as the successor of painted scenery are illimitable."

Mr. Edison is working hard for the absolute perfection of his machine, and at the same time is arranging for the securing of pictures the like of which, in other than inertness, the public has never seen.

He has bought, for about $5,000, two ancient, but still serviceable, locomotives and several dozen flat cars. He has built about a quarter of a mile of railroad track in a secluded spot, not far from his laboratory. In a few weeks he will start a train from each end of the track, and will run them to a crash. The engines and cars will be manned, just as trains are in active service, and all the incidents of a train wreck will be caught by machines stationed at short intervals near the track.

Machines have been sent to Rome, and in a short while the entire stage at Koster & Bial's will be occupied by a realistic representation of Pope Leo XIII. saying mass in the Sistine Chapel.

Edison's Latest Invention *The New York Times,* 26 April 1896.

MR EDISON'S INVENTION.

New York, April 24.

Mr Edison's vitascope was exhibited last night. A series of life-size figures were projected on a screen, which reproduced dances and prize-fights with equal fidelity. The splashing of waves on the seashore was also reproduced.

Mr Edison's Invention *The Glasgow Herald.* Issue 100, 25 April 1896.

THEATRE ROYAL.

TRILBY.

The most attractive programme presented at the Royal for many a week was heartily enjoyed by a large audience last evening. Two items were on the bill. The first was the Cinematographe, and the second " the success of the century "—" Trilby." The animated photographs, which are now so popular, were received with loud applause. They were fairly clear, but the vibration was, as usual, noticeable. Experiments are being made to do away with this drawback, and no doubt the pleasing pictures will eventually be improved. Perhaps the most attractive one shown was " A South-Wester at Dover." The huge waves rolling in by the Admiralty pier and breaking upon the shore made a delightful picture. The last Derby, with the victory of Persimmon, and a bout between Mace and Burke were amongst the best of the photographs. The performance of

Theatre Royal. *The Bristol Mercury and Daily Post.* Issue 15127, 3 November 1896. p. 8.

A HEAVY GALE AT BIARRITZ (Urban-Eclipse).

We have before commented upon the immense attraction which sea pieces have for moving picture audiences. The sea is popular with us all. The sea, too, has its moods, as some of the greatest of the world's painters have discovered. The moods of the sea, in fact, are as numerous as the moods of the other and smaller half of nature, the land; and we are glad to see that the makers of moving pictures are getting alive to the fact that in the moods of the sea there is a wealth—one might almost say a limitless wealth—of material for moving picture subjects. In this release Mr. Kleine has a subject entirely after both our editorial hearts. For each of us responsible for this publication has lived much by the sea, studied it and photographed it. We know something of the fascinations of the sea, of the difficulties of adequately portraying it on a sensitive surface, and the delights of looking at good sea studies when they have been obtained. In "A Heavy Gale at Biarritz" the sea is shown not in the placid aspect which it wears when seen from the deck of a smoothly moving Atlantic liner, but in its wild, stormy, tempestuous, tumultuous mood. For there are rocks at Biarritz and the sea at times breaks in upon them, angrily, lashingly and stormily. The result is that in this picture, which is a tribute to the cleverness of the operator, we have a short study of the sea in its passionate moods. The waves roll in, they break, they dash, they thunder; they create clouds of sea mist; one, indeed, could almost feel the atmosphere of the very spume which the sea forms when smashing down on a rockbound coast. For all this, then, we can see that this little picture, though only 256 feet long, will enthrall moving picture audiences as it enthralled us who have stood and watched the sea many a time and oft just in the mood as it is shown in the film. It is a very fine piece of photography, indeed, and far more worthy of careful attention than much of the trashy manufactured stuff with which, unfortunately, the moving picture screen is still burdened. We hope that the Urban-Eclipse people can be induced to give us more nature studies.

Moving Picture World (Oct-Dec 1911) *Power's Cameragraph No. 6* [advert]
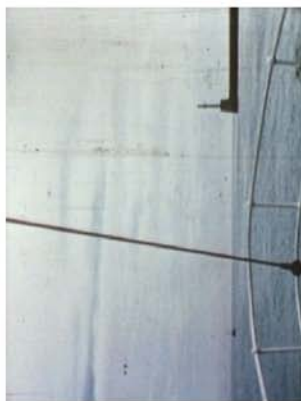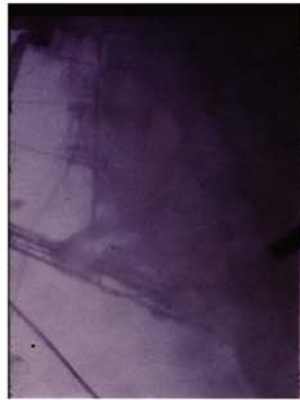p.594 Chalmers Publishing Co. New York [Internet] Available from:
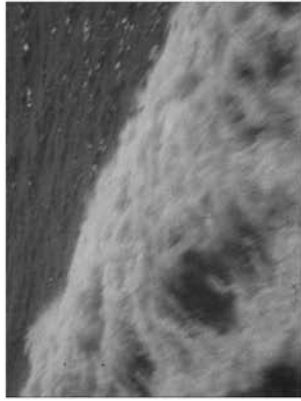http://archive.org/details/moviwor10chal

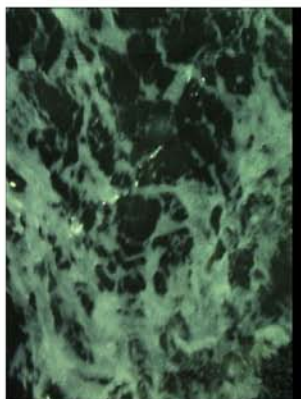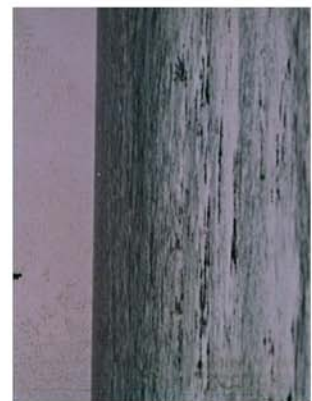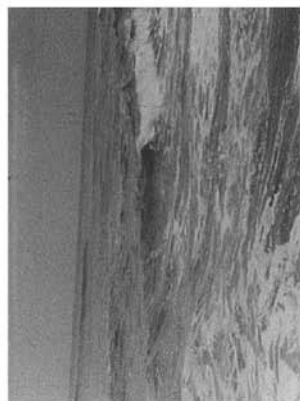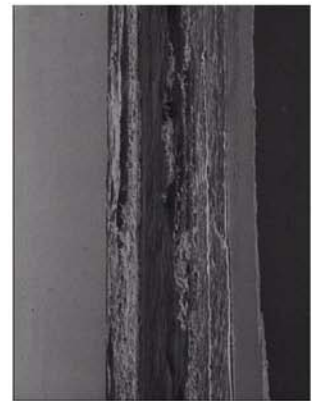**Appendix C**   **Stills from *Sea c.1897-2011* (indicating colour variation)**
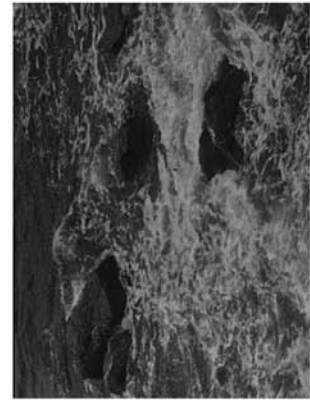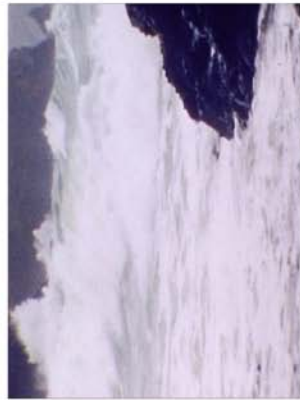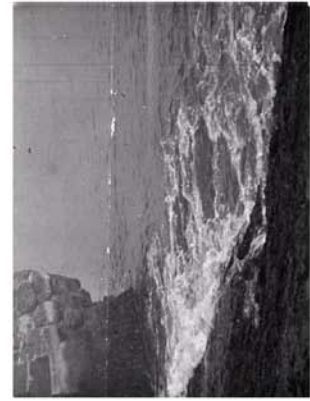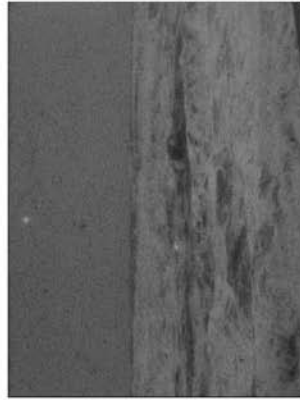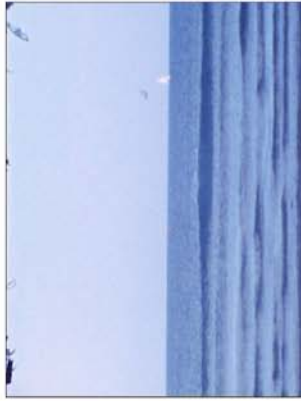
Appendix D   *Sea c.1897-2011* Source Material

Alexander, M. (1982) Iona - *Dove Across the Water.* col. sound 18 mins. Pelicula Films. Scottish Screen Archive

Barnes, B. & J. (c.1939) *Seaside and Coastal Views.* 16mm. col. silent 2 mins. 30 secs. Barnes Brothers Production South East Film Archive

Blackpool 1932. (1932) b&w silent 10 mins North Western Film Archive

Chislett, C. *Rachel Discovers the Sea.* (1939) 16mm, b&w Yorkshire Film Archive

Colley, H. (1977-78) *Shoreham Airport; Rough Sea at Seaford; Falmer Pond.* Super 8mm col. silent. 2 mins. 30 secs South East Film Archive

Craig, D. (c.1948) *Trawling in the Deep.* col. silent 37 mins. Scottish Screen Archive

David Simpson material. (1927-1938) 16mm b&w. Yorkshire Film Archive

Dr. W. Ormerod Collection (1948-1951) South West Film Archive

Edison Manufacturing Company (1897) *Surf at Monterey.* 35mm b&w silent. 25 secs. American Library of Congress U.S.A.

Edison Manufacturing Company (1900) *A Storm at Sea.* 35mm b&w silent 1 min. 17 secs. American Library of Congress U.S.A.

Edison Manufacturing Company (1904) *European Rest Cure.* 35mm b&w silent. 18 mins. American Library of Congress U.S.A.

Elder, J. C. (1944) *The Isles of Youth.* col. silent 29 mins. Scottish Screen Archive

Fishing from Fleetwood. (1965) col. silent North Western Film Archive

Glasgow Films (1966) *Hebridean Highway.* col. sound 20 mins. Scottish Screen Archive

Gormley, C. (1974) *Polar Power.* col. sound 19 mins. Tree Films Scottish Screen Archive

Hickling Collection. (c. 1940's) 16mm b&w silent. Yorkshire Film Archive

Horwich Civic Ceremony & Devon Scenes. (1959-66) col. 15 mins North Western Film Archive

Ibberson, W. *Yorkshire Beaches.* (1945) 16mm col. silent 14 mins.Yorkshire Film Archive

Isles of Scilly Collection (no date) South West Film Archive

John Hope Collection (no date) South West Film Archive

Mitchell and Kenyon (1901) *Rough Sea at Roker.* 35mm b&w silent 53 secs British Film Institute National Archive

Mitchell and Kenyon (1902) *Waves at Southport.* 35mm b&w silent 1min 34 secs. British Film Institute National Archive

MORECAMBE. (1957) col. silent 11 mins North Western Film Archive

North (Trade Films) 1986 16mm sound. North East Film Archive

Page Collection (no date) South West Film Archive

Ramsden, C. & B. *Sand in Our Hair.* (1950) 16mm. Kodachrome silent 17 mins. Yorkshire Film Archive

Richardson, G. (c.1963) *Whitley Bay.* 9.5mm North East Film Archive

Raynor Collection. (1943-4) 8mm b&w. Yorkshire Film Archive

Road to the Isles - Loch Morar. (c.1957) col. silent 13 mins. Scottish Screen Archive

Saltburn by Sea. (1961) 16mm North East Film Archive

Saltcoats Flooded. (1919) b&w silent 5 mins. Scottish Screen Archive

St Ives. (1968-9) Super 8mm col. silent 5 mins. Yorkshire Film Archive

Storms/Dawlish/1979 (1979) South West Film Archive

A Strange Catch. (1975/6) col. silent 8 mins. North Western Film Archive

Trans Atlantic Yacht Race. (1931) 16mm, b&w silent 20 mins.Yorkshire Film Archive

TT Samuel Ugelstad Trials. (1956) 16mm col. silent North East Film Archive

Wallace, M. *Scarborough Fair.* (1973) 16mm col. sound. 43 mins. Yorkshire Film Archive

Waves on a beach. (1950's) b&w 38 secs North Western Film Archive

Appendix E   Transcripts of Recorded Discussions

Part 1

Transcript of discussion following screening of *Sea c.1897-2011,* at The Poly Cinema in Falmouth on October 21 2011*.*

Five participants present, anonymised except for myself, with initials JM.

[The discussion started around initial responses].

B: I'm quite interested, I really enjoyed this aspect of it, whether it's something that I've made in my head or not, but the sort of staggered experience of where the various media, kind of, the points at which they edit, so there will be points where cine film will edit, but the sound doesn't appear to and vice versa and I quite liked that different pacing of sound and visual footage. And then subsequently I was really intrigued at the end where the visual footage is credited but not the sound specifically and then I started to wonder how much of the sound accompanies what I am seeing and how much of it is something that you have built and applied to it, applied to the footage.

JM: Yeah, I mean I think it's interesting that you think that it is just the visual that's been credited, but some of the sound ...

B: [interrupts] I think it was just because it was all film archives ... As a little coda, it was quite late on in the film where I noticed particular qualities of vinyl in it, it's probably just my ears, there was lots and lots of kind of visual indicators and stuff like ... but it was much later when there was a much more audible sense of recording media, to me anyway, which I thought was really interesting.

C: I think building on that, one of the things I noticed was a different sense of human agency or human presence in the two different media, so I got a much stronger sense of human agency in the visual aspect of it, the way maybe the camera would shake at times or the editing between scenes, whereas the sound, because it *mostly* went with what you were seeing, it had almost a feeling of being close to silence, I don't mean that in a negative way.

D: I guess in watching [there is] a similar silence, because it becomes quite meditative and I started to think about this when I started noticing more the headings, [because] the first couple I didn't really notice and I then I noticed more, and I was like oh the difference between a sky and horizon and thinking, so where is my eye actually going? Because it is, it's very relaxing, just as a thing to sit and watch and it's very beautiful, so it's interesting to think of how the headings change the way that you look and the experience of that ...

A: I was thinking about that as well, because I found, especially when you bought in the skies, because one of the first shots was actually mostly of the sea and I was like, oh sea and sky, that's a really interesting idea, because it was reflecting the sky and obviously there is so much of the light and it's like, where did the sky begin and that's really interesting, but I did find myself maybe going off at a tangent, words as framing, like you were saying, pointing your attention towards something, because I found in the horizons one, I was ... maybe it was just because of the movement, the waves coming towards me, I found myself focussing on the waves, so it was really interesting, that really caught my attention, how do you decide if this is a horizon, if this is waves, if this is coast? I was ... that was a really hard task.. I found myself quite seasick, especially in the waves bit, I couldn't look at bits.

D: I didn't, though I normally do get really motion sick, I guess it depends on what you have eaten ...

B: I thought the sea section was particularly interesting, for me, not only because you have this very heavy presence of media, you also have a much less tangible, or much more tangible, I'm not sure, sense of location; in terms of the only way to get that footage is to be on a boat, so you constantly have the bow or the stern of the boat in shot, and you get a much greater sense of being on or being in and but also that this is only possible through this imposition of boat or ship into sea ...

D: Were they purposefully quite choppy, because I kept thinking it must be hard being at sea when you are being tossed about and there were no calm shots, I was just wondering about your editing? How did you choose things? The really rolling waves and the camera following it along ...

B: There were small ones as well, I liked the absence of that hackneyed sense of drama in sea footage where everything slows, I liked the little ripply ones ...

D: Were there criteria for that, verbalised criteria?

JM: Well, did you think there might have been?

D: I remember some of your earlier things, papers you have given ...

JM: I think that's perfectly reasonable to ask, and I'd be happy to answer that, but maybe not right now, because I don't want to focus on how I have done it.

D: Fair enough.

A: I was interested in questions of that, I mean you probably aren't thinking in terms of narrative at all, I was thinking, what is the structuring or framing principles ...

JM: I am interested to know whether people get a sense of that ...

D: Of narrative?

JM: Or of shape, or ...

E: I felt differently when you were looking straight on at the waves and it was close-cropped as opposed to side-on. Close cropped up, even when there isn't a horizon you get different things going on in your head, when it is close cropped it's that frame theory thing. You are almost wondering more about what's happening outside of the frame than you are inside the frame. Also with the close-cropped thing you get into the whole repetition thing, that's quite an interesting field to get into ...

JM: Why do you think that is then, is that because there is no other means of locating ...

E: The side angle you have got that field of vision, in a sense when it is close cropped up you are wondering what's that thing outside... there is a Kiroustami film, I can't remember what it is called, but it is just a little bit of beach, 20 metres of beach, and just waves, there is nothing there virtually and nothing happens, apart from people walk in front of the camera and some geese, but you get totally spellbound about what might be happening outside. I think that's the case ... so in a sense I always prefer the camera to be still rather than moving.

JM: What about when it was from a boat, because it's still and moving at the same time?

E: Yeah, when you are looking at the sea, not on the sea, once you are on the sea everything is moving and it brings home that point. ...

D: That reminds me ... the sense of time that you get when you are watching it, because I started ... imagining it as starting from older footage to newer footage and then realised that actually, you often can't tell, and you start thinking about it and there's this timeless [quality]..., and when stronger colours come in, you feel 'oh modernity' and its really funny the way you respond, it's not really aesthetic it's more temporal but there is a sense of timelessness about it because suddenly all those differences just move in with the movement of the waves ...

E: Also the horizon thing as well, horizon is so important, how we frame things up, when we look at things anyway, when there isn't a horizon as there

quite often isn't, what's missing - normally you look up and orient yourself and when that's not there .. you are orienting yourself by other means ...

C: If the colour film is somehow indicative of *now*, that coincided with the ending of [the] film, for me anyway, it seems there is more of an emphasis on colour at the end with the sunsets, or different colours, there were more orangey reddy colours that weren't there in the earlier parts of the film, and they came together more towards the end ...

B: The text of the film in terms of the literal text, takes you out, in a chronological order, so you are coast, then sea, then horizon, so as, that immediately by having those words in that order, puts you in a sense of going out, even though visually you are not necessarily because the horizon is from the coast, but just, there is that kind of furtherness, or kind of a chronology that goes along ... if that were to tally with the age of media, then it would ... and the length of day as well the sunset etc ...

A: I was wondering and it only presented itself to me as an option when we went into the seas ... the seas were the second one? [JM agrees] I felt then, whether intended or not, there was a stronger sense of continuity then between shots, so I felt like a lot of similar shots had been cut together so in a sort of a timeless way, like you were saying, you were spanning different times, but you get the continuity, so that you are always on a boat, on a sea no matter where you are or what time it is, and that was really interesting and that made me think back to the coast [first section of the work], because I had thought why aren't we being told where these coasts are, every coast isn't the same coast! And then actually I thought it's all coastline and if you were doing what I thought was going on in the seas bit, I was really interested by that, that idea of linking, of making your own coastline, through cutting and pasting, of making your own landscape, literally, by cutting and pasting various film things together. Then the words, though they are good guiding, almost began to get in the way because I was really interested in that movement from coast to sea to wave, there might be another way of framing or bringing them together without the cutting off, though as viewers you might want a bit of a break sometimes ...

E: With the old film, was there visual sound with some of the old film?

JM: Yes, some of the film from the 50's and 70's had some sound which I used but none of it was synch sound ...

E: It's like in photography, the picture is something that *has been*, if you've got old film, I can see how you can look at it in those terms as well, then if you are then adding a new sound on top, that interferes with that ...

C: It did at times, and it didn't. I think we are so used to having, if you watch television or film now, the sound editing is often very precise and the use of foley within sound editing so that the sound is often more real than it would

be *for real* and there was a lack of that at times, but sometimes the sound and the visuals seemed to coincide.

JM: I am happy to hear that, because that was intentional, there was a bit of foley in it as well.

C: There were times, particularly when there was a large wave and it was spattering onto the rock quite close to where the camera was, where I expected to almost hear that almost individual splattering of water and it wasn't there.

JM: In your mind do you make that sound?

C: Yeah, not make but anticipate.

E: To me it's almost better if the sound is not there, in some ways, in a sense it's so fundamental, it's almost more interesting not to have the sound sometimes.

JM: It's a very different piece then ...

A: The most interesting shots to me or sequences of shots, were when I felt, in the place of the camera person, most vulnerable. So when you are at sea, or in that cave for example, so I thought how can you get out, how can they get the camera out after, maybe the sea was going out rather than coming in

JM: I think that was shot in Kynance Cove so it's like it was through something, and as high contrast footage so it does give you the sense of a cave ...

A: And similarly, what seemed linked in my mind, the grainier it got and the more yellowy it got, and the darker it got the more interested I was in it ...

JM: How did that affect your sense of space or location?

A: It felt a bit smothering, because you can't really see that well, but I kind of enjoyed that as well, it's a sort of smothering but kind of cosy, that sounds really weird, I quite liked it ...

E: The earlier shots when you got a wild sea, I have been looking at wildness and the traumatic, trauma and how that can undermine certain... well in psycho theory the idea of the real, and how you encounter that in the trauma of the sea when it is wild. But now people are saying that you get that in every picture and if you look at any picture or bit of film you can see this element coming out, it's hard to explain, but I was very familiar with ... that rings lots of bells ... as a lot of the stuff I am working on is to do with the sea and coastal pictures.

JM: Even the colour? As you have been working with mainly black and white? Even the colour seemed familiar did it?

E: Yes absolutely because some of the archive is really old stuff and looked like frozen bits of your stuff. I have been looking at repetition recently, at the linkage between repetition and representation, it's very interesting ...

B: Picking up on photography, as E was just saying, the Barthesian lens ... you can look at that, and the idea that we don't see the photograph, we don't see photography, we see its subject. I have been thinking a lot about this lately in terms of recording, the idea that what I have just seen - because of its nature and because of the way it is edited, from found footage or archive footage - it forces you to deal with the cinematography of it rather than just .. so I find myself looking at the grains and scratches and flicks as much as I am looking at the foam and rocks and seabirds, and that's partly because of my own current obsession and partly because I am being forced to by of the nature of the way that this is built and by the nature of its presentation which is something that I found really successful about it, is to have the means of something's making, made so prominent, that's really interesting to me.

E: Also you encapsulated the order chaos, the orderliness of waves, and as they splosh out, you get this total chaos. In your film first you've got the chaotic wild seas bits and then sunsets towards the end and then you get into the whole nature thing, you can talk about nature as being totally contingent and chaotic but that the way that we try to order it and make sense of it [pause] But you can't do that because nature is crazy and you can't order it but we really try to. People say that when you stare at the sea that again is something that we are doing ...

A: But then B's observation, I was really intrigued with the graininess as well and at one stage I felt I was looking at a slide show of the film, the film itself, the texture of the film imposed over images of the sea, you know when you adjust your gaze so that you are looking at the screen rather than what is beyond the screen I found myself very much doing that. So in response to what you were just saying [E] about chaos and order, if filming is a way of ordering it, when you see the film disintegrating, it's completely thwarting that possibility or illusion, exploding that illusion, because film has its own decay.

JM: But you thought that at times that was almost on top of the imagery, the decay?

A: Yeah.

B: There was one bit near the beginning where I was wondering whether there was a certain kind of texture that I was looking at, was part of the film or whether it was the actual texture of the physical screen over there ...

JM: Which bit was that?

B: Right near the beginning where there is a heavily ...I want to say like a tartan, but sort of vertical and lateral lines that seem to be really present but in a way that isn't part of the flicker of cine film. I wanted to go and touch it, is that the actual white rectangle over there or is it part of the projection ...

C: I think that at the same time that you say that the making of it is obvious, I think it also has a certain frameless quality as well ...

B: [interrupts] I don't mean the making of it but the *means* of its making, as material ...

C: I dunno, just a feeling of a certain framlessness, because it's moving between these different films made at different times by different people, ... if you are watching a movie kind of film, the frame disappears because you think you are there, and there was no sense of that, but also there wasn't a sense of there being one frame, that you were constantly looking through either, it was always shifting ...

E: I like the close-cropped stuff ... because ... if you go to the seaside, you immediately postcard it don't you, you look for the postcard, you kind of frame it up, some people say that is an entrapment, that ideology of the postcard frame, so when you are forced to not look at it in that way, it gives you another way of looking at stuff ... it's good.

JM: It's quite a mixture of amateur footage, some of its home movies, I don't know whether it entered your heads ...

C: I did wonder, I was wondering quite often who made this and why, especially with the ship ...

B: There was one boat and I was thinking is it some kind of weather boat and there was one which was clearly a trawler and one where you could see the net in the water and one where you are looking at the bow, it could be a trawler it could be meteorological, it could be a storm seeking ...

D: That section does make it quite a strong narrative, because you come out of that into the horizons and the skies, feeling like it's going to be alright.

A: I almost didn't like that, in a way, I felt that it let it down a little bit, I felt that there was more going on than that ending on skies or horizons.

D: What do you mean 'more going on'?

A: Because that feeds into the whole and they vanished off into the sunset and lived happily ever after type of narrative.

JM: It finishes it too much?

A: I felt it was a more complex structure.

D: It depends, if it is being played in a gallery on a loop, then I suppose that's a different kind of narrative, or isn't a narrative.

JM: Exactly, to what extent does the space in which you are in affect how you look at this, as you say, we are in a cinema in racked seating, so you can sit back ... how do you think that would affect it, if it was in a gallery on a loop.

D: Well, if you come in on what we think of as the end, then you either have less of a sense of a narrative or a completely inside out sense of narrative or you take it more as case studies in images or something like that.

JM: I was interested in something that doesn't happen very often now, which is kind of trapping you here and making you watch something from start to finish, because it's to do with that attention thing ...

C: It's quite strange in a way because before I came in here I was out there watching the sea, the real thing as it were, it kind of invokes that notion of temporality a little bit more I think ...

B: Interesting that it was quite quiet for a cinema, the volume of the audio was lower than I would expect in a room like this.

JM: In cinemas, the audio is quite compressed and high volume, you don't get much relief from it ...

C: There wasn't typically cinematic spatialization of the sound I don't think.

B: No, it didn't feel *mastered* ...

C: Especially with the wind sound when we were on the boat, it didn't feel like it was moving ...

B: But it did feel quite skilfully recorded, it's quite hard to get that kind of whistle that's really hard ...

JM: That was off one of the films ... I made everything mono, to me it didn't work stereo so I made it mono so it came from the screen rather than spatializing the cinema ...

C: Yeah, that sense of being on the boat, that feeling which made people feel seasick, wasn't quite echoed (to use a loaded term) wasn't echoed in the sound, there wasn't much sense of depth ...

[Discussion goes off topic and ends.]

Part 2

Transcript of discussion following visit to *Sea breaking* installation, Falmouth Wharves, September 4 2012.

There were four participants for the discussion and a fifth participant was recorded separately the same day (see below). Participants are anonymised again (but not using the same letters) as for Appendix 2. The discussion started with initial responses.

A: I think my very first response was that of extreme difficulty with the rate of change when I walked in and I realised later that it was changing all the time and I wasn't just getting used to it, ... but when I walked in I was completely bewildered, in contrast with the way I saw it last time [he saw the piece in development] it took me five minutes just to figure out where to be looking and how to absorb it ...

B: I came in when they were all lit and they were all lit for a long time and so when they started changing I thought oh is that supposed to happen? And then realised it was random, but at first I was thinking because it's cuts of film and its of cuts of time, so the shutters were really disorientating and a bit upsetting because it was so calm and then quite a loud noise and a change. That started me thinking about where it had come from and how it had got here and that sort of thing, so it started off seeming quite simple, but the shutters made me think about it more deeply.

C: The first thing that hit me when I came in was the sound actually, more than anything, you can hear the sound before you even come round to see ... I felt that it's quite bewildering when you come in, you can see the screen but you can't see anything else, you can just hear all this rattling, but you don't know where the rattling is coming from and whether you are going to walk into some machine and because it somehow has a real factory sort of sound to it, it sounds like a machine that might have some raw edges that you might walk into. I am sure that wouldn't happen, but it was before I did the rational part ... and disorientation, I was not quite sure where I was. I suppose because when I came in the central one didn't come on for ages and I wondered whether it was broken, maybe that one wasn't working. It felt that the screens that were working, in my mind, felt a lot more stable actually than the rest of what was going on around it, weirdly.

B: I could probably have sat and watched it for half an hour.

C: Also when I came I thought, ok we have got four, five lots of sea and I had to really take the time to settle into it before I really began to enjoy it and also once I could see a bit more in terms of what was happening in the room, I could see the film going round on the loop and it was quite unsettling this clacking noise of the shutter coming down, kind of guilloteen-esque. It was

throwing back to that sense of taking a picture on a proper old camera and you get the shutter coming across.

JM: Somebody said slide projector to me, it's got that clunk.

B: But because normally you take the photo or move the slide on but here you are not in control of it, it just happens ...

JM: Did you start to get absorbed into the screens themselves, the materiality of what you were looking at on those screens, the differences between them and so on?

C: Once I had calmed down a little bit ... by the end, I decided they were the same bit of sea that were filmed at different stages and roughly which was newest to oldest, that took me quite a lot of time. To begin with I didn't know anything about it obviously, I just thought it was five random bits of sea, randomly showing ...

B: Are they all the same bit of sea?

JM: They are.

B: I didn't pick up on that. But the one on the end, [she means the super 8mm screen] I was so transfixed by that one, I was obsessed by that by the end. I don't know whether it's because the colours are so intense and bright ... but when are the different bits of footage from?

JM: All on the same day.

C: Really? Just filmed with different ...

JM: Different cameras ...

C: Amazing. That's what you [to another person] were saying, is it age or is it the equipment she has done it on.

D: I quite like the different repetition, you get the repetition of what the sea does anyway, because it's so tight into it you don't get the sense of the sea going in and out, there is a splish splosh though, and then there is the repetition of the film spools. Once you get into that you want to know what's going on, what's it about and then it's hard to tell as there isn't much information, there are no reference points ...

JM: There is both a lot of information and very little at the same time.

A: There was one lovely section I managed to catch when three screens all had what felt like the same wave, at very slightly different rates. I seemed to

catch it at that perfect a moment where for about twenty seconds it was all the same thing ...

JM: There is the possibility that that might happen.

B: Is it all at the same time? So they are just in a row?

A: Are they playing back at the same rate? Because I felt like some of them were slower.

C: I felt like that.

JM: They should be, but they are not at the same rate per second ... but in terms of matching the time. The super 8 is a different number of frames per second, 18fps, to the 16mm which is 24fps and the video is 25fps, you would only gather that from the flicker, but you are thinking of the wave itself?

A: I am. Are they all focused on the front of the waves?

JM: It was a fairly bright day so there was quite a depth of field.

C: There is this fragment from a poet called Thomas A Clarke which says something like 'you have to walk all the way around it to see it and you have to stay with it to know it' and that's something that just came to mind in terms of [her own work], but I had a very similar experience with this actually, I came in and now I can see there was so much information that I couldn't actually take it in. Because I came in and my first conscious thought was okay I've seen it now, I don't really understand but there is lots of sea. Obviously it took me a long time to match the similarities and the narratives and also to be brave enough to walk around behind the screens as well, and to see the screens from different angles. That was really interesting because then you get all the different images cross cutting and interrupting each others' visual field and if you see them on the side something funny happens with the colour, it goes a kind of purpley.

JM: Yes, that's something that happens with the black boards ...

A: What narratives?

JM: Yes, what narratives?

C: Well for example there are two screens, these two [points] where at one point it seemed to be that the waves were following similar patterns which was why I began to think it must be the same place, it must be the same patch of sea, because there was a piece of scum forming in both of them that was very similar and you see the waves breaking at similar angles according to the screen, that's what I meant by narratives.

JM: I have been quite influenced by Italo Calvino's Mr Palomar, a short section in the book, Mr Palomar, he's on the beach, reading a wave. A man just standing on a beach trying to see the beginning and end of a wave. He doesn't use metaphor at all so it comes across as quite dry. I was quite taken with the idea of an impossibility of seeing the beginning and the end of something. I don't know whether that has a bearing on the narrative aspect or not, but to me there isn't any narrative.

B: It's like breathing and meditation, when you follow your breath and you try to see where it starts and where it ends and then there is that middle bit where there are neither of them ... it's very like waves actually.

D: What about the actual positioning of the screens, did that take a lot of jiggling?

JM: Yes, because I didn't want them to overlap too much, but not have too big gaps and there is a spot, a sweet spot, where you can see them all at once. It is quite a sculptural piece that you have to move around, I have got so used to it, to the gloom.

B: How come you use black boards?

JM: Because then they disappear when the image isn't there, whereas when you have whiteboards they don't. That's the reason for the external shutters, I wanted to have sections where there weren't images, so I was going to cut in black, either physically in the film or digitally or whatever, but of course you don't get black projected, it's a sort of grey really. I wanted them to disappear and the only way to do that was to have external shutters. There are some refinements to be made.

B: Do you not like the sound?

JM: I do, but I think they could be a little less rattley and they are something that I have been working with someone else who made them for me and I didn't give him much time, so really they could be refined. As you say it is quite a striking noise and I wasn't quite sure how that sound would affect people.

D: It's also a noise, years gone by you would associate with going to the cinema ...

JM: Yes, it's all packed away now, hidden away ...

B: I still like how they emphasise when things are cut off, it's not a meditative piece in that you are watching one undisturbed thing, it does move around quite a lot. I like that it is exaggerated in a way ...

JM: The reason that the one in the middle was off so much, is that the thing that is programming it got stuck on that bit so I had to physically switch the programme on and off, in order to get that to go on and off. So it wasn't quite working as it should, as you noticed ...

A: The shutters are really critical to my enjoyment of the piece. When I came in, I had no sense of how large the space was, so I had an immediate precedent effect of the audio and the visual, so the clicking was immediately coming from the screens and then when I grasped the size of the room a little bit, I started to figure out that the echo meant it was further away and it was not coming from the screen, it was coming from a machine. The complete blackout meant you are absolutely exploring the space in very different configurations, so when these two cut out the space is wider and you get a different perception of the image and then when it's just those, you are sucked in, the space changes again and you have a complete disconnect between what you are hearing and what you are seeing at that point to me ...

C: It was nice that it disappeared, as I said I didn't even realise there was a middle screen for a while. You've got so much to take in when you do come in, it's quite good that it takes a while to settle in to that.

JM: Yes, you have to give it time. So do you think you become more aware of you looking and listening?

C: I became more aware of everything a little bit, because of the black, because the black isn't just about your sight, because I was very concerned about my body and bashing into something or falling over.

D: When you say are you more aware of your looking is that your concern?

JM: Partly, but I am curious about that, it was mentioned by somebody yesterday ... you've pointed out, because of the withdrawal of sensory information ... you have an oversupply of some sensory information like the sound and undersupply of the space that you are in ... I wondered whether that might make you more sensitive to that.

C: It probably is but for me it is not working on a conscious level really, that sense of orientating yourself and you are principally orientating yourself through sound and vision but because you are deprived of a lot of the vision, it kind of feels that you are not using those senses.

D: When you think we are all stepping out of that social media world, you come to a place like this, everything stripped away, that's where you go to rediscover how to look at things...

A: It's probably really strange hearing about it being disorientating because you [to me] will never really experience that. As soon as I came in again, because I knew it, it was totally different.

C: It's funny because the more familiar you become there is a greater sense of permission. I suppose it's power how you feel in control of your body, confident in that space and how it's going to react or interact, then you can move around and be a bit braver with what's going on. But in the beginning I just stood here and just watched it, and thought ok its viewing that's what I am supposed to be doing and was quite narrow about it ...

D: Also, [in the darkness] it's a non perspectival space, with the history of art, pre-perspectival looking was very sophisticated, but things became so configured with perspective ... but maybe there is another way to reawaken the old ways of looking at stuff, but not to do with vanishing point and so on.

B: It's funny because there is no perspective that feels that you can see all of them in a sort of optical way, I was moving back and forth trying to get to the middle as if they were symmetrical ...

JM: There is one point where there aren't any gaps, so that it is possible to see it as one thing, but I am not sure that that happens actually ...

A: I found it somewhere around about there, round about that height [pointing]...

JM: You are one of the few people who crouched ....

A: Talking about looking, this one here is my favourite [super 8mm] because it is extremely abstract and you see a very different form of the waves and the ocean, in that one you are distracted by all the detail, the individual ripples, in this one it becomes much more of a ... almost a sculptural thing ...

C: It felt like that was slower [pointing to Super 8mm], the older the equipment the slower the image was and the less information I was getting, in terms of pixelation or whatever you would call it. I don't really like it when I can see absolutely everything that is going on, because for me if it's that close to how I normally see I would rather just see with my own eyes, actually being there. Also you get that sense of nostalgia, of it being kind of older, of a different time, but it's interesting that it's not of a different time, but it's just that equipment that does that ...

JM: What do you think made you read it of a different time? Do you think that is a cultural thing? You can get super 8 effects, grainy effects and they are used in a fairly crude way usually to signify this was before ...

C: I think even if you watch old films, the people speak differently, dress differently because it's further away somehow it's safer, you can romanticise it, it feels materially softer, the image ...

JM: So the softness gives it a sort of distance. There is a harshness in the High Definition one. The middle one is a VHS tape, I like it.

C: Is it? I have to say that I thought in my dating of it, the small one was the oldest (super 8) then this one (16mm) and then out of the ones in the centre, I had the VHS one as the newest, and then it was between the one on either side for the next ...

A: I have to say the same, I thought the central one was the newest ... I didn't see the HD-ness at all.

C: I was probably dating it according to the light, because for me it seemed like that was the darkest one or that was the hardest to see and that one had black flecks, [16mm] then those two on either side and the one in the middle was the brightest.

JM: It's a bit over-cooked, being VHS is does not have a great range and on that day the white of the waves was really bright, none of the cameras could deal with it that well. It shows more on the VHS.

C: The other thing about grading it from darkest to brightest, is somehow I think I have made an association between memory, seeing it in your mind, and the idea that if you are seeing it immediately, your newest memory or your most recent experience is the clearest to you, and so that's how I arrived at that dating, the darker something is, the older something is and the further away in the past and the less you can see it metaphorically, the less you can remember it. The other thing that I was wondering was whether the actual film, because I thought it was literally the film, the physical things were older, whether the material itself had decayed.

JM: Only in the sense that it's been going round and round and it gathers scratches and damage and so on. The scratches are showing on the 16mm. I haven't added anything though.

C: I really liked that noise [film projector noise] and when your eyes adjusted, that you could actually physically see the film going around on that loop, that was really good. Because it does feel like you are in the mind of the camera, because you are walking between them and they [the loops] are in front of you. Which is really interesting because you are in some sense inhabiting that camera that is your vision.

Transcription of discussion with one participant September 4 2012

We began by discussing the external shutters.

JM: What's fascinating to me, is that issue of the control being taken away from you, there is an unpredictability there for me

E: Yes I think that's quite a potent thing, when you go and you realise there is something removing what you are trying to look at and it's a non negotiable thing, because it's a machine, as soon as you realise that it's a machine ... but there is a sort of an echo of a slide projector, sonically as well as with the thing ...

JM: Yes it's that thud down. The sound that it introduces is [a surprise to me]

E: The sound is fantastic. It was forty seconds of being in there that I started to look and not just listen .... last time [the piece in development called Travelling Wave] the sound was a really big thing ...

JM: Yes I wasn't satisfied with it ... it was in development and I figured out why I wasn't satisfied – I'm happy now.

E: That feels considerably more finished to the last one, the arrangement of the screens is much more successful, the line was interesting, but the differences are so much more pronounced now. The second screen in from the right, which I guess is perhaps digital, but certainly the most modern [in the previous development version] that almost bothered me, it was too clear, its that weird transparency thing, this is mediatized to the point where I can't ... I am aware of the media, but it looks too real.

JM: That is the point of the turning on and off, if they are all on at once, you get drawn by those things and the little one [super 8mm] gets really lost and that was the reason for having them disappear in the darkness, they are projected on black, although I have got little problems with spillage which I am trying to solve. It's far more successful for me, there is a little bit of magic where it just seems to float and you are not quite sure where the screen is and what it is, and it is much more spatial.

E: Do you feel like there is a dislocation between the machines projecting and the sound and the image?

JM: There is, you have to work at what the sounds are and what's making them, you have to give it some thought. So I think none of the media really dominates, no single thing dominates and there is the opportunity, not to do a didactic comparison, but a bit more inquisitive somehow, whereas I felt in the studio [the development version] it was just a bit didactic.

E: There was a strong sense of chronology in the studio, [development version] there is this and then there was this and it sort of modernises as it goes across, which was good, I did like that about it. I remember being perplexed by one of the other reactions which was *this was very layered,* whereas actually I was *this is very succinct.* This [Sea breaking] is more fluid as a piece.

JM: Also you have the opportunity to move around and place yourself in relation to it which I think is really important, because you have not only got the gaps in the timing of the things but you have got the gaps between the screens as well.

E: And you can go quite far forward without interrupting the projections ... I think there is another thing in terms of your work on apperception, there is a sense of, and this is a taste thing, I suppose, I really enjoy instances where the moving image becomes painterly and I feel that quite strongly in this piece. The image becomes something that you look around, rather that look at, it becomes painterly in that fashion ... it happens quite rarely and I remember the last time it happened to me it was a film that confused me, I was somehow encouraged to look all over the screen rather than at this focal point of action, which in cinematic terms you are encouraged to do, but it was nice to treat the entire screen as a thing. That was happening in there, [the installation] I suppose in that sense of apperception, the levels to which you are aware of what you are perceiving, or how you are perceiving. In terms of looking at what is nominally cinematic, that's quite unusual, at least from my position as a viewer, normally I am quite happy to just glare at something and be given narrative rather than have to look around in a more abstract and visual fashion.

[Discussion ends]