Figuring Space

Considering the figure in the construction of space as materialist film.

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ABSTRACT

*Figuring Space; considering the figure in the construction of space in materialist film* is an analysis of film space that uses either the image of a figure or the actual figure of the viewer in its construction. The thesis focuses on particular screen works of William Raban, Guy Sherwin, Malcolm Le Grice, Chris Welsby, Nicky Hamlyn, Peter Gidal (all members of the London Filmmakers’ Cooperative) and the Canadian artist Michael Snow. It discusses the works in relation to the basic materials of time, light and sound found in film and video. The thesis looks at the way the film frame was implemented in the work of these artists to challenge preconceived notions of film space. It also highlights the uncertainty of spatial relativity within the screen image once the techniques imposed by the artist undermine previous determinations of positions in space. The frame provides necessary elements with which a reading of a pictorial space can be made. In addition, with some of the works discussed, the frame defines an exterior screen space that at times questions the boundaries between on-screen and off-screen, and fictive space and real space. While in other works that are addressed, binaries exist within which the boundaries of a picture plane are utilized to determine an object’s spatial relativity, which in turn questions the relativity of those boundaries that determine it. The frame that previously confirmed the illusions of space within the pictorial plane could no longer be prescribed as definitive. Calculations of the film space would become dependent upon a point of origin that is situated within actual time and space at the position of the viewer. The figure of paramount importance, when considering the constructs of space within materialist film, is that of the viewer.
Introduction

By the late 1960’s the experimental film collective London Filmmakers’ Cooperative had acknowledged that certain figurative images were ‘locked into a signification system so ideologically over-determined that no other kind of operation affecting the editing, zooming, focusing, camerawork, subject-position, in the audience, off-screen space, or sound, could “subvert” it’.¹ They sought to explore a form of film that would leave the sign naked of signification. Peter Gidal clarifies this:

A denial of the process and function of problematizing significatory objects in film leads to an abstract, formal practice that is not linked to questions of representation. Thereby we would be left simply with a suppression and repression of the problematics of meaning in cinema.²

The representational qualities of a pictorial object within film space were not denounced by the members of the London Filmmakers’ Cooperative. However, instead of presenting the representational image as the sole provider of narrative in film, the material aspects of film and the processes of ‘making’ became the ‘subject’ of the Cooperative’s works.

Filmmakers such as William Raban, Guy Sherwin, Malcolm Le Grice, Chris Welsby, Nicky Hamlyn, Peter Gidal, and (in addition to these London Filmmakers’ Cooperative members) the Canadian artist Michael Snow, would implicate the figure, whether it be fictive or actual, as a material component within the construction of a film. When the arrival of a performer is given in Snow’s films, or we view Fergus Early (in Raban’s Fergus Walking (1978)) walking down a street of dilapidated buildings, their introduction into the schema does not exist as an independent narrative form separate from the material aspects of the work. They are intricately linked with all material components of the work. Each image of a figure can be read as a material of the medium thus stepping beyond the metaphorical and social implications contributed by a textual reading of the image.

¹ GIDAL Peter, Materialist Film, Routledge, London, 1989, page 47.
The experimental filmmakers covered by this thesis presented a film-based praxis that defined the material of their medium as the prioritized narrative. They used the image of the figure in film to initiate an alternative method of reading to that found in mainstream commercial cinema. These artists were not concerned with making film for entertainment as is found with mainstream cinema, they made work that was specifically intended for viewing by their peer group – a prerequisite for viewing the work was an understanding of the film process. This thesis seeks to explore the implications of the representational figure within the screen image and the role that the actual figure of the viewer plays within the construction of film space. Critical analysis often attributes the figure with cultural codifications that situates it within a discourse that follows gender and social implications. These are not primary concerns of the following argument. It focuses on the formal qualities found when an image of the figure, or an inference to a figure, is used to describe film space. It also brings into the discussion the idea of the viewer as an important component in the construction of film space. Their physical positioning in relation to the film image and the projection screen highlight the necessity to include the actual as well as the fictive in the consideration of the materialist film space.

Chapter One explores the role that framing devices and techniques play in the construction of the on and off screen space. It discusses particular screen works that bring attention to the area that existed behind the camera, thus initiating a renegotiation of the position of the viewer. Also investigated in this chapter is the way in which the film frame is used to determine object positionings within the pictorial plane, and the direction of travel of an object through space. Film works produced by Michael Snow, William Raban, Nicky Hamlyn, and Guy Sherwin indicate that the frame has the ability to discuss a film space that is often overlooked in mainstream cinema. They include the actual space in which the viewer is situated. In addition to this, Sherwin extends the conceptual approach by including the passing of time in both *Two Portraits* (2001) and *Man With Mirror* (1976-2003).

The material element of time is one of the fundamental aspects of all screen-based practice. Time predisposes the constructs of space, and vice versa. Neither can exist without the other. Notation of the passing of time is given by the systematic placements of events
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and objects in space, thus providing an opportunity for a structural coding to emerge. It is in
the editing process that codifications of time can be manipulated to permit a discussion of
space that questions traditional structures. Chapter Two specifically addresses the editing
techniques used by Chris Welsby, Raban, Malcolm Le Grice, Snow and myself. Its primary
concerns are the physical optics associated with the act of viewing and the way that
perceptions of space are altered once the neural codings in the eye are undermined by the
editing employed by the artist.

While each of the works discussed in Chapter Two use intricate methods to determine
the editing structure, it is impossible within the limitations of the chapter to provide an
extensive investigation. It was decided that in order to provide a cohesive discussion the
chapter would focus on the physical perception of the moving image, a perception that
relies on the continuity of a succession of still images. The physical processes used in
viewing film and video separates screen praxis from the traditional art practices of painting,
sculpture, printmaking and drawing. Film and video projection work relies on the
immediacy of the physical experience at the time of the event for it to be interpreted or
understood. Unlike the traditional practices, it cannot easily be reproduced in a pictorial
textbook form.

It is possible for the filmmaker to undermine any determinations of space in a film by
manipulating visual perceptions with the editing techniques employed. One particular
method used in editing is quick successive changes of colour from one film frame to
another. Depending upon the length of duration of each colour, after-effects that are a
negative impression of the former colour occur causing the appearance of the size and
position of the image of the object to alter. This technique is used in Michael Snow’s
Wavelength (1967) and Malcolm Le Grice’s Berlin Horse (1970). By employing it, both
films undermine the ability of the frame to provide a stable point of reference for
determining the position of an object within the pictorial space of the screen.

Chapter Three focuses its attention on sound, considering it as a material of the film and
video mediums. Sound has been predominately connected to the image in mainstream and
commercial work, in doing this there is a tendency for the image to become saturated with a
meaning that would not have existed if the two were presented as independent components. The screen pieces in discussion for this chapter sought to break the literal connections between sound and image. While all but one of the works uses an audio that is loosely connected to the visuals, each addresses sound and imagery as two distinct separate components of the medium. These works provide consideration for a film space constructed differently to that produced by the visuals.

Sound has the ability to describe geographical space. This happens when relative points in time and positions in location are provided by the occurrence and/or reoccurrence of sound. Sherwin’s *Under the Freeway* (1995) and *Filter Beds* (1998) and Snow’s *Prelude* (2000) use sound to indicate directions of left and right relative to the position of the viewer. Both artists use the audio to counteract the constructs of space found in the visuals, this allows them to provide intricate layers of space. Sound also exists within a temporal structure, a space of time. As a result, the audio can be used to situate positions within the temporal framework of a film or video piece. Chapter Three explores the way that audio is used to determine the past and present tense in Malcolm Le Grice’s *Blackbird Descending (Tense Alignment)* (1977). It investigates the way in which the sequence of events filmed, are reordered and the way that sound is implicated to undermine the perception of the events’ temporal order.

The position of a sound within the temporal order provides a point of reference for subsequent sounds. These references differ in accordance with the process of cognizance initiated by the viewer. In order to comprehend what is heard, the viewer relies upon the recognition and familiarity of the sound. Once an unidentifiable sound has been heard, at each repeat it is recognized in reference to its previous occurrence. And for those sounds that only occur once, their placement within the metrical structure of time will be made in reference to the beginning and end of the work. It is almost impossible to produce an audio that does not exist as or within a recognizable representation, as Le Grice’s *Berlin Horse*, Snow’s *Rameau’s Nephew by Diderot (thanx to Denis Young) by Wilma Schoen* (1973) and my work *card 4* (2003) shows. The exception to this, however, is the soundtrack of *Wavelength.*
The works discussed in the following chapters are predominately film, the exception being the discussion on the video work of my own. By focusing mainly on the representation of space in the screen image, the editing sequences that employed specific protocols in both pre and post-production and sound compositions, the distinction between film and video is absent. This is not to say that all aspects of both mediums are interchangeable. There are fundamental differences between film and video. However, bearing in mind that the thesis does not distinguish between the mediums of film and video, any terminology within the body of it that incorporates the word film, except when it refers to the actual material of the film medium, is using it as a generic term in reference to a screen practice. Instead of focusing on the differences between the two mediums, this thesis concentrates on the formal qualities of a visual art practice based in time.

3 The video medium comprises of two formats, digital and analog, providing its own separate set of issues.
Chapter One

The film frame defines a variety of complex spaces. In order to discuss material properties of pure filmic space an investigation should be made into certain aspects of the frame’s definitive role. This chapter will address the operative role of the frame in relation to the camera mechanics implemented in Michael Snow’s work and the duality of the frame in William Raban’s *Fergus Walking*. Also discussed in the following will be the ways in which the in-frame and on-screen space collapse with their respective out of frame and off-screen spaces in the films of Nicky Hamlyn and Guy Sherwin. Each of these four artists implemented protocols which discussed a screen space that was not primarily situated within a fictive structure. By foregrounding the recording processes, alternative constructs that confirm the principle role played by the film frame exist. Each of the works discussed undermine the position of the pro-filmic object in relation to the frame, thus causing any previous understanding of the screen space to be mitigated. These works, that highlight the dominance of the frame and its ability to define specific space through either inclusion or exclusion, are the primary focus of this chapter.

One of the fundamental basics to the art of filmmaking, and of all two dimensional visual art practices, is the relationship of the frame to the image. The frame gives the point of reference from which compositional negotiations can be determined. It is instrumental in defining the spatial coordinates within the image. And, it defines the relative position of each object within the perimeters of the film space. This follows the mathematical structures of composition found in the formal practices of painting and drawing. The construction of pictorial space relies upon a horizon line, or inferred horizon line, and the surrounding frame. These points circumscribe the spatial coordinates necessary for a viewer to establish the illusion of three-dimensional space. In addition, when there appears to be no evidence of a horizon line existing in the image, an inference to one will be established in reference to the point of view of the spectator. Once the relationship between the horizon and the frame is established, each object within the image can be given their relative positions in accordance to the frame and the horizon line.
It is important to note that the position of the viewer plays an active role in coordinating the placements of the objects in the pictorial space. Their actual position provides the third point of reference necessary to the understanding of geographical space. To understand this further, reference to Merleau-Ponty’s theories on space can be made. He argues that:

….there can be a direction only for a subject who describes it, and a constituting mind is eminently able to trace out all directions in space, but has at any moment no direction, and consequently no space, without an actual starting point, an absolute ‘here’ which can gradually confer a significance on all spatial determinations.¹

If the theory is applied to the determinations of space in cinematic viewing, then the actual position of the viewer would be the starting point of all spatial negotiations. The viewer provides the ‘absolute here’ for all deliberations of space. This also includes the representational pictorial space upon the projection screen. Each object within the screen image will be positioned in reference to the viewer – to the right of, or to the left of, or directly in front of them.

Film space exists both in the image, on the screen and off the screen. It is not constrained within the boundaries of the pictorial plane and screen frame. If the position of the viewer is the third point of reference for determining the spatial coordinates of a film or video work, the off-screen space that they inhabit should be included in any acknowledgement of film space. It is integral to the construction of that space. Michael Snow, William Raban, Nicky Hamlyn and Guy Sherwin produced film works that questioned the restriction of film space to the screen image. For them, actual space was as important as the fictive space found within the screen.

By modulating the optics while recording the visuals, Michael Snow explored the way that pictorial space is constructed in the viewing process. The protocols used for recording his film *Wavelength* undermined the position of the objects that existed in the pro-filmic²

2 In using the term pro-filmic the reference is being made to the space which is immediately before the camera and within the boundaries of the visual perimeters of the camera lens. A pro-filmic object is an object that exists within the pro-filmic space.
space. The work was recorded as a slow zoom that traveled the length of the interior space of a New York loft. At dispersed points in time, Snow introduced individual human activities within the perimeters of the view caught within the camera’s lens. Each event of activity is loosely based on structure that potentially follows a storyline. As a result, it would be easy to consider the fictional structure of the human events to be significant at the expense of other crucial nuances particular to the work. Yet because the primary concern of the work is the trajectory of the zoom, the predominant event is the negation of the pro-filmic space caused by the zooming action. The zoom also determines the duration of the film and it ascribes the spatial configurations of the loft as a temporal measurement. It is therefore important to consider the human events in relation to the temporal framework of the film and the position of the zoom. This makes it possible to identify certain spatial constructions at work in *Wavelength* that are created by modulating the optics associated with the camera.

The shape of *Wavelength*’s space has been described as conical\(^3\) yet there are two contradictory conical ‘shapes’ at work in the film. Most obvious in the pictorial space is the cone shape defined by the film frame. Its base is the wide view of the loft. The point of the cone is provided by a photograph that inhabits a small area on the far wall. This size of the photograph, which eventually occupies the full screen at the end of the film, contrasts with the wide view of the loft. It is between the two ends of the loft that the travel of the zoom passes. As the zoom traverses the space, a continuous reduction of visual information within the perimeters of the film frame occurs. The second conical shape is situated within the viewer’s point of view. Its shape is the opposite of the first cone. The pointed end is positioned at the camera, (a proxy for the spectator’s eye), with the width of the far wall defining the base. This second cone provides another frame of reference for establishing an understanding of spatial relativity. It also significantly highlights the flattening characteristic of the zoom. In addition to reducing visual information, the zooming action has the effect of compressing the illusion of depth within the pictorial plane.

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To explain the compressive character of the zoom it is necessary to consider the position of the horizon in the pro-filmic space to the position of the camera. It is also important to include in the deliberation the effects of the zoom on the representational image. Constructs of space are understood by calculating the position of an object in relation to the horizon, and the object’s relativity in reference to the frame. Determination of a three dimensional form is made in comparison to a receding space within a defining frame. If Snow’s camera is placed at one end of the room, all objects and events between the camera and the vanishing point will be recorded in relation to the horizon. Yet, once the camera mechanism of the zoom is initiated, appearing to bring the objects closer, any prior determinations of positions will need to be readdressed. While it appears that the objects within the loft are becoming closer in proximity, the camera remains fixed at its original placement, it does not move. If the camera does not move, the horizon in relation to the camera would not change. Yet within the pictorial field, the horizon progresses towards the camera’s point of view in a similar fashion as the images of the pro-filmic objects. The closer the horizon appears, the depth of field within the image is reduced, thus compressing all three-dimensional forms.4

It is the continual process of flattening the pictorial space, and the reduction of the visual information in Wavelength, that are relevant to the positioning of the human events within the work. Because of the length of time between one human event and another, a different relationship to the frame and pro-filmic space exists for each. Additionally, the associations of the pro-filmic objects in relation to the frame and in relation to the space alter throughout the duration of the film. As the zoom traverses the loft, it is the constant shifts and re-evaluations of the pictorial plane and the depth of field that defines the difference between each event.

It is important to situate all human events within the temporal framework of Wavelength. Snow’s use of a loose narrative structure brings attention to the material properties of the work. As the film progresses each subsequent human event occurs within a reduced visual

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4 An ideal correlate to this would be the spatial surface occupied by a sphere of Plasticine with its formal characteristics existing as three dimensional. Once it is flattened the surface space occupied would increase while its three dimensional form will be reduced to almost complete non-existence.
field. The ability to construct both the fictive space of the activity and a cohesive narrative becomes limited as a result, leaving a semantic construction that uses the fragments of visual information to be resorted to. The fragmentation of film space is addressed by Roman Jakobson of the Prague School. He argues that:

Film works with manifold fragments of objects which differ in magnitude, and also with fragments of time and space likewise varied. It changes their proportions and juxtaposes them in terms of contiguity, or similarity and contrast; that is, it takes the path of metonymy or metaphor…5

In *Wavelength* the events of human activity provide the similarity needed for the continuity of the narrative construct. Each is connected to the others because they are similar in content. They provide a pathway for a semantic construct.

However, any semantic connections made between the human events in *Wavelength* are undermined by the length of time between each and by the action of the zoom. Each image, event, and object within a composition, affects and is affected by what surrounds it and what comes before and after it in any progressive form of accumulation. The frames of information before and after each event of human activity in *Wavelength* affects the way in which the event is read. In addition, the greater the length of time between one event and another within the composition of the work, the magnitude of effect that each has on the other reduces. The position within the duration of the film of each occasion of human activity will change the way in which the activity is read. It is what occurs between these human events that affects the way in which the overall composition of the work is understood. Because the zoom defines the time measurement of *Wavelength*, and there exists a temporal distance between each event of human activity, it is the trajectory of the passage of the zoom which determines the reading. Effectively the transitions between all events within the film will be constructed by the passage of the zoom. The significance of the events that incorporate human activity, as of all other events that do not, will be positioned in relation to the zooming action. Because the visual field is reduced and compressed by the action of the zoom, the constructs for each event in *Wavelength* will be
made against the reductive and compressive process that occurs through time. As such it is the process that becomes dominant in *Wavelength*, highlighting the constant reassessment of object relativity within the pictorial plane.

Snow addressed similar concerns in subsequent works by examining representational constructs in relation to a range of camera mechanisms. These films explored the changing nature and effects of the film frame in relation to the velocity of the camera movement. Both *Standard Time* (1967) and *←→* (1969) explored the effects that a panning or tilting camera has on the recorded image. The positioning of a figure or object within the screen image were mitigated by the panning and tilting action of the camera. In both films, the recorded activities were fragmented by the constant action of the camera. Negotiating the spatial dislocations of the figure within the frame, and within linear time, becomes a process that constantly changes while viewing the work. As such, each understanding of what is being viewed becomes conditioned against the camera movement.

The forerunner to *←→*, *Standard Time* employed an erratic circular pan and tilt. Both mechanical actions defined the spatial coordinates of a room through the appearance of objects and sounds located within the time passage of the camera action. Snow extended this method of filming to position the camera movement as the main protagonist in *←→*. The principle role of the panning action in this work is confirmed when the velocity of its movement creates an illusion of solid space within the image. A solid form that emerges from the screen seems to appear as the pan reaches its highest speeds. This is a result of the activity of the camera, the quality of light and depth of space within the location, and the optics of the camera. The specific position of the camera within the interior environment established three distinctive relative associations of camera and wall. All three were significantly different in distance. The wall directly before the camera was the closest in proximity. The furthest existed to the left, with the intermediate distance to the right (see fig. 1.1). As the camera panned across the walls of the room the distance between its lens and the wall surfaces differed. This provided a fluctuating depth of space

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6 *←→* denotes the title as Back and Forth.
that changed in relation with the panning camera. As a result of the constant mechanical action, the flat surface of the wall is reproduced as a convex shape upon the surface of the screen. The effect is most evident as the velocity of the pan increases.

As human activity is introduced into the space in front of the camera, the perception of the solid form in \(\rightarrow\) alters. Each arrival into the space triggers a re-registering of the spatial depths of the intermediary space in the screen image. As a result, the opposite wall is renegotiated as a flat surface. Additionally, attentiveness to the automated process is reduced as the mechanical actions of the camera are supplanted by each activity. It has been stated by Snow that the simple activities conducted in the room ‘suggest reciprocity’ and are used to prompt the viewer to relate the activity to the action of the camera.\(^7\) The rhythm of the camera pan is conflated with the ‘to and fro’ activity of tossing a ball between two people, the back and forth action of sweeping the floor, or the harmless sparring between two friends. This establishes a paradox whereby the figure references the action of the camera that deconstructs, or rather reconstructs, the space the figure reconstitutes.\(^8\)

One of the only constants that remains in both \(\leftrightarrow\) and *Wavelength* is the film frame. By reiterating the permanence of the frame through the inconsistencies caused by a

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\(^7\) NOGUEZ Dominique, *Zum Film Wavelength in Michael Snow: Werke und Film*, Kunstmuseum Linz, 1979, pp 93-109, page 105.

\(^8\) The extent of the pan is noted with a distinctive sound. This is paramount for determining the defining boundaries of the pro-filmic space when the camera action is at its increased speed. It is the distinct sound that informs the viewer that the pan’s extent has been reached once all possibilities of interpreting the image field is denied.
pictorial space in a state of flux, both works initiate a critical analysis of film space. In each work the spatial parameters of the room become provisional upon the panning and the figurative presences located within the space, thus forcing an ongoing process of renegotiating the boundaries of the frame and the activity within. These renegotiations depend upon reconciling the position of objects and events within the interior of the room, the velocity and/or extent of the camera action and the temporal placement of events within the durational framework of the film. Because they evolve in an ever changing deliberation of space due to the constant shifting of relative points within the frame, the spatial relativity of every object and event will be in doubt. The actual position of the viewer is the remaining definitive and constant point of reference with which the frame can define space. Physical space will be reconciled with the film frame. It becomes an active constituent in the construction of film space.

Similar specific concerns of the frame’s selective process of what is present or absent in pictorial space was approached by other structural/materialist film artists. One work that is significant in its attention to the role of the frame is William Raban’s *Fergus Walking*. The second film in the three part *Autumn Scenes* (1979), the piece was developed from the premise that a film could begin with its ending and conclude with its beginning. While Raban’s reconfiguration of the analog of linear time was accomplished through an intricate form of editing, one distinctive characteristic of the film is its obvious reference to the frame. By allowing the car window, through which the film was shot, to establish a second set of perimeters, Raban reiterated the role of the frame by placing it as a subject within the film.

*Fergus Walking* provides a visual sequence of Fergus Early walking down a London street. The scene was shot from a car traveling at the same speed as, and parallel to, Fergus. The dilapidated buildings of the street provided the background, while Fergus occupied the middle field and the car window determined the foreground. The work is made up of two sections with each offering a view of the same street scene through the car window, (in the first section the window is closed, in the second it is open). The framing of the events by the window indicates a space where the filmmaker is situated, thus giving an insight into the role of the frame. Raban effectively becomes a second figure within the film. If what is
contained within or excluded from the frame is determined by the selectivity of the frame, then the frame within the frame in Fergus Walking offers a space that exists both in and out of the frame simultaneously. The space of the foreground exists at the peripheral of the film frame. It is outside of the enclosed activity and infers an area beyond the screen frame. This is highlighted by the tension between both pictorial frames that was created by the jerky movement of the camera – the inner window frame constantly agitates the pictorial frame by refusing to be still within. The activity of the window frame has an additional effect of competing with the midfield and background activity for the viewer’s attention. Fergus’ walking activity and the tension created between the car window and the film frame, trigger a constant shift between the figure ground relationships. The clashing of the two frames also evidences the difficulty of maintaining control of a car while filming, thus bringing into presence the existence of the filmmaker and the space that he inhabits.

The film frame also gave Raban an opportunity to undermine the reading of linear time within Fergus Walking. By manipulating the spatial coordinates defined by the film frame, he was able to create an irregularity between the film image and the progression of time. Raban implemented a process of editing which subtly displaced the linear time of the recording in the first section, and severely undermined the temporal progression of the second section. It is the second half of the work that questions the determinations of direction of travel within the frame. This anomaly is revealed by the conflicting relationship between the figure and ground constructs of the pictorial space. It is indicated by the movement of the boarded windows and doors of the background buildings through the frame, and is peculiar to the film. Both the buildings and Fergus appear to travel from left to right within the frame. The direction of the background in this manner should indicate that the figure within the composition is traveling in the opposite direction of right to left. However, in Fergus Walking this is not so.

The direction of motion within film is defined by the travel path of the pro-filmic object through the frame. If an object travels across the frame from left to right then one can determine that either the object is moving in that direction, or that it is stationary and the recording device is moving in an opposite direction of right to left. With a tracking shot, a moving object will be static within the frame as the background imagery disappears in
either direction. The background is instrumental in determining the path of direction of a moving object. Because of the editing used to produce *Fergus Walking*, this does not apply.

A metrical system of editing was used by Raban to achieve an anomaly between the figure and the background. If in *Fergus Walking* the background travels from left to right within the frame and Fergus remains central to the composition, then, according to conventional methods of reading the figure ground relationship, it could be concluded that the camera is effectively traveling from right to left. Therefore, Fergus’ direction should be from right to left. However, Fergus’ walk is directed towards the right of the frame and indicates that he is traveling from left to right. The paths of travel of the foreground and figure are at odds with each other. What seems to occur is a forward walking motion that concludes at a point that is geographically situated in an opposite direction. Fergus’ walk ends at its original point of departure which is temporally situated at point A and not where reason would conclude, point C (see fig. 1:2).  

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9 The treatment of temporal space in relation to editing strategy will be explained in greater detail in the next chapter.
assumptions that the direction of travel is determined by figure ground relationships within the film frame.¹⁰

A similar situation occurs with *karenintheround014* (2002), a screen work of my own. Captured at the edge of the frame is the walking figure of Karen Mirza. The movement of the figure is set against the background of a building dotted with vent holes and signs. The direction of the vents and signs through the frame establish the figure’s direction in the initial sequence of the work. This however changes when the editing process implemented for the work weaves oppositional images, (one direction is incorporated with its mirror version).¹¹ Both figures of Karen are situated facing inwards at either edge of the frame, with each background traveling in reference to its respective figure (see fig. 1:3). As a result of weaving the two it becomes impossible to extract the defining ground which would inform the direction of either. At certain points in this section of *karenintheround014* it appears as if the forward walk of one of the figures is actually a backward motion. The inability to distinguish between the two separate backgrounds leads to a misinformed interpretation of the figure’s directional movement.

*fig. 1:3*

*karenintheround014* and *Fergus Walking* undermine the ability of the frame to define distinctive spaces within the pictorial plane. And in particular, *Fergus Walking* specifically situates the process of filmmaking as an active element for reading the work. By

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¹⁰ In addition to this, the film’s linear progression offers clues that enable the viewer to establish a point of reference for the comprehension of the temporal structure. The distinctive graffiti ‘25 years of poverty’, situated at the beginning of the first section of the film and at the end of the second, ‘book ends’ the work. While towards the middle of each section, the man repairing his car defines the temporal distance between point a and b and point b and c. And because the activity of the man fixing his car is different at each pass, he defines the separate events of filming within the location. The action and site remain the same whereas the events are distinctively different. Each maintains its individual nuances particular to its own time. The car repair incidents define the linear progression of the film, and the passing of time between the separate occasions of filming.

¹¹ The edit for this work uses a single frame weave.
introducing the presence of the filmmaker by inference, an acknowledgement of the frame is encouraged, the space defined by the film frame is questioned and the process deployed for the making of the work is reflected upon.

In difference to the presence of the filmmaker being inferred, both Nicky Hamlyn and Guy Sherwin incorporated the image of the maker within the frame. Hamlyn’s 1996 film *White Light* deals specifically with an intimate association between the viewer and the filmmaking process by depicting a reflected image of the maker within the frame. Sherwin explores the reflective and deflective qualities of the mirror in both *Portrait With Parents* (1977), *Two Portraits* (2000) and *Man With Mirror* (1978-2001). With these works, both film artists are specifically stating the ability of the frame to define a space that belongs both in and out of the frame. Sherwin also explores the implicit nature of the recorded image to measure time in *Two Portraits* and *Man With Mirror*.

To situate Hamlyn’s practice it is important to note that from the early 1970s interior spaces have been the predominant focus within his work. An intimate and intense study of Hamlyn’s living room was explored in 1974 for the film *Silver Street*, with similar motifs reappearing in works such as *Guesswork* (1979), *That Has Been* (1984), *Not Resting* (1999), and *Penumbra* (2002).12 It is within these interior spaces that Hamlyn negotiates an intimate film space with an exploration of ‘the paradoxical nature of light, the camera eye, surface, structure, time and space’.13

The intimate surrounds of a bathroom was the site of filming for *White Light*, with the reflective surfaces of the metal taps and hoses chosen as the image subject for the work.14 The metal surfaces of the objects reflect the image of Hamlyn operating the camera. Originating from outside of the pro-filmic area, the Hamlyn’s image evidences the process of production. With *White Light*, he permits the viewer to observe his filming techniques –

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12 Hamlyn has stated that ‘Almost all my work is set in interior, usually personal, spaces.’ HAMLYN Nicky, *Revised Statement*, Unpublished, 14 April 1994, The Artists’ Film & Video Study Collection at Central St Martins, London.
13 Ibid.
14 Hamlyn returned to the intimacy of the bathroom with *Penumbra*. The focus of the work, however, is a depiction of light that is more subtle. The subject matter within the image is the white tiles of the room. Because the image of the work is simple and uncluttered, it allows the differences caused by the shifting light and changing focus of the lens to be fully appreciated.
the reflection shows him regularly adjusting the focus of the camera lens and shifting the light source. The activity of Hamlyn within the frame evidences the intense observation entailed for the work, it links the artist’s observational activities to those of the viewer. Maker and viewer collapse. This is further reiterated by the close proximity of the subject that resulted from the use of an extension tube attached ‘between the body of the camera and the lens’\(^\text{15}\). By using this attachment ‘an extreme close-up, to within one or two mm of the subject’ is accomplished.\(^\text{16}\) It allows Hamlyn to establish an intimacy that intensifies the relationship between the viewer and the subject of the screen image. However, the dramatic shifts in focus and light direction constantly cause the visuals to alter and inhibit any conclusive knowledge of the spatial coordinates of the bathroom objects.

Hamlyn’s work, just as Raban’s does, discusses a film space that extends beyond the film frame. However, the space in question for Hamlyn is situated within the pro-filmic area, yet paradoxically, it is also behind the camera. It exists both in front of and behind the camera – it exists on-screen and off-screen. It is also the area within which the filmmaker and the viewer are positioned. In the sections that follow the sub-titles of ‘9’ and ‘9a’ in Hamlyn’s *White Light*, the most dominant image within the film frame is the reflection of the camera lens. The image occupies the central position within the frame while all other activities recorded exist at the peripheral. Attention is brought to the viewer by positioning them in an area that is directly in front of the camera that recorded the image being viewed. The focus of interest would therefore seem to be the viewer. This indicates that the subject and content matter of the work are not restricted to the confines of the film frame but extend beyond to an area which is situated outside of the frame.

A similar concern with the extended film space was addressed by Guy Sherwin in *Portrait With Parents*, *Two Portraits* (2001), and *Man with Mirror* (1976-2003). In the recent presentation of the works, Sherwin creates a charged tension by highlighting the passage of time that extends over the decades that occurred between each development of the work. Just as Hamlyn had done, Sherwin used the reflective surface of a mirror to explore the representational image of the filmmaker both in and out of the frame in *Portrait*.

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\(^\text{15}\) HAMLYN Nicky, Email to the Author, 15.12.2001.

\(^\text{16}\) Ibid.
*With Parents* and *Two Portraits*. In the double screen piece *Two Portraits*, this can be seen between one screen image and the other by the obvious differences in the appearances of Sherwin’s subjects. Produced as part of his ongoing work *Short Film Series* (1976-2003), *Portrait With Parents* was reused twenty-three years later to produce *Two Portraits*. The original piece, *Portrait With Parents*, was placed alongside a recreation of the same scene shot some twenty years later. As A.L. Rees describes in *A History of Experimental Film and Video*, *Portrait With Parents* is a ‘domestic’ portrait of Sherwin’s parents in front of a large oval mirror in the family lounge-room.\(^{17}\) Sherwin’s image is seen reflected in the mirror so that all three figures within the work appear to be facing the camera and the viewer (see fig. 1:4). In the final seconds of the film Sherwin’s wife enters the lower half of the frame. When Sherwin decided to recreate the work for the production of *Two Portraits*, he presented *Portrait With Parents* in the first of the two screens as a counter balance of time. The second screen showed a similar scene that revisited the triangular composition and the series of events that occurred for *Portrait With Parents*. However, in the new version Sherwin used his daughter and current partner, Barbara Meter, to replace his mother and wife.\(^{18}\) The passage of time between each recorded event is stated by placing *Portrait With Parents* alongside its recreation in the twin screen format. Both Sherwin and his father display the progression of time in their aging appearance. This triggers a comparison between the two screen images that is supported by other contrasts and similarities that juxtapose the separate events. This allows *Two Portraits* to allude to a time space.

\(^{17}\) *REES A.L., A History of Experimental Film and Video*, British Film Institute, 1999, page 81.

\(^{18}\) Sherwin’s mother had passed away just a couple of years before his return to and further development of the work. His marriage had also ended in the intervening years.
In *Two Portraits*, a different out of frame space to the geographical space discussed with Raban and Hamlyn’s work emerges. The intermediary space between the frames of the two screens reveals an inferred time object. The obvious aging of the men and other differences and similarities between the screens provide the inference for an object of time that exists between the two. It is possible that an affinity between *Two Portraits* and a theory explored in the work of Snow exists. Snow states that what interests him is not events that can be ordered through codification but sub-events, ‘not “what is”, not “what is not” but what happens in between. In this case: “not”’. It is the link, or what exists in the space between what is and not that is prioritized by Snow. In *Two Portraits*, the inferred object of time in the space between the screens is neither ‘what is’, or ‘what is not’. It is what happens in between. The events in *Two Portraits* clearly state the absence of the intervening years, thus bringing that absence into presence. However, both recordings for *Two Portraits* captured a time space that once documented became unchanged. As a result what appears on both screens is concrete time. The two screens provide book ends for the space of time between the two events. They also provide the perimeters within which the space between the two screens exists. Therefore the space which denotes a clearly defined segment of time could be interpreted as the inferred object of that time in the intermediary space between the screens.

Similar concerns were addressed by Sherwin in his performance piece *Man With Mirror*. By projecting a prerecorded event into the site of production, Sherwin provides a cohesive discussion of time and space with the work. Recorded in 8mm format, the projected film showed a young Sherwin performing a series of choreographed movements with a mirror painted white on its reverse side. During the performance event the recorded film is projected onto Sherwin holding a similar mirror as he performs a series of movements that juxtapose those performed for the film recording. The mirror is used to either deflect the projected image, or to semi absorb it in a similar way a screen does. What was seen during the performance was an image that either extended towards the perimeters of the performance space, or was contained in the immediate area of the performer directly in
Figuring Space; considering the figure in the construction of space as materialist film.

front of the projector.\textsuperscript{20} It must be noted that for Sherwin to achieve the work it is important that the scale between his actual body and the projected image of himself is precise. They must be exact in size for the represented image of Sherwin to sit directly upon the actual body of Sherwin.

At its earlier performances in the seventies Man With Mirror presented a subtle dialogue of two disparate times, it also provoked a significant discussion between space and the perception of space. In the first stages of the performance, Sherwin held the painted side of the mirror towards the projector that was placed in front of the audience. This allowed the mirror to act as a projection screen. Because the scale of the projected Sherwin had been accurately replicated, what appeared on the painted surface of the mirror was the same surface of the projected image of the mirror. The hands of Sherwin’s image were visible in the same position of holding the mirror as those of the performer. However, when the choreographed movements of moving the mirror to the left, right, up, and down in the performance were conducted in an opposite direction to that of the projected image, what appeared to occur was a reduction of the mirror surface. Illusion at this point becomes increasingly complex. Both Sherwin hands seemed to be closing inwards causing the reduction. Yet one hand was that of the performer and the other was the hand of the projected image. The two became fused making it difficult to separate reality from illusion.

At certain points within the performance, Sherwin flipped the mirror so that the reflective surface was facing the projector. As this was done the surface of the mirror deflected the projected image to the outer reaches of the performance space. On numerous occasions during the performance, the mirror was rotated causing the deflected image to travel across the multiple surfaces of the room. As each surface was registered by the deflection, a dialogue about the enclosed space was presented. The light of the projection provided references to the given temporal and spatial structures within the dark space. Additionally, the deflection within the darkened confined area displaced the image frame

\textsuperscript{19} SNOW Michael, Passage (Dairy), \textit{The Collected Writings of Michael Snow}, pp66-67, page 66.

\textsuperscript{20} On rare occasions Sherwin has extended the concept of the deflected film image by incorporating sound in the work. The sound was also deflected through the performance space in a similar way as the light image. However, for this to happen the site of the performance must meet particular dimension requirements which allow a sound wave to be deflected. Interview with the author, October, 2001.
Figuring Space; considering the figure in the construction of space as materialist film.

from its two dimensional surface, (held in the hands of the performer), to the surfaces which form the performance space. In effect the room became the screen.

After the initial performances of *Man With Mirror* in the seventies, it was twenty years before Sherwin reenacted the work. From 2000 to the present day, Sherwin has revisited the work on a number of occasions. What became prominent with each revisit was a clearly defined time space evidenced between the projected image of the younger Sherwin and the older performer. The projection of the original seventies film footage onto the present performer situates a trace of the past within the present, it sandwiches the years that elapsed between the two events. This highlights what Sherwin refers to as ‘an echo’.  

At the time of the original production of *Man With Mirror*, the artists of the London Filmmakers’ Cooperative were exploring ideas and concepts that operated tautologically. Artists such as William Raban, Malcolm Le Grice and Anabel Nicolson were addressing the ante-filmic with works that were shown in an extended screen format. Termed as ‘expanded cinema’, the films were presented as multi-screen pieces and/or as performances which occurred in front of the screen. Many of the works reflected the Cooperative’s theories of tautology. Raban’s *2’ 45”* uses a simple approach to the theory by producing a film that was developed over a succession of performances. As Raban explains the work:

"(2’ 45”)…involves the audience by incorporating their image into the film. It takes as “subject” the primary situation of audience watching a screen – an empty screen for the first performance. The audience silhouettes are filmed from behind, and their comments recorded onto the film soundtrack. At the next performance this film is replayed in place of the blank screen. Each time that 2’ 45” is shown, it is refilmed, this new film becoming the material to be projected for the following showing. 2’ 45” deals specifically with relating the time of the camera (past) with the time of the projector (present)."

21 Ibid.
22 Ibid.
Sherwin also worked with these ideas of tautology, using them to explore the differences and similarities between the repeats of an activity.

The notation of passing time becomes more significant in *Man With Mirror* the further in time it is from the initial performances. At its more recent showings the magnitude of the ‘echo’ within the work is greater as the ‘before’ and ‘now’ encompasses a temporal space that extends over a period of more than twenty-five years. The work defines an object of time that exists at the collision between the illusion and the actual. It becomes clear that *Man With Mirror* displays similar characteristics with those attributed to *Two Portraits*. Both works established additional frames for reference that defined an object of time. Each presented a construct of time space that resides beyond the film frame.

The role of the film frame was extended beyond one that defined what appeared upon the screen surface and/or in front of the camera in the works of Sherwin, Hamlyn, Raban and Snow. While each of these artists approached the subject in different ways, all brought attention to the extensive ability of the frame to discuss space. As was shown with Snow’s *Wavelength*, the conventional means of establishing spatial relativity, by using the frame as a point of reference in relation to the pictorial horizon and the objects within the image, can easily be mitigated by the filmmaking process. Once the space within the image exists within a state of flux, the space outside of the screen and the viewer’s position within it provides the foundation from which the spatial relationships existing in the work can be established. And while the frame that defines the screen space separate from the viewing space is incorporated in the construction, its ability to conflate the two spaces in the work of Raban, Hamlyn and Sherwin is evident. As such, it becomes increasingly difficult to define the set binaries of inclusive/exclusive, absent/present, illusion/actual and framed/unframed that the film frame maintains in conventional narrative structures.
CHAPTER TWO

One of the principal elements of all film and video based work is time. While certain implications of the arrivals, departures and locations of Snow’s characters in *Wavelength*, and the existence of an inferred time object in Sherwin’s *Two Portraits* and *Man With Mirror* have been previously addressed, an analysis of time manipulated by the editing techniques implemented during production will be discussed in the following argument. Particular attention will be paid to the way the physical eye perceives organized elements of time, and the way single frame images are structured in film. This is important to the consideration of colour concepts within the chapter. It is not the way colour is applied to the medium substrate, but the way the eye perceives the colour deflected from the screen surface that is significant to the thesis. By focusing on the effects editing has on colour perception it is possible to apply the argument to the medium of both film and video. It is during viewing that these peculiarities of the editing sequences of the works discussed question the formal qualities of the frame.

The ability of the frame to include and/or exclude was used to determine the editing structure in Chris Welsby’s *Parkfilm* (1972). The ‘aleatory system’ implemented, notes the mechanisms of both camera and physical eye and the process of production. Some of the basic elements used for the production of *Parkfilm*, light luminosity, cognizance, and photographic registration, all lead to a construction of an objectification of time within the screen frame of the work. By highlighting the process used, a connection between the shutter mechanisms of the camera and projector, and the filmmaker’s eye and the eye of the viewer can be made. What becomes interesting at this point is that the shutter action mimics the action of the saccades in the human eye. Saccadic movements and retinal after-images, known as successive contrast/similitude effects, are initiated by the eye to process visual information. This can be implemented in the attempt to confuse the reading of colour and spatial relativity within the film image. By undermining the optics used in viewing the

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1 Aleatory system is a system that is dependent upon chance, it is the term used by Deke Dusinberre in his writing on *Parkfilm*.  
moving image, artists like William Raban, Malcolm Le Grice and Michael Snow were able to produce works that challenged the ability of the frame to determine spatial coordinates. This brought the frame as a reliable constant in the reading of film space under question. The following investigates the way Welsby’s Parkfilm, Raban’s Fergus Walking, Le Grice’s Berlin Horse, and Snow’s *Wavelength* deconstruct traditional and conventional pictorial compositions by implementing non-conventional optical illusions.

In Welsby’s *Parkfilm* there is a direct correlate between the film frame and editing. Highlighted in this work is the interdependency that exists between two of the material elements of film, the frame and time. Shot in London’s Kensington Gardens, *Parkfilm* registered the fluctuating passage of human traffic over a period of three days. The pictorial composition incorporates a background, middle-ground, and foreground within which people cross the frame from left to right and right to left. The camera, set at a ‘right angle across a busy park pathway’², was used to record one frame each time a pedestrian entered the pro-filmic space and another at their exit. The rigid structure of the shutter’s single action was inextricably dependent upon the unpredictable flow of pedestrians.³ When there is virtually no activity within the pro-filmic space, the viewer is given only a single representation of an individual upon their arrival and another at their departure. In contrast, when the pedestrian traffic is heavy, a single figure may be viewed at multiple points crossing the frame. However, when viewing the film the position of each figure’s first indexical image at a point that is distant from the boundaries of the frame become evident. *Parkfilm* discusses not only the comings and goings of the pedestrians but also the mechanisms of the camera, the process of production and the level of luminosity provided by the light of the sun.

The majority of Welsby’s films deal with the effects of environmental conditions and changes in the landscape in relation to structures and protocols of filmmaking. Known as aleatory systems, they are dependent upon uncertain contingencies and are used to establish the film’s structure. The time-lapse process incorporated in the majority of Welsby’s work

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² Ibid.
³ Welsby’s use of precise single frame shooting was explored with William Raban in their co-produced work *River Yar*. Both *River Yar* and *Parkfilm* were produced around the same time.
defines a clear link with Muybridge’s intense analytical studies in the serialization of time.\textsuperscript{4} According to Peter Wollen, it is the process implemented by Welsby which enables him to ‘capture… changes in the seasons, the position of the sun, the force of the wind, the movement of the tides; a whole range of natural and meteorological phenomena’.\textsuperscript{5} While Welsby’s films give provision for the discussion of ‘elemental processes - such as changes in light, the rise and fall of the tide or changes in wind direction’,\textsuperscript{6} and allows them ‘the space and time to participate in the process of representation’\textsuperscript{7}, Parkfilm offers something more.

\textit{Parkfilm} gives a pictorial illustration of the conflict between the mechanical apparatus of the camera and the human activity of activating its mechanism. The work also states a direct comparative between two positions of human activity – Welsby’s action of recording is triggered by the pedestrians' entry into the pro-filmic space. Deke Dusinberre attributes the aleatory system implemented for \textit{Parkfilm} to the randomness of the flow of pedestrians.\textsuperscript{8} However, other factors must be taken into account. Equally important is the recording process, the filmmaker’s ability to discern each entry and exit of a pedestrian, and his reaction time to trigger the camera shutter. First and foremost in the process is Welsby’s ability to visually register the instance of time within which the pro-filmic event occurs. What also significantly alters the length of time it takes Welsby to recognize the entry of a pedestrian into his field of view is the luminous level of the sunlight on the day. The time it takes for the light source deflected from an object, (the pedestrian in this case), to reach the eye of Welsby, via the lens differs as the level of light changes with the position of the sun in the sky or with an increase or decrease of clouds. The greater the brilliance of light the intensity of the wavelength produced by it increases. This allows a situation within which the speed of the light deflected, and time till registration, will differ to those occasions when the light is poor. The result is, the brighter the day’s sunlight, and the greater the

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\begin{itemize}
  \item \textsuperscript{4} WOLLEN Peter, Introduction in Chris Welsby - Films/Photographs/Writings, Arts Council of Great Britain, 1980, \url{http://www.sfu.ca/~welsby/Wollen.html}.
  \item \textsuperscript{5} Ibid.
  \item \textsuperscript{6} WELSBY Christopher, \url{http://www.hi-beam.net/mkr/cw/cw-bio.html}.
  \item \textsuperscript{7} Ibid.
  \item \textsuperscript{8} DUSINBERRE Deke, St George in the Forrest, page 12.
\end{itemize}
brilliance of colour worn by the subject, the quicker the recognition of the object within the pro-filmic space.

Also affected by the level of luminosity provided by the sunlight is the ability of the filmmaker to discern between objects. If the daylight is bright then the distinction between ground and figure will be clear. Yet, on the second day of filming for Parkfilm, an overcast sky reduced the level of light, and therefore effectively diminished the possibilities of perceiving the figure of a pedestrian at their precise moment of entry. Additionally, the position of the pedestrian within the depth of field would also alter the time until recognition and the length of duration that they existed within the pictorial field. If the figure enters the frame at the furthest point in deep field, then the time it would take for the deflected light source to reach the position of the maker and camera, and the duration of the figure’s progression across the pro-filmic space, will differ from the pedestrians that cross in the mid to shallow field area. The further away a figure was from the camera the longer it would take to register their image. And at the greater distance from the camera, they existed within the field of vision for a longer period. This increased length of time provided Welsby with greater latitude to mark the presence of the figure within the frame. Yet in contrast to this, the closer the pedestrian was to the camera their entry would be noted by the filmmaker almost immediately. However, this close proximity shortened the length of time the pedestrian was within the frame of the lens with the registration of their image at their exit occurring at a considerably shortened time in comparison with the pedestrians who crossed at the furthest point from the camera. Also, because the field of vision is narrower at the camera position, the ground crossed by the pedestrian was minimal in comparison to the length covered by the pedestrian at the furthest point. In analyzing Parkfilm, it is easy to see the mathematical calculations of traditional composition.

What is interesting in Parkfilm is that the majority of the figures initially appear at a disassociated point from the boundary of the film frame. If the total time it took Welsby to visually register a figure and the time it took for the image of the figure to be recorded was calculated, then the cause of the distance between the frame and the first appearance of the
Figuring Space; considering the figure in the construction of space as materialist film.

figure is exposed.\(^9\) From the point in time of a pedestrian’s entry until it is recorded there exists the process of light stimulus, recognition and identification, reaction, the triggering of the shutter device, the opening of the shutter, and the registration of light onto film. The measured time between a pedestrian’s entry and the recording of their image onto the film material is the unit within which the filmmaking process belongs. Within the film image, this appears as a gap between the film frame and the first appearance of the pedestrian’s figure. The gap is where no image of the figure exists. It is a representation of the process employed. This makes it possible to determine a transfer of a known pictorial space to a non-tangible object of time.

To understand further, the role of the camera in Welsby’s environmental films should be taken into consideration. Welsby has stated that he not only ‘avoided panoramic vistas or depictions of homogeneous pictorial space’\(^{10}\) but also:

> concentrated on the more transient aspects of the landscape, using the flickering, luminous characteristics of the film and video mediums, and their respective technologies, to suggest the fragmentary quality of our post-industrial experience of the natural world\(^{11}\)

Nature and technology merge. The pictorial representation of nature in Parkfilm evidences the mechanical disposition of time. The aleatory system implemented for Parkfilm surpasses the simple explanation of the fluctuating pedestrian traffic determining its structure. It included a multitude of variables that existed with the process of recording the film.

The physical processing of visual information that occurs within the filmmaker’s eye, and its correlation to the mechanical process of the lens and the processes instigated by the eye of the viewer, become obvious when the method used for producing Parkfilm is taken

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9 When a figure exits it appears closer to the perimeters of the frame. Its recording was dependent on Welsby’s ability to determine the point in time at which it was to exit the pro-filmic.


11 Ibid. With his environmental based film observations Welsby has successfully approached this philosophy, however, Park Film, Running Film and the almost unknown Lawnmower Film are of the relatively few of his works that utilize human activity to determine the structure of the work.

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into consideration. Because Parkfilm’s structural protocol recorded a single frame at each triggering event, the illusion of an individual figure appearing simultaneously at both edges of the film is possible – this occurs when no other activity takes place between a figure’s entry and exit. The successive appearances of a figure at disparate positions within the screen image, which occur when the activity along the path is at its busiest, causes an individual to appear to travel across the park at a disjointed speed. While the position of a figure within the image may significantly change with each frame, the continuity of time and motion is maintained. This is made possible by the overlapping of the remnant of one image to the following image on the retina of the eye. It is this overlapping that causes the impression of a simultaneous occurrence of a figure when there is no other activity.

The establishment of a linear sequence from single still frame images is one of the primary principles in creating an illusion of a moving image. One image follows another of identical content and similar composition. A basic illustration of this is the schoolroom past time of producing a flicker animation with a series of drawings on separate pages of a book. The mechanics of the physical eye create an illusion of fluid motion from the serial arrangement of the static images. One aspect that makes it possible to see a moving image is eye mobility, or more specifically, saccadic eye movements. Rapidly occurring at $800\,\text{s}^{-1}$, the saccades provide the amount of data necessary for the production of a flawless image of objects in motion.\textsuperscript{12}

The characteristics of the saccadic process are similar to the mechanical shutter operations of the film camera and projector. Image registration on the eye’s retina involves a period of stasis between each perception of visual information. The still images absorbed by the retina are connected with a period of no image, a moment of blank/black. Known as ‘fixational pauses’ these static moments allow the time necessary for the translation of retinal information.\textsuperscript{13} Moments before and during saccadic motion ‘visual sensitivity is reduced’ to an extent where ‘motion and position information are severely damaged’.\textsuperscript{14} In effect what occurs in the process of seeing is a successive rendering of image, non-image,
image, non-image, etc., with which a similitude can be seen in film – image, interval, image, interval, and so forth. It is the remnant of the image held over by the retina until the next indexical occasion arises, approximately $1/800^{th}$ of a split second later in the eye or $1/24^{th}$ of a second in film, which provides a succinct illusion of movement. The smooth transition between the disparate placements of an object in space will be provided by the remnant of image that fills the gap between each retinal registration.

In a screen work of my own, time as a material element is situated in relation to the illusion of movement through screen space. *gabscal / 21 seconds 16 frames* (2002) captured a simple and non-eventful everyday activity of a mother and son walking towards and then passing through a gate. However, the metrical editing system implemented in the production of the final piece establishes a dialogue of time. Constructed at twenty-five frames a second, the temporal space of PAL video is the subject of the work. Each individual frame of the original twenty-one seconds and sixteen frames footage, was inserted into an extended duration of the original at dispersed intervals. In an effort to present a dialogue that discussed the materiality of time in relation to a linear event, each inserted frame was placed at a calculated length from its predecessor. Starting at twenty-one seconds and sixteen frames the length between each subsequent edit was reduced causing a systematic spiral. This was determined by the position in the original shot of the inserted frame in relation to the last frame of the original shot. In other words, if the inserted frame originated from the position 00:00:02:10, then it was placed nineteen seconds and six frames from the previous single frame insert. This is calculated by subtracting two seconds and ten frames from twenty-one seconds and sixteen frames, which then gives you the length between the frame in question and the last frame in the original. The editing implemented in *gabscal* extends the duration of the original twenty-one seconds and sixteen frames to a length of fifty minutes, it highlights the material aspects of time.

At the point of each frame insert in *gabscal / 21 seconds 16 frames*, there exists two positions of time situated side by side. One belongs to the original time frame of the footage from which the single frame is extracted and the other of the extended duration. The space

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14 Ibid.
between the two positions of time and geographical placement of both images of the mother and son couple is bridged within the screen image of *gabscal*. It is when one couple is situated at a point furthest in spatial distance from the other that the linking from one to another becomes prominent. As the mother and son approach the gate they become closer in proximity to the camera. When the single frame image that shows the couple at a further point from the camera is placed into the sequence, a fluid visual connection between the separate time frames and geographical positions within each image is made. At the return to the couple at the closest proximity, the sudden change in size and position within the screen frame cause the couple to appear to physically jump forward. What occurs is a fluid crossing from one geographical position and time space to another.

![Diagram](image)

**fig. 2:1**

By introducing it amongst the metrical formulas of editing, the figure as a point of focus becomes a measure against which incongruent relationships of time can be identified. This is what occurs with the couple in *gabscal*, and can be found in William Raban’s *Fergus*.
Walking. The focal point to the work is the position of Fergus within, and in relation to, the frame of the car window. Based around the activity of walking, Raban inverted the linear progress of time with a strict metrical formula developed from Fergus’ pace. The linear progression of Fergus’ walk was dislocated by swapping the order of the frames. For the first section of the work, Raban implemented a single frame cut. The original order of these individual frames was disrupted by every second frame being swapped with the one that preceded it. This created an arrangement as follows, 2, 1, 4, 3, 6, 5, 8, 7, 10, 9, that was to continue until the end of the section. The rearrangement creates a situation whereby the moving image jumps two frames forward and then slides back one (see fig. 2:1). The subtle inflection caused by the treatment is almost undetectable, yet there exists a quiet persistence of an anomaly within the moving image.

In the second section of Fergus Walking, Raban used an edit structure that causes a reassessment of what is viewed. The rhythm of Fergus’ walk was maintained at one full
step for every half second enabling the visual effects of the film to be achieved. At approximately twelve frame intervals, Fergus completes a step forward. Each was to become an indicator for the edit cut. Placed at the width of each stride so as not to disrupt the rhythm of Fergus’ walk, the edit divides the footage into equaled twelve frame segments. These were then swapped in a similar fashion to the first section of the work, yet instead of switching the first with the second, Raban placed frames one through to twelve in the position of last. This reordering was continued until each segment was placed in a reverse order. The first twelve frames became the last twelve, the second twelve became the second last twelve, and so forth. At each edit point a distinct jump occurs in the numerical pattern. For example frame twenty four, the end of the second last section, and frame one, the beginning of the last, were positioned next to each other within the temporal order of the film (see fig. 2:2). Each edit constitutes a backward jump of one second followed by a forward linear progression of twelve frames. The twelve frames forward, twenty-four frames backward continued for the entire second section of the work.

As a result of the negation of each twelve frames forward by the twenty-four frames backward, Fergus’ direction of travel appears to progress towards its original point of beginning. Yet the appearance of Fergus’ stride forward seems to be left relatively untouched by the jump cuts. A continuity of the forward motion is established in the viewing by the saccades’ processing of visual information in the eye. The saccades allow any disjunction between one frame and the next, which may occur at the edit point, to be concealed through the overlay of the image remnant of the preceding frame onto the next. Yet, the seemingly fluid motion of Fergus is contrasted by the background and street scene that appears to travel in a stilted reverse direction. While the stride of the walk appears unaffected, the backward jump-edit of one second is obvious in the door and window frames of the buildings in the background and the activity of cars and pedestrians in the street. The editing initiated a situation where the logic of motion established by Fergus’ stride forward, is counteracted by the illogical figure ground relationship that exists between the background and Fergus.16

16 See fig. 1:2, page 13, Chapter One.
In addition to establishing a continuity of motion, the saccadic eye movements play an important role in colour perception. Each visual fragment of light retained on the retina is embedded with codes of colour information. They provide the necessary input for reading the colour of what is seen. However, in film and video this can easily be manipulated. The visual fragment retained with the saccadic movement affect the perception of colour of the following fragment. The determination of colour of the succeeding image will be altered in relation to the stimulus of the previous colour. This causes the perceived colour to be different to that that originates from the material of the medium. What is perceived by the viewer can be altered by the effect as is found with Malcolm Le Grice’s *Berlin Horse* and Michael Snow’s *Wavelength*. The theories of colour in both these works extend beyond the support role often found in fictive narrative. The way these two artists applied colour to the material of their medium is important but more significantly, as a result of the editing techniques they implemented to achieve the effects discussed in relation to the saccades, it could be argued that their applications reconstructed the space of the screen and of time.

In discussing his 1977 film *Academic Still Life*, Le Grice expressed that the underlying concerns of the work were what the viewer observed – he considered this as being the ‘product of the act of perception’. The majority of his early screen work, in particular his twin screen piece *Berlin Horse*, evidence this. To create an intricate system in *Berlin Horse* Le Grice produced multiple layers within the visual and audio compositions of the work. The imagery used by Le Grice originated from two sources. One, filmed by him, shows a horse being lunged by its trainer while the other was obtained from found footage and depicts horses and wagons being led from a burning stable. The activity of the horse lunging is important within the film – both horse and trainer offer a measuring scale to which other material implications and modifications can be compared. They provided a ‘bass line’ against which numerous loops of superimpositions of colours and sound could

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17 Colour is often utilized as a decorative aspect in mainstream cinema. However, some independent filmmakers introduce blanketing colour theories found within the metaphorical aspects of psychology. For example in Derek Jarman’s *Edward II*, the costumes worn by Tilda Swinton progressively change from white, to red, and then into black as the narrative spirals into corruption and tragedy. 

be structured. However, it becomes increasingly inconsequential as the rhythm of the piece establishes the evolving process of the film as its subject.

The original film material used for *Berlin Horse* was black and white, from which a negative was produced and then superimposed onto the original. Following this, a variety of colour filters was applied to the material, with the process of obtaining a negative from the positive repeated, with the two then sandwiched together. The rich colours that resulted from this provide a discussion about the process incorporated to achieve the final effect. This meticulous procedure was accompanied by an intricate system of editing. By looping the visual sequences providing them as a focus, Le Grice established foundations for a ‘geography of markings’. His application of colour onto the film substrate, and subsequently the screen, make it easy to connect the way he works with film to his initial practice of painting. Exposing the process of making the film mimics the ‘history of the brush mark’ in painting. The mark declares the material medium as its prioritized narrative. In addition, the repetitive occurrences of complementary colours that result from the looping structure in the work reflect the positive and negative processing implemented during editing. This makes it clear that Le Grice is working with light and light displacement.

![Fig. 2:3](image)

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19 The term ‘bass line’ is used to connect the structure of the film to the structures found in music. A bass line in musical compositions can be used to provide a constant scale of reference for all other instruments in the score.
20 Ibid.
21 Common to the disciplines of painting and drawing, it is the remnant of all previous marks left by either the brush or the drawing implement. These will inform the viewer of the process used to produce the art object.
There are two ways by which the use of colour becomes accentuated in both Berlin Horse and Wavelength. The first is a method of developing layers of colour filtered material, the second is the effect caused by the quick succession of different colours on the retina of the eye. Both Le Grice and Snow incorporated the use of colour filters at different stages of the production process. Le Grice implemented the use of colour filters in post-production for Berlin Horse while Snow used them during production, however both works provide significant discussions about light displacement and colour/hue aberrations.

In production and during post-production optical printing, each hue will undergo a change when light is projected through the filter and/or film material if it is placed with a different colour. For instance, yellow layered with a blue filter becomes green, red with yellow becomes a brilliant orange, a touch of green upon orange will become an orange brown, red overlaid with a green filter will be a dark grey to black, and so forth. At the post-production stage, Snow added a complex level to the systems of colour in Wavelength in an effort to achieve transient hue aberrations. He used filters and film stock in a non-conventional way, for example ‘daylight film with fluorescent lighting’ and other methods that were inconsistent the ‘dos’ and ‘don’ts’ of filming.22

Other aspects of colour theories were employed for Wavelength by positioning certain objects within the room. These objects provided a basic colour scheme against the relatively monochromatic backdrop of the loft. Three in number, they provided the primary colours of the spectrum – a yellow chair, the blue shelving unit that is carried into the space and placed against a wall at the beginning of the film, and the red clothing worn by one of the women who sit and listen to Strawberry Fields being played on the radio.23 The colour of the objects allowed an additional process of colour mixing. The particular colour of each object underwent a change once it was refracted through the colour filter on the camera lens, and/or in reaction to the ability of the film stock to render certain temperatures of colour. The yellow of the chair once filtered through blue will no longer be yellow but

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23 The role that the three primary colour perform in Wavelength deserve a more prolonged discussion than what is possible in this chapter.
green. And, once printed on film that is incorrect for the lighting situation, the recorded tone and colour of the yellow chair will differ yet again. This is also so of the blue and red.

The second way in which the use of colour becomes significant in *Berlin Horse* and *Wavelength* results from the way the optical process occurs in the human eye. Scientific research has discovered that the ability of the eye to discern different hues is reliant on the amount of wavelengths in the light absorbed on the eye’s retina. For example, the measure of wavelengths found in the colour blue is approximately 400 to 450 nanometres, green is 490-560, yellow 560-590, with red at 630-700 nanometres.\(^{24}\) However, the remnant of the light stimulus on the retina will effect subsequent stimulations. If the proceeding light is green in colour than its remnant on the retinal surface will cause the following colour to change in accordance. Inconsistencies within the visual information will result. Termed as *successive contrast effects*, the phenomenon has a bearing on the interpretation of colour and space.

For the reader to understand the aspect of light reading that result from the *successive contrast effects*, a scientific explanation shall be provided. Simple experiments show that an after-image of a black square is its opposite – white.\(^{25}\) This occurs when prolonged colour stimulation ceases, causing the firing rate of the brain’s visual cells to rebound to an opposite state.\(^{26}\) In effect, the cells excited by the stimulation will return to ‘inhibition’, while at the same time the cells which had remained inhibited during that time will be agitated to stimulation.\(^{27}\) In the process, each will overstate the new position of stimulation or inhibition so that an extreme will be reached before either settles in its current state. An analogy of this function would be to consider an elastic band that is stretched. Once the elastic has been released, instead of returning immediately to its normal state, it will recoil in a direction contrary to that that was incurred by the force stretching it. To position the

\(^{24}\) These measurements are considered not to be precise but are used for an illustrative basis employed for discussion of colour.

A nanometre is the unit of length commonly used for measuring wavelengths. There are 25 400 00 nanometres to an inch.


\(^{25}\) Ibid, page 12.

\(^{26}\) Ibid, page 127.
Figuring Space; considering the figure in the construction of space as materialist film.

situation within the concepts of colour, if red is the predominant colour upon the eye’s retina then blue and yellow will be the inhibited colours. As red moves into a sudden state of inhibition then blue and yellow will be agitated into an overemphasized state, thus giving the colour green. The after-effect of any colour will be its complementary colour in the spectrum wheel. This however alters if the duration of the exposure of the colour is considerably minimal. The shorter and more intense it is, there is an increased likelihood of a positive remnant known as a *similitude*.\(^{28}\)

If the residue of the preceding visual stimulant triggers a negative or positive impression, which affects the following, then the visual information of spatial constructs provided by colour will also be affected. The De Valois team of vision scientists argued that a major contributing factor as to whether a retinal remnant is positive or negative is the size of the surface area of the surrounding colour. The greater the area the surrounding colour inhabits the increased possibility for a contrasting effect – the smaller the area, the higher the chance of a similitude.\(^{29}\) Also, basic colour experiments establish that the perception of the size of a red square against a yellow background will be significantly different to a yellow square that is precisely the same size against a red background.

……the colour and lightness of an object are determined by the wavelength and intensity of light coming from that object in relation to that of the background on which it lies.\(^{30}\)

The perception of a contrast, or similitude after-image, will be contaminated by the wavelength of light provided by the surrounding colour. If the colour information is in a constant state of change, then attempts to establish a concrete understanding of visual codes will also be destabilized.

Once the knowledge of *contrast/similitude after-effects* is applied to *Berlin Horse* or Michael Snow’s *Wavelength*, it becomes easier to pinpoint the attributing factors to the

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\(^{28}\) It is important to bear in mind that De Valois argues that ‘the conditions that promote positive versus negative afterimages are complex’ and further suggests that ‘often both positive and negative images appear, in alternation. Ibid, page 126.

\(^{29}\) Ibid, page 131.

\(^{30}\) Ibid, page 132
modulating impressions found in the works. The regular shifts between complementary colours and the negative and positive impressions within both Berlin Horse and Wavelength create an inconsistency within the visual information. Because the colours fluctuate, it becomes increasingly difficult to distinguish the figure ground relationships within the image. As a result, any confirmations of volume, size and position within space will be undermined. All knowledge and perception of size, form, distance and time will oscillate between certainty and uncertainty.

In Berlin Horse the effect can be seen in the difference between one frame to the next which is at times significant enough to negate an apparent continuity between the two. For the majority of the film the linear arrangement of the frames remain in their original temporal order. The effect prompted by the changing hues and the shifts between positive and negative will present what appears to be a slight rupture within the linear progression. A particular shape and size of an area of hue will seem to alter when its background colour is replaced by another, and also correspondingly when that area of hue changes in colour. The size and distance established within the space of the image will be fractured by the colour changes and shifts between positive and negative. If the change in colour of the figure or ground area of the image causes a difference between one frame and the next, it would be difficult to determine specific positions within space. A reading in such a way would present time as being ruptured.

If the ability to establish the illusion of scale, volume and position within the frame is denied, it is possible that other solutions in the method of reading the work will be sought. Le Grice supplies an alternative means of reading Berlin Horse with the structure that is based on loops. Attempts to establish a form of continuity within the pictorial plane of Berlin Horse will be reinforced by each looped element of the work – be it lunging horse, repeated film sequence, colour transferences, light and dark, or soundtrack. It is the constant rhythms within the circular motion of the lunged horse, and the other repeated sequences of the work, which provide a point of reference for the establishment of a recognizable system. The film can be read rhythmically through the audio and the continual shifting and changing of the surface shapes in the image.
In contrast to Le Grice’s *Berlin Horse*, the fluctuating relationships between the figure and ground in *Wavelength* question the constant of the zooming action that dominates the work. Instead of negating linear progression, as is found in the cyclic structure of *Berlin Horse*, the rupturing of any determinations of dimensions of space cause a re-evaluation of relative distance. This is illustrated by the window frames and the telephone positioned left of center at the back wall. At certain shifts between filters, gels, and negative and/or positive renderings, the interpretation of the size of either object is susceptible to change. A succinct awareness of the *successive contrast effect* is made possible by both the architrave of the windows and the telephone. With each being either white or black, the remnant of their image will offer an explicit opposite, white will become black and black will become white. At times, however, when refracted through a colour filter on the camera lens, the light wave of each object cause the after-image to differ in colour and intensity from the previous image fragments. If the white of the architrave around the windows is perceived as blue as a result of a filter application, then its positive or negative remnant will be perceived at a level different to those previously produced with a red filter. At each occurrence of light and colour change in *Wavelength*, the depiction of the telephone and window frames offer different stimulations for determining their actual size. As a result their dimensions will appear to fluctuate.

The frame as an authoritative aspect of spatial constructs is undermined by the fluctuating size of the objects within the screen space of *Wavelength*. As has been established in the previous chapter, determinations of space within the screen image are dependent upon the position of the objects in relation to the horizon and the boundaries of the frame. Another feature that is paramount to the constructs of the pictorial space is the depicted size of each object. The larger an object is, relative to its actual size, the closer in proximity it would seem. It would present possibilities for the space within which it is situated to be read with a point of reference that is positioned within a shallow field. This would be reversed for those objects that appear small. They would offer a reference point that reads as being situated within a deep space. Also affected would be the positioning of each object in relation to the frame. The larger and closer in proximity an object appears, the closer it would be to the defining boundaries of the frame. Its degree of angles in reference to all other points of orientation within the frame would also be dramatically
different. Taking this into consideration with *Wavelength*, if the proportions of either window frames or phone is interpreted as increased or decreased, and their position in relation to the frame is what determines the depth of space, then any change in their perceived state could seem to cause previous determinations of spatial depth to be incorrect.\(^{31}\) If establishing the depth of the pro-filmic space becomes increasingly difficult within *Wavelength*, as the constant shifts between hues and the negative and positive indicate, then the progression of the trajectory of the zoom will come into question. If the progress of the zoom is defined by the boundaries of the frame and the zoom’s trajectory is in doubt, then the frame as a constant indicator of spatial relativity will also become uncertain. While the frame can be relied on in most cases to provide foundations for a construct of space within the film image, the methods applied by Snow and Le Grice in *Wavelength* and *Berlin Horse* raise issues which question this. Binaries exist within which the boundaries of a picture plane are utilized to determine an object’s spatial relativity, which in turn questions the relativity of those boundaries that determine it. The frame that previously confirmed the illusions of space within the pictorial plane can no longer be prescribed as definitive.

In the implementation of certain protocols in the editing stage of production Snow, Le Grice, Raban and Welsby were able to undermine perceptions of space in the screen image. The film frame that is predominant in the construction of pictorial space in traditional art practices is redefined as an inconsistent foundation for space in the works of these artists. The frame, however, provides a basis for initiating a discussion about the processing time as is found with Welsby’s *Parkfilm*. By implementing the frame as nominator for the triggering of the recording process, Welsby achieves a notation of an object of time and provides an opportunity for the image of a pedestrian to seem to occur at the same time within the screen image. This questions the reality of the actual time of recording putting it at odds with the time of the work and projection event. Welsby’s work is not alone in this. Raban’s *Fergus Walking*, Le Grice’s *Berlin Horse* and Snow’s *Wavelength* also positioned the recording time as a fictional space in relation to the actual time of the projection event

\(^{31}\) Towards the end of the film, echoes of previously seen images occur in the form of superimpositions. These also cause the spatial coordinates and the progression of the zoom to be evaluated.
by implementing perceptual illusions with the use of specific colour applications in their works. As a result of the editing used to produce their work, the predominant time in question is the time of the projection event. This brings into focus the actual space of viewing, which is further constituted by the activity of the physical processing of the visual information provided by the film image and subsequently the role of the viewer within that space.
CHAPTER THREE

Once actual space is repositioned as a configuration of film space, it becomes necessary to discuss the elements of film that exist within that space. One aspect of the film material that resides within the viewing space is sound. It is translated by the viewer through their ability to discern its particular wavelengths in space. The audio of a film does not exist in the visuals nor does it exist upon the material substrate of the medium. It only occurs at the time of and as the result of projection. The audio of a film cannot be determined by looking at the acetate material and while in this state an optical inscription of it is obvious, it does not exist as sound. A similar thing could be said of the digital and analog mediums of video. However, with video a visual inscription of the audio does not exist on the material. The audio exists as an accumulation of magnetic or digital information, it is not seen when an inspection of the videotape is made. The information is only transcribed as sound when the tape passes through the heads of a tape player at the time of projection. As such, with film and video the sound can only exist once its wavelengths are prescribed within actual space.

Almost every film or video soundtrack belongs to a complex communicatory system and as a result, it is often conflated to a reading that belongs to a literary structure. The laws of syntax discussed previously in relation to the positions of events within the duration of the zoom in Wavelength, also relate to the audio medium. Sound as an object is transcribed as a result of its positioning within a comprehensible system of language. It is determined by its context. This often allows a situation where the audio of a screen work becomes susceptible to a literary construct that collapses sound and image together. Many experimental film artists have attempted to undermine this while others have eliminated the connotative link with text by replacing it with a synthetic or pure construct of sound. If the reading of a soundtrack or image is given the opportunity to occur independent of the reading of the other, then it would be unlikely that either element will assume prominence. Both will exist as independent forms and the support role that sound plays to the image, which is common to the reading of mainstream film, will not apply. This allows the audio to provide a separate description of film space.
Figuring Space; considering the figure in the construction of space as materialist film.

The distinct space described by sound includes a temporal space within which the order of film events can be shown to be a construct of fiction. Image and audio can be used to confuse the tense alignment of linear time of the pro-filmic events. This would lead to a prioritization of the actual time space of the projection event over the constructs of time found within the recorded narrative. To understand the integral role of sound in the spatial constructs of film, the reduction of the audio to its essential element of time is necessary. However to be able to codify what is heard it is essential to establish a recognizable system of communication. Yet, if what is heard is not a known structure of dialogue then a metrical system similar to that found in musical compositions will be implemented. The spatial constructs of the audio will be made in reference to the codified relations between temporal rhythm, pace and structure. It is almost impossible to present a sound that cannot be codified with a system.

The recognition and understanding of an object or concept is dependent upon the placement of it within an intricate and complex system of communication. Henri Lefebvre considers that ‘mental and social activity’ will impose all chaos with an order that ‘coincides…with the order of words’.¹ So that the comprehension of any chaotic nature will be determined by establishing a contextual structure within which meaning will be derived from the relative positioning of objects within the chaos. This allows an understanding of what is experienced to develop, and once done, for the experience to be communicated through the language of words. In discussing the development of systems to enable an understanding of what is experienced in relation to film, R. Bruce Elder cites Jacques Derrida:

…the subjectivity never has unmediated access to things; its awareness is an affect of signs, and the meaning we apprehend through signs to not disclose their meaning in a pure act of self-revelation, but only by our discerning their relation with other signs. The relations amongst these constitute the system which gives each sign that belongs to it, its meaning. …paraphrased…

Figuring Space; considering the figure in the construction of space as materialist film.

sign’s presenting its material referent – that a sign’s only reference is to other signs within the system to which it belongs.²

Sound is not exempt. To identify and codify what is heard, it is necessary to establish the position of the sound in relation to all others that belong or not within the same category. What has been experienced and/or known before provides the precedence for all following experiences.

The positions within a context of meaning are considered by Jiri Veltrusky in his essay *Constructions of Semantic Context*. He states that context ‘is a dynamic unit of meaning in the sense that its meaning emerges gradually in time.’³ Veltrusky argues that the past tense is linked to the present tense within the context through it being retained by the reader.⁴ He further states that:

The unity of sense is something that imposes itself upon the addressee or the reader as soon as he (she) begins to perceive a series of meanings as a context; he (she) tries to grasp the total sense of that context although it remains merely potential as long as the context is not finished.⁵

If this was applied in *Wavelength* to the event of Hollis Frampton’s entry into the loft space, which does not occur within the visual frame of the work, it is possible to establish a narrative structure. The subsequent events within the context structure allow the sound of crashing that is heard immediately prior to Frampton’s appearance within the screen image to be interpreted as either glass breaking or a door being smashed open. A series of causal relationships could be established. When a crashing sound is heard, followed by the appearance of Frampton, it is easy to surmise that Frampton’s entry into the loft was the cause of the crashing sound. And when Frampton falls to the floor, the context that it belongs within could lead to the belief that the crashing sound was the cause of Frampton’s

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⁴ Ibid.
⁵ Ibid page 136.
physical state. The visuals and audio of the scene are minimal and fragmented leaving the reading of it to rely on a context that lacks substantial information. To resolve this, each sound that is heard or image that is seen will undergo a codification process that will situate it in reference to other elements of sound and/or visual implications. This is similar to the way that words are understood. To understand a word each syllable within its structure will be determined in reference to the preceding and/or subsequent syllable(s). Codes of similarity and difference will be used within the reading of a contextual form. This is commonly instituted with vocal sound and rhythmic arrangements of music. Yet, for sound to be appreciated in its pure form, each event of syllable or note should be indentified as individual units. This becomes difficult if, as Veltrusky argues, the reader imposes a ‘unity of sense’ onto what is heard.

In the attempt to eliminate the constraints that are often imposed by the conflation of image and sound within a contextual meaning, some film artists removed all reference to a causal relationship between image and audio by placing the sound out-of-sync with the visuals. Guy Sherwin implemented this approach in both Under the Freeway and Filter Beds. He believes that audio has the tendency to detract from the purity of the image in film. To enable the image to be read independently from sound, Sherwin has produced a large percentage of his work as silent pieces. In film, for sound to be successfully incorporated without detracting from the visuals, Sherwin believes the placement of image and sound should be considered equally. According to him, if sound is used merely as a supportive mechanism for the imagery then the audience will experience a ‘sensory bombardment’. While the sound in Under the Freeway and Filter Beds remains linked with the image by correspondence, any possibility of it existing in a support role is negated by Sherwin’s counter-positioning of the audio and image. The sound of trucks and traffic in Under the Freeway is at odds with what is seen in the images on the screen. It is the result

6 The next event of human activity within the film confirms for the viewer that the person who lies on the floor of the studio is in fact dead.

7 Interview with the author October 2001 London. It must be stated however that Sherwin has addressed the issue of film sound in earlier works by producing optical audio tracks from the recorded film image. See Musical Stairs (1977), Railings (1977), and Night Train (1979). Additionally Sherwin is currently in the process of developing works that use traditional symphonic scores.

8 Ibid.

9 Ibid.
of the separate spatial negotiations provided by the disassociated placement of the camera and sound recording devices.

Multiple viewpoints of a street block provide the image content for *Under the Freeway*. In filming the work, Sherwin utilized the street pattern to determine the position of each camera location. By selectively placing the camera so that ‘most consecutive shots are of adjacent spaces, often shown at right angles to each other’ 10, Sherwin was able to navigate the city block in a progressive movement circling it several times. In this way, the unobtrusive still camera caught the activities of the San Franciscan neighbourhood. At each location, the activity that occurred before the camera offered an opportunity for the development of a relatively cohesive narrative. However, on viewing the film it becomes obvious that the return to each camera location within the street pattern occur at a disjunctive position in time from the previous visit. This fractures any continuity of the unfolding story of each scene. The time gaps evidenced within the film image coincide with the passing of time that happens between each occasion of shooting any one view. *Under the Freeway* makes a parallel between the real-time of the recording process and projection event. Sherwin implemented a slightly different approach to develop the soundtrack of the film. The recording of it occurred within a different position to the camera yet within the same location at the same time that the visuals were shot. Placed out of sync with the imagery of the work, in what Sherwin describes as being ‘loosely attached to the image’ 11, the audio describes a space that exists both in and out of the frame.

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10 Correspondence with the author, 28th December 2001.
11 Ibid.
The way Sherwin constructs space in *Under the Freeway* evidences the extensive investigation of the location made by the camera. Linkages between disparate combinations of image and audio become coordinated in the structure. These in turn counterbalance the circular direction of the camera's navigation, thus causing a further deliberation of an extended film space. Space that exists outside of the frame of image is described as result of the audio recording occurring in an area that rarely existed directly in front of the camera. Two distinct spaces are defined, the street geography in the screen image and the space that exists beyond what was caught by the camera lens. The position of the camera provides a point from which the location of the sound equipment can be calculated, and vice versa allowing a construct of space that exists on and off screen at the same time. And to refer back to Chapter One and Merleau-Ponty’s theories, the geographical points within this space are made in reference to the position of the one who is calculating it. Both spaces, on and off screen, merge and neither actual or illusion takes precedence over the other.

The external screen space is discussed by an out-of-sync sound in Sherwin’s *Filter Beds*. The work was filmed at the site of the abandoned water filter beds in Middlesex and presents the bipolar positions between a wide shot and an extreme close-up, and a focused and out of focus shot. *Filter Beds* is visually rich yet instead of relying on a literary reading of images it discusses the texture of the image that is produced by the camera actions. With this film, the attention to geographical navigation of the site found in *Under the Freeway* does not exist. However, Sherwin does implement a counterpoint between the image and the sound in similar way and in so doing provides an innate space. The external screen space becomes prominent in this and in *Under the Freeway*. Both discuss concrete space in relation to the illusion of space found in the image in the screen. This is made possible by the dialogue that occurs between the image and the audio at the time of projection.

The projection event is the point at which the constructs of a film come into being. Malcolm Le Grice states that, ‘For film’s audience, the only point of contact with cinema as a material reality comes through the actual time and space of projection.’

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12 Le GRICE Malcolm, *Abstract Film and Beyond*, page 143.
transcription of both visual and audio information within a film can be complex. Le Grice considers that as a result of commercial cinema:

…techniques of film have been primarily developed to ‘manipulate’ a recorded (picture and sound) ‘reality’, into structures and events which never happened in anything like the terms which the language tells us they happened, whilst presenting the result as a ‘representation’ of reality.

In his film *Blackbird Descending (Tense Alignment)* Le Grice uses anecdotal constructs to question the mainstream readings of cinematic work. In a similar way as Sherwin did with *Under the Freeway* and *Filter Beds*, Le Grice uses sound to describe an out of frame space. *Blackbird Descending* also offers an opportunity to examine the way in which a cohesive understanding is constructed from a fragmented source of information. In addition, *Blackbird Descending* exposes the structures of fiction by revealing the numerous recording and structuring methods used in screen production.

*Blackbird Descending* made up of ‘ten minute takes… shot from a space occupied by one of the characters’. Each shot captures the same set of events, which seem to be repeated in either or both the visuals and audio. It appears as though what is given is a collation of separate camera views of a series of actions by the characters within the film. These then become the trigger for the construction of a chain of narrative events. However, because of the way in which Le Grice structures the work, what *Blackbird Descending* establishes are separate spaces of the same event of time.

The scenes and events recorded for *Blackbird Descending* consists of a man tree lopping, a woman hanging out the washing, another woman working at the typewriter in an upstairs study, a phone conversation, the sound of violin music, a young girl plays the violin. All of these activities take place in the same house and garden and at times one scene includes the activity of another. This happens in the third section of the work, which depicts a view through the kitchen window of a woman hanging out the washing. In the background of her activity the man lopping the tree can be seen. At a later stage in the film,

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the event of the tree lopping recurs as an individual scene. The position of the point of view of the camera is situated between the clothesline, and supposedly the activity of hanging the washing, and the tree that the man busily saws. The prior knowledge of the clothes-hanging activity gives provision for the space that exists behind the camera and outside of the image frame. While the laundering activity is excluded from the image, it will be recalled as result of the repetition of the event of the tree lopping occurring on the screen. The event of the man lopping the tree and the other activities presented in the work will thus be situated in both a geographical and time space.15

At particular points in *Blackbird Descending*, the visuals of events are replaced with an aural substitute. These sound substitutes also occur for events that happen later in the film. With each different view, sounds from previous and subsequent in-front-of camera activities can be heard. During the window shot of the clothes hanging, the sound of a spinning washing machine can be heard. In this same scene the phone ringing and it being answered, followed by a call to the woman at the line, who is then heard in conversation with, one would assume, the person who rang also occur. As the film unfolds, the visuals of the work show the individual events to which what is heard previously seem to belong. This provides a link between the sound and the image causing each subsequent occurrence of sound to be identified with a process of visual recollection. The pictorial elements of the work will be transferred to the time space of sound.

Once the visuals in *Blackbird Descending* are re-inscribed as a sound object one can begin to explore the crux of the work. *Blackbird Descending* is about time, it is about the placement of objects and events within time, and about time as a measurement of space. As the sections of the film evolve, it becomes evident that each is entered at a different time within the arrangement of activity events. Because the visual information is reduced, and/or different to that which had been viewed before, the audio will be used as an indicator to determine the temporal position within the narrative. The initial arrangement of the linear sequence situates the phone ringing at a point which is in the future tense to the sound of the washing machine, and past for the coffee making. The temporal positioning of each

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15 As the first half of Blackbird Descending progresses, the amount of visual information reduces until a minimum of text, dialogue and then light is left.
Figuring Space; considering the figure in the construction of space as materialist film.

individual element of activity is determined in relation to all other activities that occur within the same event of time.

At each repeat of the time event in Blackbird Descending, the temporal arrangement of the activities are displaced by certain sections which either contradict the order of recorded events or the previous determinations of what is heard. This is particularly so with the violin playing. The first occurrence of the violin activity within the film exists as a sound outside of the pictorial space. It is heard as scales being practiced, and leaves the impression that it occurs in another part of the house. Because it is easy to assume that a musical exercise would only occur in real time and not as a recording, it is easy to interpret the sound of the violin scale exercise as occurring at the time of filming. However, in the next part of the film the activity of recording the scaling exercise played on the violin is shown. It is then replayed from the tape recorder that sits on a nearby table. The dichotomy of the act of playing the instrument and the playing of its record, an impression of its previous existence, disrupts the tense alignment of all previous and subsequent events of the violin audio within the work. As a result it becomes difficult to confirm any placement of the violin playing within the linear arrangement of the sequence of activities. Neither the ‘before’ or ‘after’ the playing/recording event can be ascertained, nor can fact be discerned from fiction. The inability to determine a future or past tense is further compounded by a shift in the order of image and sound events within different repeats of the time event. The coffee making and the delivery of it to the woman typing is presented in the early sections before the phone ringing, yet in a later repeat of the time event these actions occur after the ringing phone. Precise positioning within the order of events in each repeat of the time event becomes increasingly difficult when dependent upon memory recollection.16

The actual event of the violin playing and its record being played presents two distinct states. The initial activity of the violin playing is what is occurring in time and has yet to

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16 Michael Snow presents similar arguments in the whistling sequence in Rameau’s Nephew. Initial introduction of the scene shows Michael Snow whistling into the microphone facing the camera. This is followed by side views and then a back view while at all times the whistling will continued to be heard. However, once Snow’s back is to the camera it is impossible to confirm that the whistling heard is being produced by Snow at that precise time. In his paper on Rameau’s Nephew, Pierre Théberge suggests that it is ‘here we are in the realm of fiction’. THÉBERGE Pierre, Rameau’s Nephew by Diderot (Thanx to Dennis Young) by Wilma Schoen in Michael Snow Works Films Werke und Film, Kunstmuseum Lunz, 1979, pp 109-139, page 116.
realize its completion, any resolution of the act is possible, while the playing of the record offers a representation of the violin playing, it remains the same at each repeat of the activity. Henri Lefebvre would categorize one as ‘work’ and the other as ‘a product’. According to Lefebvre ‘…work has something irreplaceable and unique about it, a product can be reproduced exactly, and is in fact the result of repetitive acts and gestures’. While it can be considered that every ‘repeat’ of the narrative structure within Blackbird Descending would clearly define each as product, it is necessary to clarify what exactly is being repeated. As is shown, an exact replication of the violin playing can be achieved by recording it. In this state, it becomes a product. If it is impossible at any point in the film to determine the origin of what is heard, it is probable that the sound is a regeneration of the original. However, in contrast and under close examination, the events that occur in the image of Blackbird Descending are clearly not a repetition of any other in the film. Each imparts a unique collection of visual information. They therefore can be classified in what Lefebvre categorizes as work. While at the time of production this argument holds, it is important to bear in mind what is seen on the screen is in fact the product of the work, it is its exact replica. At the time of filming Blackbird Descending, the audio that emanates from the tape recorder is a product while the activities that occur within the pro-filmic space are what Lefebvre would term as work. Once both of these become the recorded material, and are re-presented in the screen projection, what was previously work becomes product.

Blackbird Descending plays with the illusions of reality. What appear to be actual events are exposed in the film as being mere representations. These illusory constructs are also shown to exist with the representation of time and are common to mainstream cinema. Once the compositional arrangement of activities and events in Blackbird Descending, and their relationships within, are considered, it is clear that the film outlines the variety of ways that linear time can be manipulated in a narrative structure. In his early writings, Le Grice argued ‘Narrative is the story, it is the story told in the act of narration… The narrative is not the events themselves, but a representation of events’. While the narrative is seen as a representation of the story, through the act of narration it also presents a unique

17 LEFEBVRE Henri, page 70.
18 Ibid.
event in time. With a film practice, it is the actual time of projection, within which the story is represented, that is unique. The projection event is significant in the considerations of time in relation to the structure of the work. While the past and future tense are difficult to ascertain in the structure of *Blackbird Descending*, the actual event of projection provides the necessary references for positioning the tense alignment of the work. The soundtrack plays an integral role in this. While the audio is unable to provide a point in time within the storyline of the film, it provides a relative point for the determinations of positions in time of the projection event. The precise positioning of past and future tense, which is confused by the tape recording of the violin playing, becomes inconsequential leaving the tense alignment in the audio of *Blackbird Descending* to occur in relation to the time space of the projection event.

Michael Snow’s film *Prelude* also concerns itself with the ordering of events in time. In comparison to *Blackbird Descending*, it discusses the implications involved in the ordering of events in time in subtle way. Instead of ‘jumbling up’ the arrangement of events as Le Grice did with *Blackbird Descending*, Snow flips the events of audio in an opposite direction to the visuals of the work. He presents a very simple scene – a pizza is delivered to a group of people who then settle down at a table to share the meal. Towards the end of the scene, an object crashes to the ground. Both soundtrack and image seem to progress in a coinciding linear order which would allow it to be read in a familiar and established manner. For the majority of the film the visuals of the narrative are minimal, they are presented in contrast to the intense activity that is heard in the soundtrack. Except for the middle point of the film, what is heard does not appear within the image and until the mid point is reached, its source is unknown. For the first half it is easy to assume that the soundtrack of the work occurs in the same order of time as the image. This is not so. The audio and visuals of *Prelude* occupy individual temporal pathways. They cross only at a position in space that is the mid-point of the time and geographical space of the pro-filmic and projection events.

The visual sequence in *Prelude* is established as the camera surveys a room in a semi-pan. A girl runs to the door. She collects pizzas from the delivery-boy and crosses the room to a table positioned centrally within the space. A group of people move into view then sit
down to eat, the camera pans past the groups’ table activity, and a lone figure drops an object allowing it to crash to the ground. The pan continues showing an area void of activity. The camera action results in the film frame excluding the majority of the activity from the visual sequence of events. When this occurs in conventional cinema, the missing visual information is substituted with an audio that provides information about what is occurring outside of the visual frame. In *Prelude*, Snow undermines this cinematic practice by placing the order of audio events counter to the visuals. In a contradictory order to the visuals, the audio occurs as follows – joking and laughter; a crashing sound; table banter; a discussion of a meal about to be eaten; someone calls for others to come and eat; a call that announces the arrival of pizzas; and a door bell. This order is the reverse of the visual sequence.

<table>
<thead>
<tr>
<th>Visual</th>
<th>Audio</th>
</tr>
</thead>
<tbody>
<tr>
<td>a girl runs to the door</td>
<td>joking and laughter</td>
</tr>
<tr>
<td>collects the pizzas</td>
<td>crashing sound</td>
</tr>
<tr>
<td>crosses the room</td>
<td>table banter</td>
</tr>
<tr>
<td>a group of people sit down to eat</td>
<td>a discussion of a meal about to be eaten</td>
</tr>
<tr>
<td>group activity moves out of frame</td>
<td>call to come and eat</td>
</tr>
<tr>
<td>a lone figure drops an object</td>
<td>announce arrival of the pizzas</td>
</tr>
<tr>
<td>an area void of activity</td>
<td>a door bell</td>
</tr>
</tbody>
</table>

Both the soundtrack and the image only occur in-sync at a point in time that signifies the middle of *Prelude’s* duration, (it is at this point that the group is gathered at the table). This mid-point provides an axis that exposes the way that sound is used in commercial cinema to embellish the image. It is also here that the boundary between actual and illusion is crossed. For a moment in time, the soundtrack and image of *Prelude* synchronize allowing the fiction of cinema to exist (see fig. 3:3). Snow highlights the fictive construction by ‘hamming up’ the actors performances in this part of the film.
Figuring Space; considering the figure in the construction of space as materialist film.

to the camera of the pro-filmic activity. By situating the activity at a position that is not deep within space, the superficiality of a fictive construct is commented on. The space of *Prelude* at this central point belongs predominantly to the two-dimensional screen defining it as a construct of illusion.

An eloquent discussion of space that defines a left and right direction occurs before and after the middle point of *Prelude*. The travel path of the audio and visuals occur in an opposite direction of each other. This results from the counter-positioning of the two and gives provision for the geographical position of the viewer to act as a fixed point in the negotiation of the film space. Henri Lefebvre argued that there is the necessity of an axis and an origin to define orientation of any object in space, which would in turn define space itself.\(^2^1\) And as Merleau-Ponty points out the directional indicators of space ‘…the ‘upright’ and the ‘inverted’ are relationships dependent upon the fixed point chosen’.\(^2^2\) In *Prelude*, an area within the image is confirmed as existing to the left by the following audio, and vice versa, the origin of a sound situated to the right by the following visuals. Both left and right are positioned as such from the point of location of the viewer. This suggests that the actual position of the viewer acts as an axis for the construction of the film’s space. *Prelude* transcribes the elements of space within its visuals and audio to the geography of actual space.

An axis point exists in my own work *gbscal / 21 seconds 16 frames*, it determines a sound/time space. It occurs at the closing of a gate and is central to the metrical structure of the piece. Particular temporal elements of the work are reduced causing the audio and visuals of the piece to collapse to the point of the axis. The audio derived from an original length of twenty-one seconds and sixteen frames is looped for the duration of the piece. At each repetition, it is reduced by two frames causing it to implode at the closing of the gate. At 2/25\(^{th}\)s of a second, the reduction is not clearly distinguishable and at times, the end of one round of audio, which is signaled by a single unit of vocal sound, seems to merge with the next. The inability to ascertain one loop from the next occurs when the sound quality and pitch of the first frames in the following loop offer a probable conclusion to the

\(^{2^1}\) LEBFEBVRE Henri, page 169.  
\(^{2^2}\) MERLEAU-PONTY M., page 247
fragment of audio heard at the end of the previous loop. When this happens it is possible to
assume that the culmination of the two fragments exists as one whole sound making it
almost impossible to define the transition between the two loops.

As gabscal / 21 seconds 16 frames progresses it advances towards the implosion point at
the gate closing. Once the segments of the audio are reduced to a length that is minimal in
time, a description of what could be considered as a pure sound occurs. This is provided by
the fragmented sound of the gate grating on the pathway as it closes. At this point in the
work, the understanding of sound is reduced to the primary element of time. Each separate
frame provides an individual object of sound, a note derived in time, and when two frames
are eliminated at the beginning of each loop, it is two objects being removed. It is
reasonably easy to determine what is heard when both sounds of the gate opening and
closing are given, however, once the final sound of the gate closing is reduced it becomes
abstract making it impossible to affirm as any particular known sound. It can only be
described as a pure sound constructed through the measure of time.

Understanding sound as an element of time allows an audio void of references to a vocal
language to be addressed. Most of these, however, will be given within a metrical structure
allowing it to be comprehended with the implementation of formulas. This undoubtedly
situates them within the discipline of music. In relation to Michael Snow’s text based film
So Is This, Bart Testa invokes an argument of Derrida’s, ‘to understand someone talking,
you have to remember the start of a sentence, and anticipate a conclusion’, and this
‘requires knowing the rules of syntax and having ready command over vocabulary’. 23
While Testa is specifically addressing the spoken language, rules of syntax also apply to
music. The positioning of points in time by individual notes require them, and consequently
the overall structure, to be considered in relation to what had been previously experienced.
Additionally, those who have had significant training in music will have a greater ability to
predict the conclusion and to comprehend the overall structure of the composition. They
will be well versed in the language of music.

The soundtrack of Le Grice’s *Berlin Horse* is distinctly identifiable as a musical composition. The music of the soundtrack uses a score that succinctly adds a dimension to the looping structure of the work.\(^{24}\) An element that allows a process of positioning points in space is provided by the structure of the audio. It allows time, space, and similarity and difference to be recognized. The ascending and descending scales of the musical composition in *Berlin Horse* establish a pattern that is historically grounded in the culture of western music. It is distinctly recognizable to the majority of a western audience. An understanding will be made by placing what is heard into a category of familiar sound, thus establishing a position from which the recognition of subsequent sounds and their formations can be made. This links all previous and subsequent units of sound within an overall composite of idioms. The composition will be comprehended in what Rodulf Arnheim would consider as a ‘synoptic space’\(^{25}\), an abstract of the whole. Each individual object of sound within *Berlin Horse* will become an indistinguishable generic component within the structure once they assume an ascending or descending scale. This is not to detract from the importance of the soundtrack in *Berlin Horse*. The ascending/descending structure provides a necessary element of content for the work.

If the identification processes were removed from the syntactical structures of language, then a situation would be created which R. Bruce Elder considers as ‘withholding the self from language’.\(^{26}\) Removing known methods of identifying what is heard or seen will cause other applications of understanding the film’s message to be implemented. An exceptional example in the visuals of a film is provided by Peter Gidal’s *Room Film* (1973). By undermining attempts to identify objects within the image on the screen, *Room Film* prioritizes the material of light over textual references. Priority can also be given to the essence of the material of film once the identification also of it is undermined. Once an individual object of sound is given outside of any systematic structure, it would be experienced in the same manner as the light material of *Room Film*. Outside of a systematic

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\(^{24}\) The accompanying score to the work was composed by Brian Eno. Le Grice produced the original soundtrack for the work that accompanied it in the early screenings.


\(^{26}\) ELDER R. Bruce & SNOW Michael, page 221.
construction, other elements of sound that would provide the syntax do not exist. An identification of the individual object of sound becomes difficult to make.

Improvised music provides a possibility for an accumulation of pure sounds to occur. It is an area explored by Michael Snow in both his film/art and music praxis. Improvisation typically presents an arrangement of musical notes and movements that undermine the boundaries of contextual structures. The arrangement of sounds that are produced in this way only exists in the moment of production. Often it will offer a collection of sounds that clash and/or seem to be chaotic in order. Snow describes the process of producing improvised work:

In playing totally improvised music one is in a present which is metamorphosing against the wake of the music’s recent past, which one is simultaneously trying to categorize while moving into a future over which no one person has total control.27

Its evolution exists only within the present tense. The improvised score fails to offer a full context for determining the individual components within it. What is heard has no precedence in history except that of the previous notes within the performance, thus it becomes possible for an unknown syntactical structure of sound to occur. However, once an improvised score is recorded and securely positioned within time, its syntactical system and form will eventually become known. This becomes so for all unknown sound structures once they are recorded and re-presented again and again.

Snow expanded on concepts of improvisation in the development of film work. Of interest is his film about sound and context, Rameau’s Nephew by Diderot (thanx to Denis Young) by Wilma Schoen. The film explores important issues that R. Bruce Elder argues had previously been avoided by experimental film artists.28 Rameau’s Nephew renegotiates relationships in time in both the visuals and soundtrack of the film. Sections of the film deliver a rearrangement of events in time, offering a chaotic nature similar to the chaos

27 ELDER R. Bruce & SNOW Michael, page 223.
found in improvised work.\textsuperscript{29} Words were relocated within the sentence structure or replaced with another word not relevant to the context. In addition, the swapping of single letters or phonetics of a word was implemented. Yet, once fixed in order, a result of recording, any chaotic nature that may have previously existed will subside with each subsequent representation of the recorded material.

A prime example of the rearrangement of sounds and speech that Snow employed in \textit{Rameau’s Nephew} is the conversation that occurs in the ‘Tea Party’ section. This scene was presented in a duplicated form. It was ‘produced by taking a single, long take of the scene, and printing it… first forwards, and then, backwards and flipped left to right’.\textsuperscript{30} The scene provides an experience of a spoken language that would have previously not been heard by many of its viewers. It explores the processes of recognition entailed by both speaker and listener. For the filming of the ‘Tea Party’ section the actor’s lines were spoken phonetically backwards. Reasoning would surmise that once the recording was played in reverse, what was spoken backwards would then assume a correct order. It would be easy to recognize as its original language form. However, as Elder states, ‘we have trouble making out what the actors say, as their pronunciation, inflection and intonation are peculiar’.\textsuperscript{31} The sound of every syllable is presented in a disjunctive association.

The actor’s experience at the time of performing the ‘Tea Party’ scene was working within those same guidelines that Snow discusses with improvised music. Because the sounds spoken have no precedence within a known language, each voiced phonetic sound was in a present state of impermanence – it was worked against the ‘recent past’ while ‘moving into a future’. While the dialogue will offer a distinct semblance of a language once it is re-presented in a reverse order, the experience of the phonetic pronunciations will in effect be represented in reverse. The language sounds heard will be situated within a ‘present’ which is subsequent to ‘moving into the future’ while waiting for the ‘recent past’. The present sound heard by the viewer is a sound which had originally been worked

\textsuperscript{29} \textit{Rameau’s Nephew} is sectioned into 26 parts and is 240 minutes in length.
\textsuperscript{30} ELDER R. Bruce, Sounding Snow, page 146.
\textsuperscript{31} Ibid.
against another sound that is yet to be heard because it exists in the future of the film, when originally when spoken it existed in the past.

If an unfamiliar audio is recorded and then repeated, it becomes possible to codify what is heard. So that while the ‘Tea Party’ scene at first seems unfamiliar once it is viewed repeatedly the unfamiliarity becomes increasingly less. One element that allows this to occur is the ability to distinguish between difference and sameness within the arrangement of sounds. In effect, when the phonetic arrangement of the ‘Tea Party’ dialogue, or the reducing sound of the gate closing in gабская / 21 seconds 16 frames, is heard, the difference between each individual note and tone of the sound will be clarified. The attempts to break down an audio by reducing it to a time measure of a single frame will still allow a possibility for identification. Clarification of this is given in a screen piece of my own, card 4.

A four-camera view of a card game played by four people is presented in card 4. Edited in a single frame weave, a simultaneous multi-view point of the scene is provided in the visuals of the work. In the attempt to undermine the way a viewer interprets what is heard, the soundtrack is also edited in the same way as the visuals. Because the video material used for the piece was digitally captured into the computer while being fast-forwarded and rewound, the audio used for the first half of the work is distorted. This presents an unrecognizable vocal dialogue. When the four tracks of audio were weaved together the random occurrence of the distortions provided a disordered collection of sounds. Yet, in accordance with a metrical formula developed for the editing, a second set of audio tracks were slowly woven into the work causing a recognizable system of sound to emerge.32 It became possible within the soundtrack of card 4 to make a distinction between the scale and tone of each sound and to determine the length of time until the arrival of a similar sound. It is the difference between each that ‘engenders the repetitive aspect’,33 and once introduced, the repeat of that sound will be sought. The mathematical orders that are found in musical compositions will be implemented in the translation of what is heard in card 4.

32 The second set of visuals are derived from their original recordings being captured in a rewind mode, however, the audio which accompanies the second half is a section of the recorded source in real-time.
33 LEFEBVRE Henri, page 395.
It would appear then that all possibilities of disconnecting sound from a representational system, which allows a confirmation of position within, is impossible. Yet there is one film at least which does accomplish this, *Wavelength*. Much has been written about the soundtrack of the film but for the purpose of this argument it is necessary to refer to the sine wave which is consistent throughout most of the work. Starting at fifty cycles per second, the sine increases to a degree where it becomes almost unbearable for the viewer to experience. Statements made by Snow affirm that the sine wave is intended to establish a counter to the diminishing pictorial space. As the zoom reduces the extent of visual information, the sine wave ascends to invade the space of the viewing area. At its lowest measure of cycles the sound is low in tone and relatively non-intrusive. Yet as the speed of the sound wave increases the comfort zone is breached, it triggers the consideration of a present state within an actual space. By the conclusion of the film, a transition from a flat sound object and the illusion of three-dimensional space in the screen image to an opposite state of a definitive sound space and a shallow pictorial field would have occurred.

While the difference between the two extreme states of the audio is significant, the progressive movements, which occur between the two, are not distinguishable. This is where *Wavelength* differs from the works discussed in this chapter. The sine wave audio of the film cannot be connected to a vocal language or musical score. Snow uses the measures of sound in time in a different way. Because each individual fragment of sound within the sine wave exists with a fraction of time between it and the next, an opportunity to distinguish between either becomes impossible. Further denial of identification is caused by the close proximity in tone and note between one fragment and the next. If it were possible to extract one increment of sound from another, then a system within which an order could be imposed would be established. This is not probable with the sine wave of *Wavelength* as it is impossible to situate a position at any point within it. In effect from beginning to end

35 In conversation with Simon Hartog, Michael Snow, states that the ‘sine wave glissando is ‘realer’ than the (‘representational’ ‘realistic’)…… It is ‘concrete’ while, for example, *Strawberry Fields* on the radio, in the film is already a quote of a quote of a quote, etc.”. Le GRICE Malcolm, Peter Gidal, Gordon Gow, Jonas Mekas in *Structural Film Anthology*, British Film Institute, 1976, pp 28-35, page31. This further confirms the viewing space as the concrete space of the work.
the sine wave audio becomes one individual object that slides from one condition to the other without acknowledgement of the transitional process.

Only in this pure form of sound can one separate audio from a representational structure based on imagery and text languages. Without any possibility for audience identification there will exist an inability to establish any known system of communication. Opportunities to implicate literate codes that extract visual and audio from their material essence will be denied. As a result, both the visuals and audio will stand independent of the illusionist constructs found in fictive readings of film. Once this happens it becomes easy to understand that each exists in a corresponding time period at the occasion of projection. A distinct film space also exists with Under the Freeway, Filterbeds, Blackbird Descending, Prelude, Berlin Horse and Rameau’s Nephew. While the last two of these discuss a time space, the former four films distinctively establish an off screen space. By determining separate spaces of audio and visual by a counter-point, actual space will be established in relation, and in reaction, to the area defined by the material properties of the film.
CONCLUSION

The materialist filmmakers of the last half of the twentieth century sought to define the material properties of the film medium. For them, light and time were and are the primary properties of a screen-based practice. With their works they explored the medium of film by challenging preconceived notions of the role of the camera, the projection event and film space. In addition to the experimentations conducted in regards to light and time, the ability of a frame to include and exclude and the use of audio to provide an additional film space were pushed beyond their conventional limitations. All four aspects were fundamental in providing a foundation for the structures implemented in the work of Michael Snow, Malcolm Le Grice, Guy Sherwin, Nicky Hamlyn, William Raban, and Chris Welsby. While these artists prioritized the material of their medium, it must be said that the visuals of the film image played an integral part in what they were attempting to do. By using the imagery to set protocols for the applications of structure a narrative about the material qualities of the medium emerged.

Attempts to apply fictive narratives are common when a representational image is given. This is particularly so when the human form appears and often, metaphorical constructs involving it will be made. For artists such as Snow, Le Grice, Sherwin, Hamlyn, Raban, Welsby and myself, the representation of the figure in the image provided an additional element with which film space could be constructed. A narrative strictly based in the constructs of literature does not play a leading role in the work instead the image of a figure was used to construct a film space complex in dialogue. This makes it possible to consider the figure image in film and the material properties of the medium parallel to another. The reading of this group of artist’s work lifts the burden of positioning the figure within a semiotic context.

By introducing human activity in *Wavelength*, Michael Snow plays on the fine line between the reading of the work in a literal form, that links the separate incidences involving the people that enter the pro-filmic, and the reading of the work as a complex construction of material elements. The arrivals and departures of and the activities
conducted by the people filmed were instrumental in highlighting the material of the medium. The work provides a coherent discussion of time, the events of recording and screening, the transitions between points in space and the material of light. Both this film and \textit{Wavelength} fragmented the actual space at the time of recording with the camera actions used causing the representational space on the screen to be reevaluated at the viewing event. For \textit{Wavelength} and \textit{Fergus Walking} the only constant for defining consistent spatial constructs was the frame of the camera lens and the screen image.

The frame has the ability to include and exclude, and when notation is given to the frame of the camera lens and subsequently the frame of the screen, the work becomes about absence and presence within the image and beyond. This has been shown in the work of Raban. Conventional constructs were agitated in his film \textit{Fergus Walking} by placing a frame within the frame causing the two to define distinctive and separate spaces. The work clearly stipulates film space as extending beyond the confines of the screen space by introducing the filmmaker as an additional figure that exists outside of the lens frame. Raban was not alone in this. Other artists were also exploring film space beyond the frame with the introduction of their own image in the depicted scene. An indexical image of the filmmaker appears upon reflective surfaces in Hamlyn’s \textit{White Light} and Sherwin’s \textit{Portrait With Parents} and \textit{Two Portraits}. The space in which the maker existed became one that the viewer was also positioned within. The on-screen and off-screen space are compounded. As the two become merged the boundary between them becomes non-descript in the same way the boundary between actual and illusion does in Sherwin’s performance piece \textit{Man With Mirror}. The ability of the frame to define distinct spaces is considerably diluted as a result.

Sherwin’s films \textit{Two Portraits} and \textit{Man With Mirror} shows that the film frame can be used to establish a segment of time that has a precise beginning and end and which could be considered as an object of time. Welsby explored a similar concept by using the frame provided by the camera lens to determine the editing protocols of \textit{Partkfilm}. At the entry into the frame of the pro-filmic space of a pedestrian Welsby triggered the lens shutter to record a single frame of film. Within the screen image this causes the first appearance of the pedestrian’s figure to occur a distance inside the image frame. The gap is the measure of
time that it took for the entire process of recognizing the figure within the space through to registering the light on the film substrate to occur. From beginning to end, the period of time that elapsed becomes represented within the image of the film.

The ability of Welsby to discern the difference between the figure and ground and the readings of light in the image within the lens frame played an important part in the making of the Parkfilm. The process relied on the eye perceiving the necessary visual information needed to set it in motion. Similar concerns of visual readings are shown in works produced by other filmmakers. Raban, Le Grice and Snow all experimented with the way the eye perceives an incongruent representation of time by implementing various editing techniques and approaches. The editing employed for Fergus Walking, Berlin Horse and Wavelength undermined the frame as a constant in defining space leaving little else but the position of the viewer as the absolute point of relativity for the understanding of film space. While each artist provides a figure within the image to be used as a measure with which the structures of time and space could be identified, the figure becomes inconsequential as the fluctuating light information undermines those readings of space and time. Neither the frame nor the image of the figure is able to provide definitive locations within the screen space.

A film’s soundtrack is also unable to offer any definitive resolution for a position in space or time without reference to the position of the viewer. They provide the point of origin for all understandings. The juxtapositioning between image and audio in Sherwin’s Under the Freeway, Le Grice’s Blackbird Descending, and Snow’s Prelude allowed the inclusion of the geographical and time space of the viewer into the calculations of the film. Each work relies on the viewer’s ability to position site and action within the entirety of the film. The audio plays an important role in achieving this by providing a geographical left and right to the viewer’s position, and a position of before and after in time.

A primary element to sound, time gives provision for the tones and notes within an audio to be positioned in relation to all other occurrences of those similar and different. It allows the audio that is heard to be contextualized. Time becomes the measure of the space described by sound, and as such, sound can be used to distinguish between the past and
future tense within a temporal arrangement. This is shown in *Blackbird Descending*. By imposing what Jiri Veltrusky terms as a ‘unity of sense’ on the accumulation of sounds foreign to the listener, the distinction between what has been heard and what has not been heard previously allows a formulation of a metrical structure to occur. This would allow it to become familiar to the listener creating a sense unity within the soundtrack. Once achieved, it then becomes likely that the audio will be conflated with the imagery of the film making it increasingly difficult to establish the image and audio as equal and individual components within film.

Film space in the materialist filmmaker’s work should not be limited to the screen only. It extends beyond to a space that includes both the filmmaker and the viewer. Yet any understanding of either the on-screen or off-screen space needs the actual position of the viewer to provide the absolute point of relativity. In the construction of space in materialist film, it is the position of the viewer that needs to be considered. They are the prioritized figure in the spatial constructs found in the work of materialist filmmakers.
Figuring Space; considering the figure in the construction of space as materialist film.

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