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***The Animator's Body: Feeling Negative,
Feeling Positive.***

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PhD

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A thesis submitted in partial fulfillment of the requirements of the University of Brighton for the degree of PhD.

Date:

A handwritten signature in black ink, appearing to read 'Vicky Smith', written over the date field.

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I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed

Dated

Abstract

This project is an enquiry into how imagery can be made onto film using the whole body as an instrument. It uses direct-on-film practice and case studies analysis. The research refers to experimental film theories of the material possibilities of the film (Le Grice 1977, Hamlyn 2002, Reynolds 2004), critical theories concerning the dynamics between technology and the individual, and phenomenological analysis of embodiment in relation to movement, space, situations, and objects.

To duplicate a series of near identical images physically and without a camera, the artist must assume a mechanized role. Lisa Cartwright proposes that the awkward positions of the animator's body can result in alternative manifestations of autonomous practice and experiment. (Cartwright 2012) In this project, bodily fluid, boiling animation phenomena and attempts to mimic technology shape an irregular choreography of process and production, and generate novel, unfamiliar markings on film.

This research involves use of the whole body, inside and out, and in close contact with the film surface. This emphasis on the physical process is theorised with reference to Laura Marks' metaphor of film's 'skin'. The tactile haptic image elicits an active viewing dynamic and is discussed in relation to how the artist uses the body as medium to variously protect, attack, invigorate, fuse, and intermingle with the materials and technology, and how in turn this reciprocity can shape a radically altered view of the animator's presence.

In his discussion of the mass-produced and the uniquely crafted image, Walter Benjamin during the 1930s proposed that positive experience from the alienated conditions of labour could be reached through the mimicry of technology. In the 'aura' of early photographic images, the object, through prolonged contact and exposure, mimicked and absorbed its human subject. Likewise, in the contact film method, material lengths spill out of the camera and possess the auratic capacity to be saturated with human bodily residue – traces which, in experimental film theory, testify to an autonomy of production and allegorize a refusal to comply with standardized dictates of industry. Where all the above theories relate to the film and its *viewer*, this thesis translates to film and its *maker*. It results in a unique camera-less film inventory of unfamiliar synesthetic images, generated through the body, which is drawn upon as a source of stains, marks, and energy.

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The Animator's Body: Feeling and Moving

Introduction

Definition of Subject: the General Area

The method of hand-painted camera-less film dates back to 1910, and is regarded in film history as a subgenre of the avant-garde (Rees 1999: 28). Relatively well recognised within experimental and avant-garde film, the 'direct' or 'handmade' film is little known elsewhere. To substitute for the camera, numerous alternatives are invented, including marking straight onto, or into, the film itself, and generating imagery through contact with objects and substances. Despite the limited means and scale of much of this work, the direct on film method yields a great range of animated imagery, from vivid colours to intricate subtle living environments¹, and from in-frame imagery to dynamic motion across the filmstrip.

The Thesis: Project Origins

For much of my 25-year experimental animation practice I have used materials and technologies in ways that customize and reinterpret the purpose for which they have been designed.² The gradual disappearance during the new millennium of both analogue film and collective film production workspaces meant that increasingly I was devising alternatives to laboratory processes and technologies, and hoarding cans of 16mm found footage.³ While analogue film had become disposable, film leader was doubly devalued. Its transparent surface had no signifying value in industry beyond its function of 'space'. I recognized affinities between leader as undervalued material and the unproductive feelings of fragility and failure that I was personally experiencing. Devitalised, I had to force myself to work, and I wanted to translate that mechanical feeling to the automatic types of movement in animated film practice. In this respect, Esther Leslie's reading of the irregularities and failures of bodies and technologies in the exhibition of contemporary animated drawings, *Shudder*,⁴ was a formative influence on my project. The research crystallized around these early concerns: how to rescue and

¹ Body fluids have been placed directly onto film and in this sense, the film becomes alive with enzymes and bacteria.

² My film, *Fixation* (2001), overexposes photo-paper to light, and burns it directly in the sun. In my series of *bodygrams* (2003), I lay on photo-paper and impressed it for hours with my leaky body which sweated and seeped into the paper. The image, formed through osmosis of skin and emulsion, was not hard-edged contrast, but rather dispersed, soft, leaky and dirty dis-colours. In *Hair in the Gate* (2009) the body entered and touched the inside of the lens and the camera to make contact prints. In *Rash* (1997), I scratched out imagery to make it hard to see, and to protect it from visual scrutiny.

³ Found footage is film material cast out from laboratories or film cutting rooms, and can be found in editing trim bins and in flea markets.

⁴ *Shudder* was an exhibition of animated drawings at The Drawing Room, London. March 2010. Co-ordinated by Animate Projects.

rework the clear film leader and marry it to themes of disposability and vulnerability, and also to locate through the practice the tenacity and resourcefulness of my body.

Thesis Enquiry

Within the field of experimental/avant-garde film, it is commonly held that the direct-on-film image is made by manual graphic methods. Even where bodies and bodily residue have been used directly on film, as in Stan Brakhage's *Mothlight* (1967), they have been applied manually to the strip. My concern is how the animator's body in its entirety, outside and in, can be used as an image-making tool with which to build a tactile film inventory. Jennifer Barker's methodology of traveling from the epidermis to the visceral core in the *viewing* body experience of cinema is an influential model that shapes this enquiry into the full body *making* of film (Barker 2009). The practice will take a similar shape to that of Barker's enquiry (see page 30 for a fuller account) as it uses the outside of the body – its skin and surface – to make images, through to use of fluids that issue from the orifices, such as saliva and tears, followed by the muscular/skeletal system, and the body's proprioception as a source for marking film.

Finally, the project encompasses the less tangible dimension of human embodiment: the life force, energy and will, without which there is no desire to be animate. I investigate how feelings of vitality or inertia might be expressed and seen to manifest in film colour, kinesis, pulse and flow. The body is unaccustomed to certain manoeuvres that are required for making film without cameras, and I examine what happens when it is put to this purpose. Likewise, what happens to film made by the body alone? We experience pain and difficulty when forced to move like machines, yet the complications arising from coupling with technology are not insurmountable, and while the marks and patterns on film are liable to lose their metric character, they give to film a new vocabulary of richness and fragility. As I will demonstrate, this small gauge physical film practice generates a strong and sensual synaesthetic experience for both artist and audience. It is a cinema of contact, radically lo-tech, resourceful, and DIY.

Key Analytical Frameworks: Matter and Contact

1. Matter

Experimental film theory offers analytical perspectives on the role that cinema technologies and film materials of the frame and strip play in making meaning. Cinema phenomena of light, dark, and flicker; processes of (positive and negative) image reproduction; duration as a structuring determinant; expanded cinema; the role of the projector; medium specificity; reflexivity and matter as a technical support are all concerns of the experimental sector and have been analysed by scholars and historians including: David Curtis; Al Rees, Lucy Reynolds, Mary Ann Doane and Rosalind Krauss, and artists who have theorised their own, and other, practices such as Nicky Hamlyn; Malcolm Le Grice; Annabel Nicolson and Carolee Schneemann, all of whom I refer to in this investigation. Laura Marks' metaphor of film as 'skin' shapes my argument of medium specific/body specific and why certain media, or matter, lend themselves to particular aesthetics, and in relation to my research into the capacity of camera-less film to represent the fullness of the body.

2. Contact.

In its materialist experimental sense, and as Le Grice defines it, contact with film matter is an important factor between film and film-maker at all stages. The research also draws upon a phenomenological framework to analyse the aesthetic and experiential role of making contact with matter and feeling and touching as embodied, intentional reaching toward and responding to the material world. As Merleau-Ponty proposes, we understand things and spaces not purely through the intellect, but through being amidst them. 'Our relationship to space is not that of a pure disembodied subject to a distant object but rather that of a being which dwells in space relating to its natural habitat' (Merleau-Ponty 2004: 42-43). Lisa Cartwright draws on the idea of being embedded within things to examine the somatic manifestations of pleasure and frustration that arise from encounters with animation tools and materials. As she suggests, the rotoscope screen is an affective zone that is thick with all the movement that crosses it (Cartwright 2012: 55). In contrast, I will research the possibility of making the filmstrip thick with contact: both the strip itself as material and the space of the projected immaterial image.

If for Laura Marks, film's 'skin' is a form of cinematic representation based on the

sense of touch, my research pursues cinematic representation *made* through physical methods. Physical film is particularly suited to capture the energy of the body, as the imagery does not have to be contained by the film frame, and the method is more direct, and more urgent. Each frame is one of a kind, like life itself,⁵ brimming, boiling and animated. At the same time the film, no longer contained within the camera, is unprotected and open, allowing it to become thick with repeated bodily inscriptions and over-layering. Bodies are secreting, irregular and break down, and when they touch film or mingle with technology they are forced to move in unfamiliar ways, and this impacts upon the marks that are made on film. The relationship of the body to technology is analysed with reference to Esther Leslie and Walter Benjamin.⁶

Other interpretive paradigms impact on this enquiry, but are not pursued as main concerns: the use of analogue film inevitably forms a resistance to notions of progress and consumerism, and the discourse of obsolescence should be acknowledged: as a circumstance of our times, the debate on ruins and the outmoded catalyzed the research and made it more urgent. However, I have not pursued this as a main theoretical approach, as the use of defunct technologies has not been a continuous concern throughout my oeuvre in the way that the animated body, touching, feeling, breathing, and moving have been.

Psychoanalytic, feminist perspectives on the abject and the formless relate particularly to aspects of this project, as does Julia Kristeva's enquiry into the relationship between language and loss, and the female body as it is constructed as leaking (Kristeva, 1987). However, analysis of the 'l'informe' has already been undertaken in relation to films made without cameras by Kim Knowles (2013) and I will not pursue this here. Instead, the phenomenological framework is more productive than a psychoanalytic one for analysing the sensuous character of physically marking film.

Main Project Enquiry/ Aim

To investigate how the animators' full body can be drawn upon as a tool and resource, for making contact with, and marking directly onto film and creating

⁵ A claim of early cinema was that it was like 'life itself' (Doane 2007: 126, and a claim of the handmade film is that it is 'the flow of life one is watching, as though the bloodstream had been magnified to fantastic proportions (Cantrills 1971: 5).

⁶ Leslie gave a keynote presentation at a symposium I co-convoked at UWE in 2010: *Animation Deviation*. She addressed John Gerrard's *Sow Farm* (3D model simulation 2009), a factory farm in which no creatures are visible in the closed chrome structure – the lake of effluence collecting outside the prison is the only evidence that soft and sentient beings are held within. This image made a strong impression on me, that to be leaky is to be sensitive, living, and moving.

types of imagery that could not be achieved through the use of cameras.

Project Questions

- a. How can the body be used as a medium (as trace, stain, index, and texture) directly on film and in relation to actions of attack, caress, and motion?
- b. How does the physical demand of repeated handling of and copying film frames and technologies permit possibilities for enfolding, intermingling, and integrating with materials, and in which ways is tactile making apparent in the perception of the work itself, as unfamiliar, haptic, synesthetic, dispersed, and irregular?
- c. How is work directly onto film mediated, if not by the camera? How might technology be partnered and/or adapted/customized into effective systems for marking onto film?
- d. How does camera-less film communicate the energies and imperfections of the body, and in which ways can plotting, controlling, and marking directly onto film as a live event offer novel registers of presence?

I will tackle these questions as a set of concerns that underpin and inform the entire enquiry, running through the theoretical areas, the case studies, and my own practice.

Thesis Structure

I examine firstly, in Chapter One, the area of experimental, avant-garde film from the 1960s to the present in order to sketch out a foundation for understanding material, structural, and perceptual aspects of manual reworking of film. More recently, Schlicht refers to certain artists' insistence on having a physical engagement with their material that is not possible with digital technology (Schlicht 2011: 39). The review of *material* aspects of film made without cameras is developed then to analyse the *physical* and *feeling* aspects of experiences of making this work – the affective relations between bodies and film technologies – and how tactile making becomes haptic viewing. How do haptic images appear? They use soft focus, containing too much or too little detail and are hard to see and so the eye must touch them not by penetrating into depth, but by spreading over the surface (Marks 2000: 137). Laura Marks' study of the haptic as a strategy for protecting the film image by caressing or damaging it, and her metaphor of film as 'skin' is significant in relation to my materialist use of film leader, which itself is an outer layer charged with the function of protecting the body of the film.

Lisa Cartwright's enquiry into the inter-subjective layering and intermingling of rotoscoped figures with animators' bodies offers a further means to think about how the screen might be saturated with the body and made 'flesh'. In order to create flowing rotoscoped sequences, the animator's body is forced into awkward positions and irregular movements. Physical mimicry of reprographic technology leads to mistakes in film imagery and those errors are analysed by Cartwright in positive terms as desirable imperfections. Through her research into the pleasure and stimulation arising from artistic experiment with animation technology, the 'compulsive effort to move forward and push the limits of the form' (Cartwright 2012: 68), she reclaims the experience of the body, which toiled in the assembly line production of animation (Cartwright: 52).

Benjamin's theory of the aura can also help to explain incentives for complying with technological imperatives, as a dynamic exchange in which the body is not so much dictated to by technology, as objects are invested with bodily residue and made more auratic. The aura is examined from the perspective of the prolonged contact time between the subject and the camera, a period during which the subject is transmitted into, and absorbed by, the sensitive photographic ground. The direct on film method lends itself to such extended exposures; its open surface offers possibilities for multiple inscriptions, stains and physical traces, and it is meaningful therefore to examine this work as auratic. Residues on film provide evidence that contact has occurred and are proof of an authenticity that Doane would claim is yearned for. Marks in the handmade film are not as regular or stable as mechanically reproduced imagery, yet flaws and imperfections are sought after because they point not to realism, but to the source and ground of the body.

Experimental film theory identifies that the appearance of film made without cameras, and in which object and ground are brought into contact, makes the image difficult to recognize (Le Grice 1977: 35; see page 19). In Chapters Two and Three, I analyse through primary readings of case studies what happens to both the physical body and the film material that gives it this distinctive character. My case studies have imagery which is haptic, and is either affectionately protected or vitalized through layered, textured, grimy residue, or attacked with scratches or fluids. In the tactile film/performances *Fuses* (Carolee Schneemann) and Annabel Nicolson's *Reel Time* (both 1970s) the themes of locating and

representing synchronicities between the artist, her tools and her feeling for materials helped me to theorise my own procedure, which is to draw on both the matter and the energies of the body. Camera-less practices made between 1999 and 2010 by Thorsten Fleisch, Emma Hart and Jennifer West are compared with each other and in relation to theories set out in Chapter One to analyse how physical actions of measuring, stopping and holding film material impact both the body brought to the site and acts of making and the subsequent patterns and marks that are made on film.

In Chapter Four, I analyse my project, discuss the rationale for the various methods I used to make contact imagery on film and comment upon how the outcomes of practice advance the initial enquiry. I find that the camera-less film is a fruitful technical support for the nature of this enquiry, as it accommodates and facilitates my interest in physical seepages, traces and extended exposures. The set of films made for this research are haptic, partly due to their unfamiliarity, a strangeness arising from unusual perspectives on parts of the human body, along with irregular ways of using the medium in which imagery is dispersed across frames, energetically and imperfectly, and seen in extreme detail. I comment upon how the performance of bodily contortions constitutes a reverse engineering in terms of joining film's beat to a human pulse, and how the work uses synesthetic methods to instance a fusing, enfolding and intermingling with mixed technologies and as a means to communicate the fullness of the body. In relation to the animator's body, I discuss how the body replicates film tools to generate hundreds of near identical images. The direct on film process is subject to repetitive touching, and soiling with physical residue and this makes it auratic and indexical in the sense that the mark on the film is a trace of the thing that caused it.

At its birth the cinema's most striking characteristic was in fact its indexicality, commented upon in countless newspaper and magazine articles that heralded the new technology's ability to capture time and movement...[as] "life itself" (Doane 2007: 126).

The practice is evidence that the trace of 'life itself' (Doane: 126) can be captured and sustained through direct-on-film work, even though neither camera nor photography are involved.



1. Aldo Tambellini, *Blackout* (1969). Contrasting marks from scraped emulsion.



2. Norman McLaren's calculations.



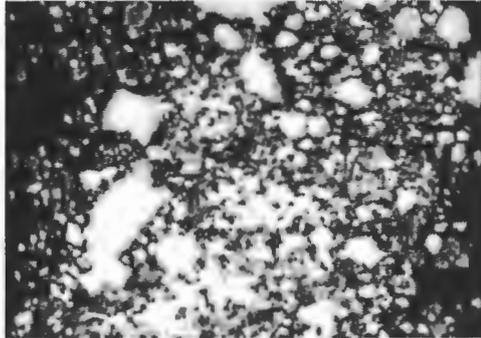
3. Len Lye, *Free Radicals* (1958)



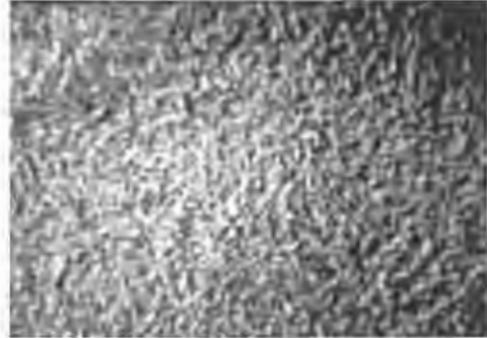
4. and 5. Len Lye, *Rainbow Dance* (1936). Stenciled flat human forms bounce with energy and colour.



6. and 7. Stan Brakhage, *Mothlight* (1967). Bodies, wings and seeds occupy 3 or 4 frame groupings, and their regular placement makes them partially recognizable.



8. Man Ray, *Le Retour à la Raison* (1923). Salt is a metaphor for film grain.



9. N. Hamlyn, *Risoni* (2004). Assertion of the film surface.



10. In both *Le Retour à la Raison* and *Mothlight*, tension is established by positioning things both within the frame and along it.



11. Brakhage, *Chinese Series* (2003). The thumb as a tool can be felt arcing around the frame.



12. Brakhage, *Way to the Shadow Garden* (1955) encapsulates the rejection of the optic for the haptic.

Chapter One.

Section One. A Cinema of Contact: Surface, Depth, Power and Sensuality

This chapter introduces key theories and seminal writings from experimental film theory and practice. Corresponding to claims and intentions of modernist art of the same 1920s-1970s period, this theory is concerned to implement autonomy of making and to interrogate its own condition: the language, forms and principles relating to the film material and the cine apparatus of the frame, image registration, reproduction and (dis)continuity. I look now to key voices in this sector that have addressed the specific area of camera-less film to establish how it has been previously defined and analysed.

Film historian David Curtis'⁷ interest in the camera-less film lies within its possibilities for stimulating new perceptual experience, in that objects registered directly on film create completely new appearances (Curtis 1971: 17). Although he has historicised experimental film since the 1960s, I turn to a recent statement by him in relation to the question of why the medium of analogue film is so important today:⁸ 'It is hard to imagine a world without celluloid films and the film projector. So many artists have found their way to film-making through a response to the filmstrip and to the extraordinary transformative power of the projector' (Curtis 2012: 62).

Curtis is reflecting on the particular material qualities of film as plastic object, which can be physically manipulated, and the projector, which illuminates, magnifies and sets into motion this film material. The film projector performs a highly active role in much experimental expanded cinema and frequently involves modification of the film running speed or total disengagement of the film from its frame-by-frame mechanism to be pulled through manually. Frequently, the projector shares the viewing space as in a gallery situation, and is felt as a noisy presence, establishing a continuous background rhythm. In my case study *Reel Time* (see Chapter Two), it has the role of central protagonist (Lucy Reynolds 2004: 13). With the projector present, film's materiality is foregrounded in that cuts and repairs to film material audibly jolt the mechanism.

⁷ Between 1977 and 2000, Curtis headed the Arts Council of England film sector, fostering numerous artists' films and nurturing artist-run spaces such as The London Film-Makers Co-op (see footnote 12).

⁸ Tacita Dean's Turbine Hall installation and publication *Film* (2012) at Tate Modern showcased film industry skills and the permutations that are possible from using mechanical masking techniques and matte devices.

Curtis considers Len Lye as a key figure who ‘responded’ to the strip and who, in his pursuit of kinetic art, is credited as a forerunner of the direct on film method (Curtis 2007: 134). Lye is significant to the genre in that, through his dancing lines made directly across the filmstrip, he freed animation from its mechanical frame-by-frame method (Curtis 1971: 36). The process of frame-by-frame film-making is often laborious and could be seen to inhibit the kinetic quality which is present in Lye’s works. Lye’s promotional commissions pioneered previously unseen types of rhythms and image evolutions. The direct method of composition offered him an opportunity to explore film colour, surface and movement. ‘He made *Rainbow Dance* (1936) for the GPO into an essay in non-natural colour, with moving actors rendered monotone and flat like the stenciled shapes that surround them’ (Curtis 2007: 136).⁹ Curtis remarks upon the two outstanding features that can be achieved by marking directly onto film – the non-natural colour and the flatness of the imagery. As he observes, Lye’s treatment of the human figures reduced to flat printed shapes are given little importance beyond their ability to move. Why did Lye use the figure in this reductive way? It’s as if, in a modernist enquiry into the conditions of the film medium, the bodies are reduced to flatness as a means to emphasize the picture plane and to assert the kinetic character of film itself. It’s also perhaps a reference to the dynamic creative process through which Lye energized his own body and being (Smythe 2013: 85).¹⁰

The enquiry into the nature of the shallow film surface space is important for my research. The surface is that which visibly lies on the outside of objects has substance and can be touched as well as seen. As I will show, several camera-less film-makers have exploited this tactile potential and the reactions that come about through rubbing, joining and mingling with matter. The celebrated achievement of cinema is its ability to capture on film an impression of deep space, yet this space cannot be touched. Though touching film leaves marks on its surface level alone, the viewing experience created by these inscriptions can be powerful and deep. Some scholars regard the touching of film as a means of accessing and stimulating depth of experience – that of subjectivity, interiority and reciprocity, so much so that the surface is invested with the viscosity of ‘skin’ (see section two for this discussion).

⁹ Lye’s *A Colour Box* (1935) has no photo imagery and is purely camera-less. I’ve chosen, however, to examine *Rainbow Dance* as it bears a similar title to one of my case studies, *Rainbow Party*. The rainbow refers to the spectrum of colours, and direct-on-film is reputed for its colour palette.

¹⁰ Smythe reads Lye’s work as a development of pure abstraction, claiming that his interest lay with an embrace of somatic energy as a means to counter socially prevalent forms of corporeal discipline and control.

Film's surface can be quickly worked on, and Curtis cites artists' who 'compose' directly on this filmstrip. The term 'compose' is borrowed from painting or music and many camera-less makers do refer to other art forms of dance and music in their titles. One such example of powerful direct on film surface work is Lis Rhodes' *Light Music* (1975), which is composed on the strip systematically by manually applying striped graphic design transfers to the film. Curtis observes that, contrary to its strict 'orchestrated' organization, the film simultaneously 'overwhelms' (Curtis 2007: 234). I will describe my own encounter with the work: the film, screened from two projectors at opposite ends of the room, meets and clashes across the central space. The image on the 16mm film surface occupies a very small area, yet on projection the tiny horizontal lines are massively enlarged, forming an impression of grids or rungs. These bars completely fill the auditorium, intermingling with and crossing each other, rendering a thick and almost impenetrable deep space through which the viewer might traverse. Phenomenology explains how space is made thick through our embodied experience with the world, as we are simultaneously folded into and demarcated from it through our perceptions (Merleau-Ponty 2004: 43):

Space is composed of a variety of different regions and dimensions, which can no longer be thought of as interchangeable and which effect certain changes in the bodies which move around within them. Instead of a world in which the distinction between identity and change is clearly defined, with each being attributed to a different principle, we have a world in which objects cannot be considered to be entirely self-identical, one in which it seems as though form and content are mixed, the boundary between them blurred (Merleau-Ponty: 38).

The image is made through Rhodes' manual contact with the medium, and it is also experienced as a type of haptic perceptual contact. The light and noise strike the bodies and senses of those who pass through these dense lines (suspended in the mist from the humidifier). The sense of overwhelm is doubled because the image area also forms the audio track,¹¹ exposing and capturing the viewer in a

¹¹ Analogue film projectors read sound as light, hence audio is known as optical sound. This sound can be seen if it strays into the picture area of the frame. It is a phenomenon of 'two projections in one projector' (Hamlyn 2011: 215) This synesthesia is what Rhodes exploits in *Light Music* and also in *Dresden Dynamo* (1974), made using a similar technique, to address, among other concerns, state violence.

sensory onslaught. Significantly, in this piece of two projection-expanded cinema, marks on the film surface carve out a perceptual space (and arguably an actual one if we accept that mist is substance that holds the light) as deep as that which can be captured through a lens. This is a good example of the transformative power of the projector that Curtis refers to.

It was possible to stage such expanded works as *Light Music* in the LFMC¹² open auditorium, a film laboratory in which artists could shoot, process and screen their work, allowing them complete autonomy from the film industry. Film practitioner and theorist Malcolm Le Grice was instrumental in establishing the Co-op, and his theories on aspects of tactility in film are of value for my research. His chief concern with the handmade film is how the material properties of film itself might be reflexively addressed as the film's subject matter. In discussion of his own practice, and that of Wilhelm and Birgit Hein's (*Roh Film*, 1968), Le Grice remarks,

[These films] create much of their experience through evident tactility and evident process: traces of the film's handling are deliberately retained. They attack the implicit alienation in the film process which loses contact with the vital stages of image transfer and chemical development, and both are the result of contact between the film-maker and film at all stages (Le Grice 1977: 118).

Le Grice refers to the implicit 'alienation', which comes about through the severance of labour from the object of production (see also Macey 2002). Materialist film-making aligns itself with such critical theory and does not attempt to conceal the labour involved in its production – human contact on film-stock serves as a reminder of the physical effort involved. Stains and traces (such as fingerprints, dust and moisture) are considered as marks in their own right and invite interest as to the type of contact that establishes them (Le Grice 1977: 118). As Le Grice states, the trace of the artist's body on film stock is valuable in pointing to film as an autonomous object, which is necessarily handled throughout its production, signaling that the artist has sole control of his labour and independence from the industry. Le Grice continues by addressing the specific

¹² The London Film-Makers Co-op, equipped with its own cinema, distribution centre and workshop, facilitated the freeing of film from industry demands and fostered an autonomy of practice. The ethos of self-skilling relates to the branch of critical theory, and thinkers such as Adorno, who maintains that aesthetics should affirm individuality and resist industrial standardization (Bronner 2007: 70).

area of the camera-free film in Man Ray's *Le Retour à la Raison* (1923),¹³ which comes into contact with actual chemicals and substances. Ray sprinkled salt and other matter in a seemingly random way across the filmstrip. Instead of observing the individual frame-line by placing the grains in the same place over a series of frames, thereby creating an animated illusion of one single cluster dancing in time, Ray opted for the more spontaneous distribution of things along the length of the film thereby allowing the projector to impose a frame pattern at a later point.

A.L. Rees also refers to the abstracted qualities of *Le Retour à la Raison*: '[the film] begins with salt, pepper, tacks and saw blades printed on the filmstrip to assert film grain and surface' (Rees 1999: 43). The texture of salt crystals is not dissimilar to the grain of film, and, as Rees observes, by placing such condiments in direct contact with the filmstrip, the revelation of, and reference to, film's intrinsic composition as grain is brought to the fore. When no camera is used, marks impressed upon the filmstrip lie on the surface level and expose the true condition of film as a humble coating of emulsion. In this sense, *Le Retour à la Raison* asserts a new language and introduces a cinema of contact, proximity, shadows, de-familiarization, of tiny things blown up to large proportions and in all respects more real, actual and present than the realism as seen through the lens. The filmstrip, like a slide under a microscope, reveals to us detail such as atoms, strata and cells which otherwise can go undetected by the naked eye. In this respect, direct-on-film has a forensic quality, and the artist's studio acquires the character of a laboratory – a space of investigation of matter, the inspection of which is enabled through the magnifying animating powers of the projector.

Le Grice develops the idea that the contact film is apparent to the viewer as a different, 'unfamiliar' procedure. He observes that the method abstracts objects by flattening and silhouetting them into shapes dissected by frame-lines, thus alerting us to this different material and photochemical procedure and the knowledge that film has a 'material nature' (Le Grice 1977: 35). This point is crucial to the analysis of camera-less film as tactile material, and I will make it explicit: we are alerted to the material nature of film through our embodied awareness that in order to make an impression on a surface it must, like us, possess substance. Markings on the film surface are able to occur because it is a plastic object, and the trace of this

¹³ The photogram is made by placing objects onto light sensitive paper, exposing the paper to light, and then developing the image. It is like the contact strip in which 35mm film negative is pressed onto photo paper to make a positive print.

touch is evidence that contact has taken place (I develop this point on page 44 with reference to Mary Ann Doane). For Le Grice, the failure to accurately register successive hand-drawn images is seen by him as drawing attention to film material (Le Grice 1977: 71).

Although it does use photography on film, Nicky Hamlyn's *Risoni* (2004) has a similar aim to that of *Le Retour à la Raison*, of simulating film grain. This work bypasses the ordinary method of in-camera superimposition for the less common sandwiching together of two film loops run through one projector. The layers, bearing imagery of rice shaped pasta, are slightly misaligned. Otherwise steady, the movement in the image occurs as a result of mis-contact, as though the strips are reacting to one another and causing friction. The contact in projection throws the imagery into relief, causing it to jiggle, swarm and boil, and rendering it much more alive than Man Ray's darkroom contact method of fixing shadows into place. As with *Light Music*, highly sensual things come about when bodies come into contact with and intermingle with one another. In the film industry contact with film is minimised, yet this quality of contact is core to my enquiry of what occurs when surfaces touch. As Hamlyn himself observes, any form of contact with film brings about its deterioration, including even the passage through the projector, which, while it conveys the film, is a 'perilous' encounter (Hamlyn 2011: 213-4). Importantly for my research into how contact between bodies offers possibilities for intermingling, Hamlyn observes that the viewer of *Light Music* might choose either to step into the path of the projected light beams or watch others do the same. This point is made by him to illustrate that the type of experimental work made at the LFMC was not purely concerned with the material substrate, but in fact that abstract forms could stimulate strong aesthetic experience (Hamlyn 2011: 216).

Hamlyn develops the line of Le Grice's enquiry into process and the unusual appearance of film made without cameras, suggesting that the graphic range and the materials typically used in this area give handmade work its own recognizable lexicon:

There is a familiar vocabulary of marks and images that characterise the camera-less film: scratched, drawn and painted shapes made directly on the filmstrip; hand tinting, shading and overdrawing on found footage as

well as the use of Letratone, Xerox imagery and the celebrated wings and petals of Stan Brakhage's film *Mothlight* (Hamlyn 2002: 163).

Mothlight (1967) is significant for my research into the use of my own body for imagery direct onto film, in that it is the first to collage the actual matter of bodies to the filmstrip. Hamlyn takes the film as an example through which to define his interest in questions of film phenomena and how the patterns, textures and movement reveal film's character as a series of frames. One distinct feature of direct on film, not possible with in camera work is the possibility of registering a mark both within the frame unit, and also along the strip itself (see page 24 for explanation). As Hamlyn sees it, *Mothlight* achieves both at once (Hamlyn 2003: 66). My own interest in *Mothlight's* wings and petals as patterns of transparent material differ from Hamlyn's, in that my chief concern of what happens to the framing of the matter is of equal importance to that which happens to the body: when they fall outside of an individual frame area, the moth wings are severed by the frame-line. The technological rupturing of these delicate forms emphasises their fragility, lightness and irregularity of form, compared to the even-ness of the frame-line, which routinely guillotines any matter that strays into neighbouring frames. This sense of fragility also derives from the frayed ragged edges and subdued fading dusty brown speckles of these wings (see Figures 6 and 7). For Lye, the lurid, non natural rainbow colours are equated with vivacity and life, in contrast to *Mothlight's* colours of mortality, and yet it is precisely the fragile colour of the wings which, for Schlicht, makes them beautiful: 'Brakhage arranged the translucent wings of insects on the filmstrip according to basic rules of music and thus produced cinematic images – structures, forms, and colours of fragile beauty – that scarcely could be captured by a camera (Schlicht 2010: 34).¹⁴

The examples I have discussed so far: *Light Music*, *Risioni*, and *Le Retour à La Raison* are all black and white film, yet camera-less film offers a palette of both brilliant 'non-natural' (Curtis) and 'iridescent colours' (Schlicht 2010: 34). Claims for the colour and beauty of the direct on film method by Curtis, Sitney and Schlicht span 50 years. As Sitney observes, up until camera-less work, film was not able to support the intense colour and texture that could be achieved by working directly onto its surface. Graphic film-makers wanted to avoid contour

¹⁴ Esther Schlicht curated *Zelluloid: Film Ohne Camera*, the largest exhibition and colourful catalogue solely dedicated to camera-less works, held in Frankfurt at the Kunsthalle, 2010.

impressions, and to have forms which lay only on the film surface. However, depth was achievable through the texture and layering of the actual substance of paint on film, opening up possibilities for dense impasto which, in Brakhage's work, creates ochreous hues, blue walls and lattice-works in which cracked holes and crevices allow light to poke through (Sitney 2008: 251).

The direct application of paint to the surface of film transformed the dynamics of the graphic film. Colour could be rendered more vivid than it could by the photographic process; the different kinds and densities of paint opened a range of texture hitherto ignored; and above all the problems of shape, scale and the illusions of perspective which the early graphic film-makers inherited from the painterly and photographic traditions could be bracketed by an imagery that remained flat on the plane of the screen and avoided geometrical contour (Sitney 1974: 233).

Paint and dye shows clearly on film leader which, with the exception of stray flashes and stains, has no colour of its own nor does it bear photographic imagery. Wees observes, 'When a film's starting point is entirely neutral, imageless leader, the emphasis falls entirely on the dance of lines, shapes, textures and colours created "out of nothing" by the film-maker (Wees 1993: 31).¹⁵ As Wees states, the types of marks that tend to be made on leader derive from the film-maker's imagination and do not exist as actual form. This observation contradicts the fact of *Le Retour à La Raison* and *Mothlight*, in which real substances are attached to the film leader. It is possible for camera-less film to be created out of actual matter. Even when no camera is used, the film emulsion can still record and hold the impression of things. Ultimately, though, these concrete things on film are often too large to be contained by the frame, and are severed by frame-lines, or too fiddly to fix in the same place precisely – they jump about with a frenetic pace and tend to move in several directions across the screen. Even though actual objects are used, then, their source and referent is unrecognizable. As Wees states, and as Le Grice before him observed, they end up becoming abstracted into purely dancing lines shapes and textures.

¹⁵ Wees is one of a few scholars to survey this area. He has also conducted studies into wider areas of avant-garde film, such as the book *Light Moving in Time: Studies in Visual Aesthetics of Avant-Garde Film* (1992), which indicates that his main concern lies with film as an object of visual perception.

In the two films, *Le Retour à la Raison* and *Mothlight*, materials are spread across the film in a way that would be impossible to achieve by using a camera. To clarify this possibility of working within the film frame or along its length, Hamlyn continues with his taxonomy of marks on film by identifying two key approaches – that which marks inside the frame area as animation, and that which ignores the frame line by working across the strip to exploit relations of motion. ‘This procedure ignores the frame-line, which in any case does not yet exist on the raw film stock. The film-maker works along the length of the film knowing that the projector will impose a frame pattern on the work when it is shown’ (Hamlyn 2003: 66). As we’ve seen, imagery in *Le Retour à la Raison* and *Mothlight* (see Figures. 6, 7, 8, and 10) cuts across the strip and ignores the repetitive frame unit which imposes on film an illusionistic smooth progression of action. As Hamlyn defines it, when artwork is applied in lengths to the filmstrip, the single frame only exists at the point of projection, when it is briefly held still and separate from neighboring frames. He refers to an installation *Bwlhaictke* (1976), by Rhodes and Kerr, consisting of two one-hundred-foot loops of black and clear spacing, shown side by side on the gallery wall. The film is exposed to atmospheric conditions of projection and contact with the ground and air, and through the persistent distressing eventually switches conditions – the black spacing loses its density becoming clear as the emulsion is scratched away, and the clear roll gets soiled and blackened (Hamlyn 2011: 213-6).

The themes that this work proposes, of contrasts brought about by exposure, helps to locate my own enquiry into marking film: in *Bwlhaictke*, as with other ‘weathered’ films,¹⁶ degeneration just happens as a consequence of concentrated wear and tear, catalyzed by exposure to the elements and technology, whereas in my own practice, the marking is volitional. To touch film is to damage or repair it, to protect it, or to absorb it: in the case of Albie Thoms, the defiling of film is framed as defiance (see page 26) and in the case of Nicolson (see Chapter Two) film is destroyed in order to interrogate the image and the role of the female body. The area I am developing is that in which marks on film are forced and framed as an active intervention. The imagery points to an intention, often as a statement of the artist’s sheer presence: a finger print as an indexical indication of existence in

¹⁶ The ‘weathered’ film genre is one in which atmospheric damage is used as an agent for marking film. David Gatten placed unrolled film in a crab trap, and then allowed the ocean to inscribe imagery onto the filmstrip (*What the Water Said, No’s 1-3*, 1997-98). Alia Syed buried her 16mm film, *Priya* (2008) allowing earth to eat the imagery.

embodied form – a proof of corporeality, which is impressed and communicated in matter.

Section Two: I Leave my Trace: Presence and Intention

Merleau-Ponty proposes that our relationship to space, and the objects and regions within it, is understood through our distinctive bodily features (Merleau-Ponty 2004: 42-43). In this section I move my attention from the aforementioned materialist pieces – in which marks typically serve to reiterate the film material – to questions of who made them, why, and what type of space is created by the animator as she relates to her habitat of film materials and technologies.

The trace or residue may seem accidental, or it may point to evidence of a practiced hand and a reflexive process. Sitney reads Brakhage's work in such a light, suggesting that the removal of film stock is a reference to the artist's presence, underscoring what he alone can see. The search for self-awareness is developed as the artist gradually migrates away from the photographic, and toward the handmade tactile film (see Figure 12).¹⁷

The film-maker scratched with a sharp instrument on the film stock itself, so that a set of brilliant white stars shimmers over the blind man's eyes, changing slightly from frame to frame. By attacking the surface of the film and by using materials which reflect back on the conditions of film-making, Brakhage begins to formulate an equation between the process of making film and the search for consciousness which will become more clearly established in his later work as he gains greater confidence in the truth of the imagination (Sitney 1974: 158).

Brakhage's work, as a type of image made without a lens, develops the purely material enquiry from direct-on-film and introduces a new concern for the possibility of touching film – that is to frame the presence of the artist as a dramatic intervention with film material. The metaphorical image of blinding dramatizes the rejection of outward seeing to suggest that, for Brakhage, introspection and self-knowledge are inseparable from practice, reached through by physically marking and feeling the film. For Brakhage, touch is closer to truth

¹⁷ US avant-garde film theory of the same period places importance on the role of the artist as an embodied presence. Sitney's metaphorically titled *Eyes Upside Down* (2008) reminds us of the centrality of embodiment in his enquiry as a continuation of the visionary (*Visionary Film*, 1974) and looking at things from an unusual perspective.

than vision. Yet to erase photographed imagery of the eyes, as he has done, is brutal (and no wonder that Sitney describes this action as an attack).

For Brakhage, attacks on film stock articulate his search for inner knowledge, while for self-termed underground Ubu film group member Albie Thoms, work directly on film is framed as a radical intervention, a cheap alternative to, and rejection of, industry methods. The first to use body fluids of urine and saliva by 'biting' film stock in 1971, Thoms endorsed such types of contact as a critical stance in which he refers to principles of handmade film as a 10-point manifesto. I repeat here just point 5 as it is most useful for my enquiry:¹⁸

Let no media be denied the hand made film – they can be ... scratched, scraped, drawn, inked, coloured, dyed, painted, pissed-on, bitten, chewed, filed, rasped, punctured, ripped, glued, stuck on to, burned, buried, or bloodied with any technique imaginable (Thoms 1997: 77).

Thoms sets out what appears to be a thorough extended inventory of handmade film methods. Made from scraps of film and using materials of the body, these are cost free alternatives to the expense of the film industry. He identifies numerous highly vigorous modes of interacting with film, including body fluid, used in his own *Marinetti* (1969). However, for the most part these interventions exist more as an idea than as a fruitful source of imagery on film. Biting the film is unlikely to leave much of a mark on it, as unlike putty, with which it is possible to make a cast, there is only a thin gelatin coat to sink the teeth into. The possibility of corporealising film seems, for Thoms, to lie at a conceptual level, as a form of graffiti and a defiant anti-industry stance in which film is shown to be un-precious and not overvalued. Len Lye vocalizes the importance of transmitting physical energy into film by compressing and channeling it via his hand, but Thoms radiates beyond the manual, and out to the full body as tool and media. While various artists have used their whole body as an instrument (Nam June Paik used his head to paint a line in 1962 – see Figure 63), it is not so easy to focus non-specialized body parts to aim on 16mm film. Lye's hand is an obvious tool with which to target fine lines into the small frame, but like Thoms, using other parts of the body to mark film is

¹⁸ Direct-on-film practice in the Australian Underground sector includes, Thoms *Marinetti* (1969) and currently Dirk de Bryn who performs visceral events with film in which he conceives touch as an invasive yet reparative enactment of trauma. *Trauma Dream* (2002).

the challenge of my own research. Canadian avant-garde scholar William Wees observes,

As methods of modifying found footage become more complex, the viewer's attention increasingly shifts from the photographic content of the found footage to the textures, colours and rhythms created by the filmmaker's methods of effacement and erasure. The strip of film itself becomes the principal object of interest (Wees 1993: 29).

Wees suggests that textures and colours arising from the defacing of photography is of significance, yet his emphasis remains on the filmstrip itself. Later, however, he refers to this effacement as 'graffiti- like (Wees: 29). In graffiti, the site and surface of inscription has importance, but more significant is the artist's mark left upon it as a residue, an index of the artists' intentions to register embodied presence. Krauss defines this in relation to the prehistoric prints found in the Gargas caves in which negative impressions of hands are left upon the surface by blowing pigment around them, 'No matter how simply I leave my trace' (Krauss 1994: 151). Krauss describes the type of mark and motivation behind this primitive image making. Her theories are central in locating my own research enquiry, in which printing the self is as much about a direct and urgent relationship to making as it is about the site or support. It could be argued that the cave wall, like the filmstrip, is a surface but when intentionally invested with the residue and deposits of human bodies, it becomes sensitized, like skin.

In My Hands: Haptic Visuality and Protecting the Image

The previous section offered experimental/material perspectives on film, yet if the film surface is re-imagined as a live and responsive organ like skin, the framework of phenomenological embodiment can enhance our understanding of this type of work. This section develops the enquiry into how tactile engagement with film material is experienced and perceived at both levels of making and viewing.

Schlicht refers to the insistence that contemporary artists have on a physical engagement with their material, preferring to work with matter than with the immateriality of digital technology:

Camera-less practices seem to be experiencing a new renaissance on a new level in the context of contemporary art. In a world permeated by immaterial digital media, especially young artists are discovering the aesthetics of celluloid as a material, as its sensory, in particular tactile qualities can scarcely be achieved in electronic images (Schlicht 2011:39).

Schlicht's use of the term 'renaissance' implies that camera-less film practice, having been exhausted, has now been taken up in contemporary art. I would argue that camera-less approaches did not so much lapse as the fine art establishment, in the 90s, began to embrace this work. Yet because of this inclusion in the light and open gallery space, the projector and the film occupy the same space as the audience. These exhibition conditions have altered the general perception of film, promoting an awareness of it as a touchable material, with different size reels and gauges, types of projector and mechanical noises. The Tate Tanks is one example that has hosted *Light Music* and Film Aktion events in 2012,¹⁹ and more recently Louisa Fairclough's visceral film installation at Danielle Arnaud Gallery, London (2014).

In order to pursue Schlicht's claim that celluloid practice possesses a haptic quality, I turn to Laura Marks' metaphor that film is 'skin'. In her phenomenology of embodied cinema experience, she studies the relationship between tactility, memory and cinema, referring to haptic visuality as one in which optical techniques force the viewer to feel with the eye (Marks 2000: 162). Marks focuses on possibilities for cinema as a visual medium to represent embodied experience as it relates to experimental film and instantiated through the use of that which she describes as intercultural cinema: diaspora film-makers recalling sensory experiences and shared memories of family and home. She proposes that the close scrutiny of optical visuality is inadequate to convey these memories and experiences. The haptic image is better able to emphasize the makers' tactile connection to their environment and is a means to stake a deeper investment in their subject. The types of haptic imagery identified by Marks include the use of soft focus and the overloading of the image with multiple impositions and layerings, creating a surface density. The haptic image is caressed or obscured and can be used to show affectionate and intimate relationships, protecting things

¹⁹ The Film Aktion group comprised William Raban, Annabel Nicolson, Malcolm Le Grice and Gill Eatherly.

that are familiar, complicating visual clarity with more than the eye can apprehend. Marks distinguishes between the haptic *image* and haptic *visuality*,

A film or video ... may offer haptic *images*, while the term haptic *visuality* emphasizes the viewers inclination to perceive them. The works I propose to call haptic invite a look that moves on the surface plane of the screen for some time before the viewer realizes what she or he is beholding. Such images resolve into figuration only gradually, if at all. Conversely, a haptic work may create an image of such detail, sometimes through miniaturism, that it evades a distanced view, instead pulling the viewer in close. Such images offer such a proliferation of figures that the viewer perceives the texture as much as the objects imaged. While optical perception privileges the representational power of the image, haptic perception privileges the material presence of the image (Marks 2000: 162-3).

Here Marks is discussing how the viewer might sensuously respond to the material quality of objects *viewed* by feeling the image with the eye yet not *made* exclusively by touch and feeling. Yet her examples of haptic imagery bear much similarity to my case studies. The image protected by its plenitude is particularly illuminating in relation to my analysis of *Fuses* (see Chapter Two), in which haptic looking is necessitated because of the blurred focus, inverted shots and scratched images). Marks suggests that film viewing is an exchange between the two bodies of *viewer* and *film* (Marks: 149). In my research, I have developed film/performance events that rework this model to suggest mutuality between the two bodies of film and its *maker*, and to translate haptic imagery as it exists for intercultural cinema makers into how tactile methods of making film might be rethought and experienced by the camera-less film maker (I develop this theory in relation to practice in further chapters).

Jennifer Barker develops Marks analysis of the haptic through films in which audiences experience film not just visually, but through the sense of touch and the entire body. Barker structures her argument for the embodied experience of cinema viewing along what she terms, three 'regions': the haptic layers of the skin, the musculature and the deeper areas of the viscera. Her methodology of travelling through the surface and into the guts is somewhat like the development of my own project, which moves from copying others' skins from found film footage

and onto film's surface, through to the non-visible depths of my body (discussed in Chapter Four) (Barker 2009: 2-3). Barker examines *Fuses* to give an example of this privileging of the tactile over the visual:

The film obscures its objects, not prudishly but playfully, using shadows and super-impositions, among other things, to make vision difficult and thus to invite the viewer to feel rather than see the film, to make contact with its skin (Barker: 23).

By referring to the film as 'skin', Barker picks up Marks influential metaphor to suggest that the film is responsive like a body, which beckons to the viewer to connect with it physically and intimately. She interprets Schneemann's obscuring of the imagery not as a mode of coy censorship, but as a means of redirecting attention to and feeling film's surface with the eye. As Barker observes, in *Fuses*, the obscuring of the image is effected through a dispersal of focus and the use of shadows and superimpositions.

Amelia Jones suggests that, because the imagery in *Fuses* is dispersed, the rules of perspective break down, and the representation of the body is harder to objectify.

Our primary identification is not with the apparatus nor with a male protagonist's gaze ... but with the dispersed surface of the body of the film, which points to the depths of incoherent (yet vital) flesh that subtend and are represented in it. In Marks' words, primary identification is now with "dispersion, with loss of unified selfhood" and the film thus enacts a radically new (we might call it postmodern) understanding of subject formation and meaning (Jones 2006: 149).

Jones' thesis is that the postmodern subject is unstable, and that monocular perspectival conventions of cinema are not adequate for the task of representing contemporary subjectivity. The dispersal of self over the film surface breaks down the gap of viewing separation, allowing haptic identification to occur by means of proximity; the tactile handling and activation of the visible film image means we become compelled to engage on a deeper level with the subject, and what lies underneath the image. Jones draws on Merleau-Ponty's theories of embodiment

to explore our relationship to the type of image that is experienced through our whole body. It is because we are embodied that we are able to see the other seeing, and this reciprocity reminds us of our own physical form.

In terms of Jones' enquiry into how imaging technology is used to represent the self, *Fuses* deploys techniques that both show the body as a visible entity and communicate a sense of interiority. One such method used by Schneemann to describe this correspondence between the inner self and the outer seen body is to oscillate between handmade graphic forms on film's surface and photographed imagery. As R. Bruce Elder states, 'The hand painting and overlaid graphic forms constitute a moment in the dialectical synthesis of "inner" and "outer" realities' (Elder 1998:247). (This is discussed at greater length in Chapter Two).

How do these different ways of thinking about the film surface, and the viewer's experience of it as 'skin', help my enquiry of using the full body (and bodily fluids) to mark film in my own practice, and in that of my case studies? We are unfamiliar with looking at the insides of bodies, and as Marks points out, these pictures 'resolve into figuration only gradually, if at all' (Marks 2000: 163). Matter that has been fluid is differently animated – it is hard to gaze at and haptic, therefore forcing the viewer to come closer to the images and stroke them with the eye.

Tess Takahashi discusses the persistence of direct-on-analogue film practice. Rather than dismiss it as nostalgic or decorative, as she claims some critics do, she reads this work as an important commentary on current problems of representation and experience in the digital age. Takahashi defends the idea that direct animation can reproduce individuality, yet not 'essential self-ness'. Quoting direct animator Stephanie Maxwell, she observes that contact between film and human bodies permits marks which correspond to the drives and energies of the body, 'the vibration of the fingers, the variations of pressure, and 'individual physical impulses' (Takahashi 2005: 176). In *Skinfilm*, (Emma Hart, 2004) the film is made with the lightest touch, a mere brush on the film surface, and in this way the particular artist's body is transferred (see Chapter Three for a fuller reading). As each individual has a distinct physiognomy, with singular embodied ways of moving, this will effect the amount of pressure applied and the types of inscription will be altered. The direct animation conveys then, not so much subjectivity or

'selfness', as the whole intelligent organism: breathing, hesitating, moist and heavy, all carried to the site of making.

Embodied, Animated, Mingling, Rotoscoped Bodies

Animation studies has a longstanding interest in how the division of labor (in the cartoon assembly line of paint and trace) makes demands on the body. The animated scenario is typically one which is broken down into increments, with those parts reconstituted to motion through time/space calculations, and the animator must fall in line with these exacting manoeuvres.²⁰ If the body in contact with film transmits the artist's physical individuality, how does the animator's body appear when it is marked on film as a set of single frames? A further precision still is required in order to inscribe marks into the small frame area of 16mm forcing an irregular and self-conscious choreography on its maker, which gives to the imagery a dancelike vigour and energy. Following Merleau-Ponty, Vivian Sobchack refers to the clockwork mechanism of our anatomy, which is hidden from us up until the normal movement of our body is interrupted (Sobchack 1992: 219). This 'forestalling' occurs, for example, when the animator, absorbed into the film apparatus and the technical 'shooting pattern', is forced into a different choreography and a new self awareness that comes to light in these difficult animation processes (See Perisic in Footnote 20).

Barker develops this theory of the intermittencies of the human organism:

Though we perceive our bodies' movement through the world to be smooth and continuous, human movement actually consists of a series of intermittent and separate motions. Every move we make involves the contraction and subsequent release of individual muscles ... to suggest that as human beings we move through life feeling this intermittence and discontinuity of movement in any tangible way would be simply contrary to fact. The discontinuity on which our movement is essentially predicated recedes from consciousness along with the other internal functions and rhythms of the viscera and reveals itself sensually and experientially, in unusual circumstances (Barker 2009: 128).

²⁰ To avoid the likelihood of mistakes arising from the multiple steps involved in conducting complex moves of zoom, pan and/or tilt, Zoran Perisic cautions the industry animation rostrum camera operator to follow a regular 'shooting pattern': 'Once the shooting begins, the cameraman's troubles aren't over by any means. The chances are that he will be moving the N/S wheel at one set of increments, the E/W at another and the zoom a third' (Perisic 1976: 46).

As Barker discusses here, it is only when the body is required to operate in ways with which we are unaccustomed that awareness of its intermittent character is brought to consciousness. This is the case for the experimental direct-on-film animator, whose concern it is to analyse both the film material and the process of her bodily interactions with it. Len Lye's account from fifty years ago, of his experience of making camera-less film chimes with Barker's phenomenological theory of today. As Sitney writes:

Free Radicals (1958) reduces and distills the dynamics of the hand-made film to a primitive kinetic dance of white lines and angles. The jaggedness of these meticulously executed scratches is an indexical evocation of the concerted energy required to etch them onto film. The film-maker has described the quality of the movement as "spastic". Of his working method he has said: "If I couldn't complete the etched line by forcing the needle to complete the design on the film, then the continuity of a dozen or so designs which preceded it would be lost. So, I wriggled my whole body to get a compressed feeling into my shoulders – trying to get a pent-up feeling of inexorable precision into the fingers of both hands which grasped the needle and, with a sudden jump, pulled the needle through the celluloid and completed my design" (Sitney 1974: 235).

Sitney refers to Lye's account of his unusual semi-automatic motion as he scraped lines and angles into 16mm frames of black emulsion. Continuity was important to Lye, and in order to achieve his desired illusion of zigzags not as isolated scratches, but as one line moving rhythmically through space, he was forced to hold the overall sequence, whilst lunging at and tackling the single frame. The effect of his physical compression is evidenced in the film as a series of regulated vivid strokes and the rhythms and breath of his body can be felt as emphatic marks.²¹ In this respect the film's imagery mimetically takes on the appearance of the energy and gesture that generated them.

²¹ Unlike Lye's more spontaneous and freehand interventions onto the film surface, camera-less film-makers Norman McLaren (1914-87) and Harry Smith (1923-91) devised exacting mathematical systems of registration which allowed them to eliminate unpredictability. These methods involve rigorous preparatory work such as making diagrams that plot start, finish and in-between points of a manoeuvre.

Like *Free Radicals*, Brakhage's *Chinese Series* scrapes light openings into the film surface. These shapes do not suggest a single entity, but rather, as the title suggests, a set of isolated runic inscriptions. Brakhage uses rudimentary, almost reflexive gestures for these 'finger made' films, spitting onto film to soften the emulsion. My interest in this primitive approach, here, as well as the types of marks made, is how the artist moves in relation to film stock, attentive to the qualities of contraction and release as discussed by Barker, and using the most basic means of his body as a resource for marking film. Brakhage's physical method and use of most basic corporeal tools of fingernails and spit, offers a more immediate resource and method than film that has been made in-camera and provokes for Takahashi the possibility for taking celluloid film right back to its earliest form: as wood:

Such practices, and their framing discourse, suggest a desire to get back to an original, primal language of film, made through direct contact with the most basic of materials- fingernails, spit, wood (celluloid). In the *Chinese Series*, there is no tool mediating between the film-maker's hand and the film in the creation of such an image. Scratched films suggest that the film-maker's body is essential to the representation of the basic forms they image (Takahashi 2005: 174).

Although Brakhage's marks are multiply repeated, no frame is identical and tracks of ripping serrated edges point to the crudeness of the nail as an instrument for making film (see Figure 11). The proportions of the artist's thumb fit the dimensions of the frame and its small but intense movements can be felt in the film. In terms of this research and how actual bodily matter can be used on film, this work inevitably possesses an organic cellular appearance. This phenomenon is brought about, perhaps as Takahashi states, through the essential central role of the body. The Cantrills argue that regardless of which materials are used, when they are set in motion, the rapid 24 frame per second frame rate gives hand made marks on film the appearance of a surging rhythm:

Because handmade film images are evocative of basic life rhythms, they can grip you physically in a way that few other films can. The image, ever changing from frame to frame is akin to the surging of the bloodstream, cell division and molecular structures – it is the flow of life one is watching, as

though the bloodstream had been magnified to fantastic proportions (Cantrills 1971: 5).

According to the Cantrills, hand scratched animation is akin to the experience of the lived body itself, in which the frame-to-frame changes impart a sensation of life. The lack of steadiness in hand-drawn work impacts upon the marks, which are irregular, vibrate and by animation terms 'boil', pointing to physical individuality and the failure to perform like a machine. Doane has spoken of the indexical character of cinema as prompting claims for its 'life-ness'. The indexical photographic capacity is bypassed in direct-on-film, yet, as seen from the above arguments, it nevertheless possesses a quality of witness to life. Films made without cameras attract euphoric claims (Lye, Fleisch, Cantrills), which anthropomorphize film and attribute to it a bodily character. Metaphors such as those used by the Cantrills allow me to develop my argument of medium specificity in relation to our physical form as embodied beings.

Lye and Brakhage offer instances of how the body is animated in relation to materials, and how addressing the single frame forces somatic interruptions. In practice where there is no camera that holds and focuses the film, the design of alternative devices and systems with which to register imagery is necessary. Annabel Nicolson employs technology other than the camera, or the manual, to make marks directly onto film. *Reel Time* is not an animation in the frame-by-frame sense, but Nicolson is very busy and animated in her work of stitching film. Maintaining sync with the film apparatus placed pressure on her, and she states how hard she had to work, 'trying to hold the film in the sewing machine, trying to sew fast enough to keep up with the projector ... how long will it last I keep going, just keep doing it' (Nicolson 2012: 158).

While Nicolson filtered her marks on film via a sewing machine, the rotoscope is another tool and 'minor technology' (Cartwright 2012: 50) through which the physically made film might be mediated. The relationship of the animator to this instrument offers a further perspective through which to analyse the role of the body in camera-less film production. Lisa Cartwright contests the common notion that the work of the cel animator was solely alienated labour, suggesting that hand drawn work is energizing, and that in the case of 'media innovation' such as rotoscope design, it is motivating. In her study of subjectivity and movement in

relation to the Fleischer Brothers invention, Cartwright raises several issues that relate to my own practice enquiry. Firstly she proposes that it is the irregularity of the original filmed body which, carried across to its rotoscoped trace, is more compelling than the normative moves for which the rotoscope was celebrated. She continues by suggesting that the quality of this irregular human/machine engagement constitutes a performance of its own. She also suggests that the specificities of time and location, and the shared communal labour involved in the peculiar design of the rotoscope and its imagery produces an experience of inter-subjectivity for its makers (Cartwright 2012: 48-77).

Cartwright's thesis is of value in thinking about the ways in which different media generate particular physical encounters, a concern which is core to my methodology of working directly onto analogue film. In the earliest phase of making film without cameras I devised my own rotoscope system and had for myself the types of experience that Cartwright imagines and theorises. The experience of pleasure and difficulty in holding, inspecting and tracing film – my body entangling with those on the filmstrip, my heightened awareness of my balance as it related to my breath and hand – is a factor of why physical work with film drives my research.²²

Cartwright acknowledges that a formal perspective offers one way to analyse rotoscope production, yet her emphasis lies with the embodied experience of material production and affective relations between bodies and technologies.

The screen is not just an organ of perception ... but a dense tapestry laden with the indexical marks not only of the filmed body but also the hands of the animators, the figures who invisibly haunt its field, having invested themselves there through hours of work. To read the activity of behind the scenes labour in the film industry as a distortion of human life or as an alienating reduction of human bodies to repetitive mechanical process misses the important aspects of inter-subjectivity and the psychic production of the self that occur in the processes of making media machines and texts. Perhaps it is possible to tie the industry history of film

²² An interdisciplinary conference, 'Animation Automation' and the publication of materials from this event in a *Body and Society* special issue (2012) 18 (1) are important for my research. Cartwright, and Stacy and Suchman are conducting important research in this intersection of Science and Technology Studies and Animation.

production to a historical ethnography of embodied interaction in its specific localities of practice, so we can better understand the experience of the body and the self working out of sight and behind the scenes in the important work of making screen media technologies (Cartwright 2012: 69).

For Cartwright, feelings are brought to the site of making as they impact orientations to self and others and in relation to the experience of the body during practices of caring for work and film materials. Employing similar metaphors as Marks by inferring that the screen is a kind of sensitive tapestry, Cartwright likens the process of interacting with the rotoscope to a fabric that absorbs the energies of those that weave across it. She refers to Winnicott's object relations theory, to apply his idea (that certain material objects become embedded and saturated with a physical residue) to the intense manual reworking and enmeshing of bodies in rotoscope production. For Merleau-Ponty, space comprises different regions that are made thick through our continuous passage across them (Merleau-Ponty 2004: 42). In this sense, Cartwright proposes that the rotoscope screen becomes loaded with the traces of hands that cross it, and by the terms of my research, so the filmstrip becomes dense with exposure and contact (Cartwright 2012: 69).

The motivation for the Fleischer group to work in this labour-intensive way is the inter-subjective embodied experience derived from the concentration, repetition, delayed outcome and 'communal machinery' of filmed and film-maker bodies. The process is not just a hard slog – the reward for toil is an, 'emotional satisfaction', as Cartwright describes it, realized through the pleasurable shared construction and use of filmmaking instruments (Cartwright 2012: 50). I will discuss these reflections further in Chapter Four, in which I comment upon my own experience of rotoscoping and tracing not from a series of back projected poses on to a screen, but from one strip of film to another.

Section Three: "The Inescapable Necessity of Matter"

In previous sections, I discussed perspectives on embodied experiences of making animated camera-less films by looking at the possibility for inter-relationships with other or non-beings. The correspondences an artist seeks between the film object and her body, and acting like her materials is described as 'enfoldment' (Reynolds, see Chapter Two); Cartwright refers to our interactions with film tools and screens as inter-subjective; Schneemann's title *Fuses* (see next

chapter) dissolves subject/object dichotomies while Jones reads the tactile encounter with matter as a dispersal of authorship. These theories help develop our understanding of embodied and intentional touching as a means to communicate experience of, and gain intimacy with, materials. Contemporary artists choosing to physically intervene in the cinema apparatus by marking directly onto film demonstrate the relevance of theories about impulses to copy the inanimate world and guide my discussion of bodily 'fusing' with film apparatus as a resource for making film.

The relationship of the artist to technology in physically made film, and in which the body mimics film mechanisms,²³ is discussed now with reference to critical perspectives from the Frankfurt School. The dawn of mass reproduction spawned much critical debate. Benjamin, Kracauer and Adorno discussed in mixed terms, the modern body as it was forced to adapt to automation, as both enabled and liberated, but ultimately as traumatized and alienated.

I am discussing mimesis because my enquiry into how cinema can be *made* by using the whole practitioner's body is informed by theories of how cinema *appeals* to the body as a whole. Cinema made using the body as a printing/holding mechanism instead of a camera entails a reversal of sorts, a fusion and exchange between the physical and the mechanical. The desire to explore correspondences between our own bodies and technology can be analysed in relation to Benjamin's changing viewpoints through the 1930s on mimesis. He observes that children at play learn by copying animate and inanimate objects:

Nature produces similarities. One has only to think of mimicry [of, e.g., insects to leaves]. But the highest talent in producing similarities belongs to human beings. The gift of seeing similarities that they possess is merely a rudiment of the formerly powerful drive to make oneself similar, to act mimetically (Buck-Morss 1991: 266).

It is not hard to visualize how the body with outstretched arms can convince us of its likeness to the machinery of aeroplanes that Benjamin observes in children's mimicry of objects. He suggests that the motivation behind mimesis can be traced

²³ I gave a paper at *The Society of Animation Studies* in Bournemouth (2008) and at *Film Philosophy* (Arnolfini, Bristol, 2009), reflecting on the lightning hand that, by intention as a gesture of authorship, or as an accident of synching with the camera shutter, is left behind on the rostrum table and enters the film frame.

to a primitive, instinctive drive for mastery, in which one learns by making oneself similar to other things. In terms of how this drive translates to cinema, mimetic representation has been regarded as problematic as it produces a so-called 'realism' and standardisation, making indoctrination seem natural (Bronner, 2011: 32). I will focus instead on how mimesis has been interpreted as having a positive impact on experience, in that it offers forms of connection and emancipation. To quote Marks:

Mimesis shifts the hierarchical relationship between subject and object, indeed dissolves the dichotomy between the two, such that erstwhile subjects take on the physical, material qualities of objects, while objects take on the perceptive and knowledgeable qualities of subjects. Mimesis is an immanent way of being in the world, whereby the subject comes into being not through abstraction from the world but compassionate involvement in it ... things that have been in contact leave their traces irrevocably on each other (Marks 2000: 141).

As Marks discusses, the mimetic representation is an egalitarian one, in that the maker, locating similarities between the self and the object, physically enacts, or imitates the thing that is being represented. The representation is acquired through compassionate involvement and close physical contact with things and not by positing a gulf between subject and object. For phenomenological scholars such as Sobchack, the relation between the embodied cinema viewer and film is mimetic in that meaning is not solely communicated through visual signs, but experienced through the whole body (Sobchack 1992: 110).

Technology/Anonymity

How is it possible for the subject, as Marks suggests, 'to take on the material qualities of objects'? The Frankfurt School discussed this problem as it related to the conditions of modern life of speed, industry, shock and rapid change. Esther Leslie introduces Benjamin's perspective on the role that art might play in the modern experience,

Benjamin counsels that the poverty of experience be recognized so to make a new beginning, through a 'new positive concept of barbarism'. Artists should not ignore or mourn experience's impoverishment, but retransmit it,

precisely by imitating the technology that gives rise to alienation. 'Experience and Poverty' applauds cultural producers who do this, who incorporate formally, in various ways, capitalism's alienating 'barbarism' (Leslie 2004: 84).

As Leslie reports, Benjamin's solution for the alienated modern condition was to imitate industry, 'to incorporate', or partner it and in this way to accomplish astonishing things. While modernist artists were representing peasants dispossessed of their individuality by industry,²⁴ anarchic figures in animated cartoons mimicked the regulated body of the assembly line. Mickey's malleable body carried the hope that positive experience could be claimed from the tyranny of industry through the uncontrollable impulse of laughter that copying elicits (Leslie 2004: 86).²⁵

Adorno objected to Benjamin's tolerance of cartoons, which he interpreted not as funny, but oppressive. Over the course of a decade, as Leslie describes, Benjamin's position on the revolutionary potential of cartoons changed in relation to the developing political milieu. Along with Adorno and Siegfried Kracauer, Benjamin observed that the suppression and indifference to the individual under the capitalist system is re-enacted in popular entertainment. He reads the violence to animated bodies as an ideological ploy with which to convince the masses to accept or to perpetrate brutal treatment of real bodies (Leslie 2004: 120).

Technology dictates a syncopated, dislocating rhythm. Workers must permanently react to this rhythm. Citing Marx, Benjamin describes how in the factory system workers learn to coordinate their 'own movement to the uniform and unceasing motion of an automation'. But such mimetic adaptation was more widely demanded. The city itself is a cauldron of shock effects. These shocks daily assault the dismantled individual – bombarding him or her, rapid simulations flinging themselves at the receptive organs (Leslie 2004: 120).

²⁴ Russian constructivist artist Kazimir Malevich painted faceless farmers (1928-32)

²⁵ In Disney's *Steamboat Willy* (1928) for e.g. Mickey's body is fused with musical instruments.

In his bleak reading of the fate of the body in a world dominated by technological forces and mass political rallies, Kracauer discusses the effect of just how the individual might be absorbed into 'the unceasing motion of automation'. The regimented decorative patterns produced by the popular dance troupe of the time, the Tiller Girls (1900s), in which isolated parts of their anatomy are segmented and mechanized, is condemned by him as symptomatic of socio-economic forces in which the individual is reduced to a unit with no uniqueness (Kracauer 1995: 75-77). I will discuss this in relation to contemporary camera-less animation in Chapter Three.

Leslie discusses this regime of the regulated body in relation to Adorno's concept of the 'shudder', which occurs in moments of technical failure, a brush with the unknown as a counter to capital's flattening of experience, an (undesirable) fallibility:

The shudder is the Enlightenment impulse for mastery over nature, its subjugation into the schemata of instrumental rationality ... [it is] the possibility of anti-egoistic human interrelationships with other or non-beings. Its twitching indicates a capacity for mimesis, for a connection between self and otherness (Leslie 2010: Unpaginated)

Following Adorno, Leslie conceives mimesis as a shudder in which self, others and non-beings might connect. Strange figures in contemporary experimental animation 'twitch' with non-normative forms and motions, and can be read alongside Cartwright's examination of the irregular rotoscoped body as examples of antidote to enforced regularity. While capitalism relies on division between individuals, Leslie reads mimesis in these films as a mode of dissolving of self and other. Watching this type of film it is possible to briefly forget the boundaries between beings as, taken off guard, one is wholly absorbed in experience.

The twitching that Leslie identifies is altogether a different quality of movement than that of Lye's vitalized bodies, leaping across the frame. In my own practice, the performance of physical adherence to mechanics of film reproduction is quite painful, awkward and hard to sustain. It is insightful to analyse the demands made of the contemporary viewing body in films made without cameras, in relation to early 20th century theories of the experience of unceasing motion and the

pressures to co-ordinate with industry. In *Light Music*, for example, the harsh jarring buzzes and whirrs are not music like, and can overwhelm the senses.

Aura and Individuality

The focus has been on how the body is mechanized, incrementalised, fragmented and absorbed by technology. The animator, drawing by hand umpteen individual frames makes a type of reproductive labour, using physical, rather than mechanical methods. It is possible to consider the hierarchy from a different perspective, to reverse the terms in such a way that technological objects might seem to 'take on qualities of subjects', becoming thereby imperfect, singular and auratic. The condition of the individual, single image in relation to a plurality of mechanical copies resonates with Benjamin's questioning of the revolutionary potential for mass-produced imagery enabled by the mechanization of arts. He is ambivalent regarding the widely available reproduced image, as it erodes faith in the artisanal:

That which withers in the age of mechanical reproduction is the aura of the work of art ... the technique of reproduction detaches the reproduced object from the domain of tradition. By making many reproductions it substitutes a plurality of copies for a unique existence. And in permitting the reproduction to meet the beholder or listener in his own particular situation, it reactivates the object reproduced. These two processes lead to a tremendous shattering of tradition, which is the obverse of the contemporary crisis and renewal of mankind. Both processes are intimately connected with the contemporary mass movements. Their most powerful agent is the film. Its social significance, particularly in its most positive form, is inconceivable without its destructive, cathartic aspect, that is, the liquidation of the traditional value of the cultural heritage (Benjamin 1969: 221).

Here Benjamin introduces his theory of the aura, a term used by him to describe distinctions between traditional manual and modern photo arts. The aura is present in hand crafted objects and reverberates with uniqueness and the expertise of manual fabrication. Benjamin is emphatic concerning the point that mechanical reproduction destroys the rarity and inaccessibility of fine arts, and yet it is only through breaking with this tradition that the mass image becomes

possible. He proposes that while the aura disappears in the mechanical image, early photo portraits, despite their mechanical means, can be aligned with manual processes. In early photography the plates were not highly sensitive to light, and the sitter was required to hold their pose for prolonged periods, such that the photographic portrait became an occasion. The subject, focused on the act of committing himself to the process for a specified duration, developed an increased sense of self-presence through this encounter with the camera; in the meantime, the shutter, open for very long periods, exposed the film to light for an extended time during which it also accumulated materiality and presence. From Benjamin's explanation of how the aura comes about, we can deduce that an artwork gains auratic power through prolonged handling and contact with material, whether that matter be light or moisture.

The idea of the aura is central to my project of using the human body to mark on film, and advances my enquiry into the relationship between contact and matter. While the frame in the camera is exposed for the briefest of moments, the filmstrip, as an uncontained length, is vulnerable to marking for an unlimited period. *Bwlhaictke* rests on this logic, and takes to the limit the potential of film to be re-exposed at any point. The greater the degree of contact, the more opportunity there is for stains and dirt to seep into, and shape material. As Benjamin describes it, the fabric of oft worn clothes acquires their wearer's physiognomy (Hansen 2008: 340). During the course of the 20th century, film, an industrial product of multiple mass produced images, lost its aura. Now that analogue film has been abandoned as a mass media, it has been recovered by fine artists and the 'practiced hand' of experimental film-makers. As Marks observes, as film fades and disappears, mechanically reproduced images, supposedly lacking aura, become unique again (Marks 2002: 134). Benjamin scholar Miriam Hansen elaborates an understanding of this complex figure of the aura,

The aura is a singular phenomenon that is generated through physical contact and transfer of subject to object. The aura endows an object with its own agency. At its root is the idea of breath – an atmospheric substance, an actual medium that envelops and connects things (Hansen 2008: 351).

As Hansen points out, the aura is a connective space and substance. As I see it, the aura can be seen to manifest in contact film installations such as *Light Music* in

which qualities of the film object are transferred to the subjects whose movements are shaped by the shadows.²⁶ Exhibited in galleries, film becomes original and crafted once more, and methods for maximum corporeal contact with the work makes each film, each frame even, singular and unique. This phenomenon of the aura will be discussed in greater detail in the case studies of the next two chapters.

Le Grice proposed that the handmade film existed as proof of contact. Direct-on-film practice is pivotal to current debates concerning the desire for source and specificity of image in the face of the untraceable digital form. Mary Ann Doane employs the persuasive and powerful terms of longing, to refer to the utopian dimension of the photograph as an index of authenticity:

If the cinema as we know it – contingent upon a photochemical epistemology – is on the verge of obsolescence, the utopian dimension such a fate releases is the desire for the certitude of the imprint, the trace, the etching in a medium whose materiality is thinkable. The source of this longing does not lie in the belief that the cinema gives us realistic representations of objects or people but that in the manner of the ‘this’ the deictic index, it points to and verifies an existence. It reveals more readily than the digital, with its dream of immateriality, the inescapable necessity of matter, despite its inevitable corrosion, decay and degeneration (Doane 2007: 147).

Doane proposes that what makes a material ‘thinkable’ is that it engenders in us a faith that the image is a truthful link to the original, can be touched, and ‘etched’, and is available to the senses. She suggests here that it is precisely because an object can be marked that it is vulnerable, and yet, even knowing the failure of the physical, we seek it and relate to it. This certitude is the dimension that she claims film fulfills and which helps explain the current gravitation, at the point of films obsolescence, toward methods for amplifying its aura using the direct-on-film technique.

²⁶ However, this only applies to film that has not been duplicated and has influenced decision by film-makers such as Barbara Rubin (Rees, 2011:12) to screen originals only.

As Doane claims, it is not so much a desire to see realism which cinema fulfills as a need to know that the things we see have, at some point, existed in the world. Her observation can be compared with Cartwright's reading against the dominant idea of cinema realism and naturalistic motion, in that the appeal of the rotoscope is that it creates impressions of irregular movement. It seems that imperfection is sought after: soiling, fading and flaws feel familiar to us and we seek them out in materials that are 'thinkable' and prone to marking. Film is a material that is thinkable to me, and the artists I examine in my case studies. It possesses an analogue and sensuous similarity to our own bodies, with the capacity to accumulate debris, to show its wear and tear (and by extension its memory) and to perish. The discourse of film's indexicality acknowledges this material vulnerability, employing metaphors of the physical to equate the medium with the body as skin, and flesh, which is volitional and mortal.

Summary

The different theoretical areas I have referred to here – the semiotics of the index and of the aura, phenomenological inter-subjectivity, mimesis, the haptic, presence, and medium specificity – offer ways of thinking about the richness of and approaches to making film without cameras. In subsequent chapters, case studies will be analysed using these interpretive frameworks to see how film is made physical by subjecting it to contact with various elements and marks. Consideration will be given to how the body might be brought closer to the film material through processes of contact and osmosis and through enforced adaption to mechanical rhythms.



13. 14. Schneemann's *Fuses* (1969). Scratches and goo make the imagery haptic and bring the interior to the surface.



15. A. Nicolson, *Reel Time* (1973). The sewing of the filmed reproduced image makes it original once more.



16. The strip of Nicolson sewing.



17. E. Hart, *Skinfilm* (2004), 'natural' colour.



18. J. West, *Rainbow Party* (2007), artificial colour.

Chapter Two. Case Studies. Bodies, Feminism, Structure and Material

In the previous chapter, I enquired into issues relating to making films without cameras within the context of experimental film. I referred also to theories of embodied spectatorship to support my research into how to represent and analyse the fullness of the body as a tool for making contact with, and marking directly onto, film. The *material* aspects of film made without cameras is now developed in relation to the *physical* experiences of making this work and in which ways tactile making might become haptic viewing. I undertake extended reflection on practices in which the body is deployed as medium through analysis of *Fuses* (1968), by Carolee Schneemann and Annabel Nicholson's *Reel Time* (1973). These two works are examined together because both artists foreground the role of their bodies as image making tools, employing photographed film that is subsequently inscribed on directly or indirectly by the body. These studies help develop a critical understanding of the use of my own body as a resource for marking film, and lead into further studies where the image is composed entirely without a camera.

Radicalizing and Enfolding with Materials: *Fuses*

Carolee Schneemann's *Fuses* employs highly physical action in its production: the whole body, including actual residue of bodily fluid, is brought to the act of creating. Although it consists mostly of film that has been photographed, the tactile intervention of the film surface, plus Schneemann's oft-cited rationale of connecting to the whole environment (Haug 1998: 25) is of primary significance to many scholars and brings the film closer to my concerns than many that have been made with no camera whatsoever.

The imagery is mostly of sexual activity: bodily fragments such as hands on breasts, rotated passages of Schneemann and her lover's face, along with details of patterns of fabric, colour and fur. These are all shot in close-up in a flattening red light, which create a shallow, textural space, increasing image ambiguity, pulling the eye to the surface of the film, and inviting a haptic gaze. This physical intervention on film has the effect of registering the artist on a number of different levels and is intended by Schneemann to convey subjective heightened feelings of bodily sensations (Haug 1998: 25). Haug herself experiences Schneemann's communication of internal rhythms, physical oneness with her environment, lover and film as one of disorientation, of getting lost and feeling space (Haug 1998: 35).

As stated on page 27, haptic looking is required for these types of images, which 'resolve only gradually into figuration' under 'a proliferation' of scuffed up texture (Marks 2000: 162). By subjecting film to this rough physical manipulation, photography is rendered obscure and indistinct with crudely gouged lines, bleaching and staining. Constant oscillation between perceptual layers of the photographed imagery of glistening wet genitalia and the tracks of actual moisture from inside the body, spread over and condensed on the film surface, fuse the bodies of both film and artist. Tactile layering of imagery charges the viewing space into a dense one of unfamiliarity in which a stable perspective is difficult to gain. The gouged emulsion and debris of the artist's environment screens and, in Marks terms, protects the explicit imagery of the female body from the gaze. The physicality depicted in the photographed imagery is doubled in the visceral treatment of film emulsion and in this way the material base of *Fuses* registers the dynamism and intensity of the artist's carnal and emotional outpouring.

Schneemann works with the movement between the two techniques of photography and overdrawing to suggest her more complete sensory engagement with, and total immersion in, the film medium. Elder suggests that this interplay between tactile and optical modes conveys the idea that the experience of the inner felt body and its outer visual form are a continuum, 'so as to destroy the sense that these forms belong in an external space and thus to render our experience of them tactile' (Elder 1998: 246). Here, the photographic representation and matter itself are combined to create different registers of the same event, thus showing them to be inseparable. For example, there is an image in which a fingerprint is superimposed over the photographed film, occupying the entire frame, confusing the scale of, and obscuring the figure underneath. This makes the shot hard to read and also has the effect of showing the body at two levels: as an image and as a trace of the touching of the film material. The technique of layering of imagery and forms to reiterate the theme of everything being experienced 'all at once' and merging is observed as Schneemann's main accomplishment (Stiles 1998: 4).

Alongside the title *Fuses*, the importance of balance and harmony in the assembling of film lengths suggests Schneemann's relationship not just to her lover, but also to her practice – not a single event, but an ongoing embodied

experience and integration between the artist and her environment. Actions common to lovemaking are replicated in the tender handling of, and penetration into, film emulsion and, combined with the cyclical motifs of waves, form continuities between film's material character and Schneemann showing herself controlling this environment and her own image. As Elder observes, she employs this non-linear arrangement of sequences as though it were a single canvas, and distributes colours, daubs and tints in sections over the film length, as though it were a collage which, worked on physically amplifies its themes of recurrence and rhythm (Elder 1998: 240). Instead of being assembled along narrative norms of cinema, the film consists of episodes shown, returned to and collaged together into a flowing whole, structured according to formal principles of patterns of light, texture and motion. A balance between structural and physical concerns, *Fuses* is composed corporeally, as though the film itself and the artist's body are one.

Experimental: Body and Medium

The discourse around Schneemann's work suggests that the artist's embodied relationship to her materials is of key significance. *Fuses* is, to quote one critic, 'one of the finest films ever made about embodiment' (Jones 2006: 146). David James emphasizes the rapport between the bodies of artist and film, referring to the physical inscriptions on film's emulsive surface as an 'epidermic intimacy' (James 1989: 320). He identifies an intensity of relationship to practice and materials as passionate as a sexual union, and posits the exchange in *Fuses* between human participants and film as copulation as 'mutuality' (James 2011: 61-63). Schneemann herself speaks of this process of 'mutuality' as a means of gaining control of her materials, and as a method of resourcefulness with little means (Haug 1998: 20-49).

Terms such as, 'embracing all', 'dispersal', 'disorientation' and 'integration' crop up frequently in discussion of Schneemann's work. We recall Le Grice advocating that the trace of physical contact on film should not be concealed, as it counters the alienation engendered through industrial film production's neglect of the material base.²⁷ In her research into the challenges of representing subjectivity through screen technologies, Amelia Jones discusses *Fuses* in the same context

²⁷ Doane comments on the underpinning of Marxist thought for the radical LFMC members: 'For Peter Gidal, one of the primary spokes-persons of what he called "Structuralist-Materialist" film, the focus on this form of cinematic materiality had a direct connection to the methodology and epistemology of a Marxist materialism and shared in its radical critique of bourgeois culture' (Doane 2008: 129).

as Le Grice in terms of its emphasis on material. For her, practices that have accented the tactile to interrogate the limits of the medium are not solely materialist, but are jointly aligned with a feminist discourse. She identifies Schneemann's tactile treatment of film stock as one such example: 'The films of Carolee Schneemann exemplify this dual nature of experimental cinema from this period (late 60s) invested as they are in film as a medium but also in promoting a feminist notion of touch.' (Jones 2006: 143).

While experimental film's emphasis on form has led to it being aligned with modernist methods, Jones' enquiry into the possibilities for cinematic self-imaging proposes experiment as a means to 'articulate shifting modes of subjectivity', and to represent the embodied postmodern subject. For Jones, dispersed authorship complicates modernist ideals of the unified self and typifies our contemporary postmodern condition as embodied yet interdependent and interrelated with others and things (Jones 2006: 141). Regarding the latter, the idea that the female morphology prompted a relationship to the physical was developed in particular by the movement of *l'écriture féminine*, with the thesis that a new language could emerge from this embodied experience.²⁸

Such dispersal of authorship is seen to be encouraged by leaving film outside of the camera and in contact with the debris of the environment. *Fuses* activates the whole *mise-en-scène* to the extent that agency is given to the cat, the lover, their body fluid, their skins, the sea. Even street dirt is included as medium.²⁹ When we leave the intimacy of Schneemann's boudoir, the imagery of the sea as an exterior space and infinite source of ebb and flow reinforces the theme of fluidity, the sense of immersion and connective permeability into which the artist disperses. This sensation might be illuminated by Elder's analysis of the dynamic between gender, technology and embodiment (Elder 1998: 240). He takes a different position to Jones on dispersal, aligning Schneemann less with French feminism and more with the Romantic orientation of the US avant-garde. He compares this Romantic ideal of the mind/nature dialogue to Schneemann's processes of integrating her inner body with the world that surrounds it. The imagery of the sea

²⁸ As Irigary proposes, the female anatomy makes continuous contact with itself. *Fuses* is addressing this quality of female physical contact made from all parts of the human anatomy. See in particular Robinson (2006), *Reading Art, Reading Irigary: The Politics of Art by Women*.

²⁹ See also the 'weathered' film genre for examples of atmospheric decay of film.

in *Fuses* as a natural force reinforces this Romantic reading of the work (Figure 14).

Jones observes that there is continuous movement between female experience of heightened emotion and a tactile experimental materialist approach. By investing her film with touch, Schneemann is, at the same time, operating within the conventions of the medium as experimental film-makers have done. Film has a plastic form, and this material fact of its technical support is what makes it possible for Schneemann to imprint fluids upon it. Mary Ann Doane has elaborated how the resistance to material can extend its possibilities as a medium (Doane, 2007:127). Schneemann's extensive tactile interference with film, the inverted imagery, the residue on the stock, the scratched interruptions on the surface advance the medium, allowing us to rethink film as a material and cinema as one of physical contact. Schneemann herself is at pains to point out her gestural, physical relationship with the film medium, aligning it with her own libidinal internal rhythms (Haug 1998: 24-25). Matter from inside bodies, and from non human bodies meet, and exemplify the model of the wet and open feeling body that is permeable to all environmental elements. As Blackman defines,

[the] felt body is one that is never singular and never bounded so that we clearly know where we end and another begins. This is a feeling body that presents a challenge to the kind of Cartesian dualism that produces the body as mere physical substance. The affective body is considered permeable to the 'outside' so that the very distinction between the inside and the outside as fixed and absolute is put into question (Blackman 2008: 10).

Fuses' structure of overlaying interior and exterior, the bodies all invested with their own embodied knowledge, effects the quality of permeable unbounded-ness that Blackman is discussing. The artist's physical absorption in sex is collapsed into practice, and in this sense a new order is forged with which to articulate female desire. Consciously rejecting the depiction of the female figure as an inert nude on canvas, she assumes a dynamic motion to represent the female inhabiting her body with pleasure and confidence.³⁰ Her practice is akin to

³⁰ Alongside the feminist context for Schneemann's sensual enjoyment of her body at full reach and enacting her psyche through her materials is the dominant trend of Abstract Expressionism modernist painting and Action Painting.

Annabel Nicolson's *Reel Time* (I come to this next) in that both artists perform with the image of the female body to show themselves as active and autonomous practitioners. Lucy Reynolds, one such scholar to identify the similar relationship both artists have to their practice, reads Schneemann's live performance (with film) in the same context as *Reel Time* to tease out the subtle key differences between them (Reynolds 2012: 140).³¹ She refers to Jones' theory of the postmodernist trend toward technologically dispersed, yet embodied screen arts practice:

Here Jones notion of inter-subjectivity between performer and audience becomes extended into what I call the subject-in-process, in which Schneemann's creative enquiry becomes performance as she unfolds her questioning relationship with materials into the context of the live event. At the same time, through this intimate engagement with her materials, Schneemann becomes enfolded within them, part of a haptic reciprocity between her own body and the medium she is exploring (Reynolds 2012: 137).

More commonly to film studies, Jones proposes the condition of inter-subjectivity as a dynamic between artist and viewer, while Reynolds suggests a perspective that is closer to the practitioner's sensibility, a *third* relational model: that between the artist and her materials. Jones suggests that Schneemann's use of her body introduces aspects of subjectivity and individuality that break with the detached conditions of modernist art. Developing this analysis through Nicolson's work, Reynolds argues that despite her representation of the female body, it is more firmly located in a modernist enquiry into materials, and within the context of expanded cinema as a live element to undermine illusionism. I come now to an analysis of *Reel Time* as it relates to my own enquiry into the role of the body in marking film.

***Reel Time* and the Subject-in Process: Structural –Materialism.**

Reel Time is a performance in which Nicolson operates a sewing machine, stitching a filmstrip whilst it is passing simultaneously through a projector and staging a disintegrating image of both herself and its filmic support (Figures 15-

³¹ Reynolds is discussing Schneemann's performance *Shows* (1967).

16). Using the device of *mise-en-abyme*, the strip that is being sewn bears imagery of the artist sewing. The title is a double reference: 1) to the technologies of projector and sewing machine, both of which share common features of intermittency, claw and needle and use reels to gather and hold lengths of thread or film; 2) to play on the mainstream film trope of real-time in which the onscreen fiction and its real playback time are synchronized. Nicolson references the real time unfolding of her performance as an enactment of the real-time struggle to stay abreast of technology. The failure to do so results in the image of the body/the film itself being damaged in some way.³²

The unusual contact method of handling film gives rise to imagery that appears to be unfamiliar. As Le Grice points out, in *Le Retour à la Raison* the procedure in which object and ground are brought into contact makes the image difficult to recognize (Le Grice 1977: 35). It is precisely this 'unfamiliar' contact method of handling film that feels most comfortable to Nicolson: 'I could respond to the material, it was in my hands rather than in the camera' (Quoted in Sparrow 2005: 1). Curtis raised the issue as to how the filmstrip as a material prompted multiple responses from film-makers. Nicolson articulates her own reaction to film as a tangible thing. Her familiarity with the film material is important in her performance, the success of which hinges on her assessment of film's weight and mass as she deftly manoeuvres it through a sewing machine.

Like Jones, Reynolds' central thesis is that Nicolson and Schneemann operate within the context of experimental cinema, yet by using representations of the body they break with these conditions. The bodily presence in expanded performance sets up contradictions in formalist purity by introducing an 'unavoidable subjectivity ... and representative element' (Reynolds 2012: 139). For Reynolds, grappling with the problem of positioning these performances of process, Nicolson's presence is used less as an enactment of self and more to point, in line with structural film, to the non-subjective truth of materials.³³

³² Nicolson performed other actions such as *Precarious Vision*, (1973) to stage the conditions which are present in much of her art: synchronicity, a bond of trust between artist and audience, harsh noise and light. Curtis notes how the performance enacts themes of frailty with the projector 'choking' on film material (Curtis 2011: 231).

³³ Consideration of Schneemann's intimacy with her materials is part of Reynolds wider project of linking feminist film theories with avant-garde film practice in order to propose new readings of work by 1970's female structural film-makers.

I would argue that *Reel Time* needs to be recognized beyond its Structural and historic significance. It merits a greater understanding, not just from a feminist perspective but also for what it tells us about the more personal or autobiographical aspect of the artist's practice. This is because *Reel Time* speaks as much about Nicolson as an artist as it does about the projection event or film material. It appears that Nicolson saw her practice, and her tools, as intrinsically linked to her own sense of identity (Reynolds 2004: 13).

Employing Structuralist film theory Reynolds states that female structural filmmakers used methods of staging the self as an artist to dually assign meaning to materials whilst also articulating female identity. Elder has read the idea of the 'identity' of the female artist, as one that is disinclined to use 'advanced' technology (Elder 1997: 243).

In relation to Nicolson's employment of low, everyday or 'outmoded' materials and technologies (which is, anyway, always relative to the period), I would suggest that it is not so much the degree of sophistication of the equipment that is of interest as Nicolson's stage management of juggling of and pushing at two different technologies.

As Reynolds proposes, Schneemann and Nicolson both use their bodies to perform their relationship with materials, to stage as 'subject-in-process' the representation of their subjective presence dispersed across mixed technologies. While Schneemann confidently mixes kinetic devices to enact, by her own term, a 'material equation' (Reynolds 2012: 137), Nicolson uses that which Reynolds refers to as a further body: the film projector, which, sharing the stage with the artist, takes on the role of co-performer (Reynolds 2012: 137). The active role of the projector in expanded cinema events has already been discussed in Chapter One in terms of its capacity to enhance tactile experience through the noise of mistakes and material being mangled up. This mechanical presence facilitates the multiplication of Nicolson's self image and spreads it across three modes: as live and present handling the machine; as a shadow cast on the wall from the projector positioned behind her; and on the projected filmstrip itself (Reynolds 2004: 11). In this sense the artist represents herself indirectly as multiple and dispersed: a

triplication, which underscores the question of where the image of the female resides.

Reverse Engineering and Mimesis

Reynolds has already remarked upon Nicolson's allocation of new roles to the sewing machine and projector and her central position in the room, shaping the rhythm of the event, yet her first reading of *Reel Time* interprets the artist's set up as one in which multiple identities can be explored (Reynolds 2004: 10). By drawing on Cartwright's thesis of the production of self in its localities of practice, we see that the identity that takes on most significance is the one in which the artist is an operator who gains empowerment and pleasure by taking control of the production, relocating the self working behind the scenes to the centre stage. Through the live event, the artist sets up a laboratory in which she can experiment with the fate of her own filmed image as it is governed by her own co-ordination of it. Nicolson explores her identity as an artist in dialogue with her materials and in tandem with her environment demonstrating her orientation and knowledge of her tools as an accomplished coordinator, a self not fixable, always in motion, changing constantly in relation to technology. She moves between her materials and technical supports, sewing, shaping and projecting her image, and the two machines, each with their own motors, revolutions and varying rates operate her, dictating her rhythms and motions. With regard to my enquiry into how the body can connect, merge, mingle and be used as material directly on film, *Reel Time* is significant in that, by Cartwright's terms, it instances a reverse engineering. Nicolson's use of mise-en-abyme is effective in demonstrating to us this loop of reciprocity and integration. Activating the materials in this way, commonalities between film and human bodies, as plastic forms, which can be controlled and set into motion, are brought to the fore.

Nicolson's synching with sewing instruments alters the motions of her body and it is her skilled handling of film as she guides it through the insistent regularity of the sewing machine that informs the quality of the semi automated marks on the film. As one form of technology mixes with another, her body becomes inscribed, albeit indirectly, to the order of the apparatus and onto the film surface.³⁴ Nicolson sews

³⁴ Nicolson's use of the sewing machine, and Gill Eatherly's domestic broom are prosthetics used to extend the limits of the human form. Reynolds observes: 'A series of works entitled *Light Occupations* where simple objects and actions from outside the realm of technology, such as sweeping with a broom, could become instruments for an analysis of that technology, taking on new functions and significance' (Reynolds 2011: 152). Contemporary examples include Sally Golding's mimetic performance of projection, in which non-film

holes in the strip. This merging of machine bodies with living human beings generates a quality of indeterminate impressions on film, with tracks of marks that are neither purely mechanical nor purely manual. For example, some of the needed holes are snagged and, while evenly spaced, do not travel in a straight line down the strip like the sprocket holes, but veer across the frame, puncturing the sprockets and leading to the film's eventual collapse (See Figure 58).³⁵

In re-designating and attempting to sync domestic technology with industrial tools of film, Nicolson's performed merging of mechanical/corporeal bodies constitutes what Reynolds, echoing Cartwright, describes as an 'intermingling' of self and object.³⁶ In these respects, we find significance in the theories of mimesis discussed earlier, in that the artist's own movements, assuming an intermittent character, are similar to, and inseparable from, the reprographic technologies she employs. Mingling with and perverting technology is not an easy experience for Nicolson, as it places stress on both her mind and body. She herself states the pressure of 'trying to sew fast enough to keep up with the projector (Nicolson 2011: 158). The work, like labour, is effortful, but the pressure is also a creative catalyst and the care invested is visible in the work, which is layered haptic and corporealised.

While Reynolds specifies Nicolson's use of three modes of imagery (shadow, live, filmed) (Reynolds 2012: 139), it is also of interest that within the filmstrip alone thousands of miniature images of the artist are contained. Here, I recall Cartwright's speculations on the pleasure that the Fleischers were able to experience by using their home-made gadgets to combine multilayers and scales of human forms, all compressed and held by the rotoscope screen, in relation to Nicolson's collapsing into one space smaller images of herself held on the filmstrip. By Laura Marks' terms, a haptic work may create an image of such detail through, for example, the use of miniaturism, that it evades a distanced view

machines, such as strobes and propellers, have the effect of turning the apparatus inside out so that projection intermittencies are externalized.

³⁵ Reynolds observation chimes with my own longstanding enquiry into feminist film-makers interest in self skilling with the film apparatus, which I have previously described as 'communing': 'LFMC female artists using film and video have ... been enabled by the parallel movements of co-operatives and feminism to take control of the technologies of production, using complex equipment to explore subjectivity through their own visual language' (Hatfield 2006: 164).

³⁶ In terms of one of the central themes of this research: that of copying, Deke Duisinberre, in an overview of British Structural-material filmmaking, 'perceives *Reel Time* as "another important piece in establishing the role of the projector in an expanded cinema context"'. As Reynolds describes it, he reads the sewing machine needle as 'mimicking' the film sprocket holes while Nicolson's shadow mimics the filmed image (Reynolds 2004: 11).

(Marks 2000: 163). The tiny punctured images of Nicolson are highly haptic in that they are made through multiple contact methods and experienced through haptic visuality. I suggest that it is through this tracing and handling of multiple figurations of self, condensed into one film support, that *Reel Time* articulates both a fragility and tenacity of the body and a dispersal of presence across technology.

Chapter Three. Case Studies. Insides Out, Body as Resource.

1970s expanded cinema provided examples in which the body was deployed directly as material on film. Both Nicolson and Schneemann locate 'equations' between their identity as artists and the materials they use. We saw in *Fuses* how the artist represented the integration of herself with her environment using her own body to touch and mark the filmstrip, and how that fusing, as she refers to it, can be read as a form of mimesis such that her body acts like, or becomes held by, film. Now there follow studies of three more recent direct-on-film works: *Skinfilm*, *Rainbow Party* and *Blutrausch*. These works are not performed live but arguably, in their use of organic physical material, have a live quality. The commonalities between these films and those of the 1970s are the analogues they locate between the human body and film material and their methods of working with what is to hand – integrating with, or copying domestic objects. The key *differences* will become apparent, in that the film moves away from any photographed imagery of the self as it appears externally and toward the direct imprinting of the actual corpus onto film using skin and blood to create an experience of actually being on, or inside, the artist's body (Knowles, 2013).

***Skinfilm*, 'It was in My Hands', it is My Hands: Trace as Image**

To make *Skinfilm*, (three editions during 2003-2007) Hart applied lengths of sellotape to the surface of her entire body. The tape, impressed with the variations of texture present in her skin and hair, was then transferred to transparent film leader. In this method, contact is made at various stages: tape to skin, tape to film and, in the viewing encounter, skin is seen in extreme close-up and in strips, de-familiarised and thus must be stroked haptically with the eye. Upon projection, the lines, pores, grooves and imperfections of her rough and smooth skin form a rich resource of rhythmic imagery, all enlarged, fleetingly visible, artificially reanimated and set into a kinetic flow.

The film, as is literalised in the title, is a direct index of Hart's body, made through extensive contact – a one off and original imprint of an individual, holding actual particles of the human form and possessing a high level of presence and aura. As Benjamin stated, the aura in the photo comes about through prolonged exposure to light, absorbed as it were from its subject. In the case of *Skinfilm*, the film is not struck by the materiality of light but by the substance of moisture, the greasy tracks and stains deposited by the authors touch. As Takahashi observes,

In a film that points to its status as a direct index of the film-maker's body, Emma Hart's *Skinfilm* (UK, 2004) uses cellophane tape to produce a map of the artist's body from head to toe as the tape picks up pieces of her hair, body oils and skin as objects for the eye and producing a readable map of a woman's body that must be mentally reassembled. In their use of materials from the filmmaker's own body, films like this literalise the film-maker's physical role in their production. However, their implicit reference to the traditions of conceptual, performance and body art draws attention to the gap between image and the presence of the film-maker's body in the exhibition space. Despite the desire for presence implied, such films inevitably draw attention to the spectatorial experience as an act of reading rather than of immediacy (Takahashi 2005: 173).

Takahashi's description of the film as a 'map' is appropriate in that the viewer travels alongside the film mentally cross checking where the rapidly moving images relate to which part of the body, and in this way, referring back constantly to what caused the film. As Doane describes it, the object haunts its index. The process of the artist measuring, dividing and reassembling herself into filmic sequences has the effect of invoking her in the exhibition space and partially fulfilling the desire for presence noted by Takahashi. As with any film exhibition, *Skinfilm* exists at a remove from its site of construction, yet though the artist is absent from the live event, the indexical significance of this work is the knowledge that the artist and the film were certainly enjoined at some point, and that the film has a referent. A particular living body is linked to and is the cause of this mark. The quest for a relationship of contact and certainty of source lies at the heart of the debate on the indexical image (see Doane 2007 in particular). *Skinfilm* is just that: skin and film, unadorned and un-styled. It is not a representation of skin, but its unaltered trace and indexical therefore, and it also bears a resemblance to skin, and so is iconic, and in this respect it throws into question its status as sign.

Two Joined Skins: the 'Grain' of Skin and Medium Specificity

Each *Skinfilm* screening is, in certain respects, a live event because the film surface is composed of actual skin, and in this sense Hart is always present as a decaying trace in each screening. The film is alive, precarious and not entirely fixed, and each projection jostles and exposes the delicate dermal flakes to harsh light, accelerating its perishing. As with Nicholson's *Reel Time*, it can be read as a

meditation on fragility and impermanence. Over a period of years the skin embalmed on film disintegrates altogether as Hart explains.³⁷ She has the possibility of striking another skin print but this will be altered due to her aging. *Skinfilm* points to and verifies the existence of matter, an event, because the film always mutates and is never identical.

There is value in reading the film in terms of its indexical embodied character, but, as with *Reel Time*, the work also strongly conforms to a structural model. As discussed, the structural film is a reflexive interrogation of the factors, materials and forms of its own construction. Doane teases out the concept and practice of medium specificity, proposing that this type of work resists material limitations, while being wholly constrained by them (Doane 2007: 128). By this reading, *Skinfilm* exemplifies medium specificity in that it resists, yet is constrained by the material limits. It is structural in that the artist converted her body into time, the mass of her form determining the fixed duration of 11 minutes, and the body is a source of forensic enquiry raising all manner of intriguing formulae, for example, how many frames does a human leg hold? Furthermore, Hart's application of the light permeable epidermis on transparent clear film leader effects a materialist reiteration of the technical support. The marks are made entirely on the film surface, and, as Peterson asserts, 'any film with limited depth cues is interpreted as an assertion of the inherent qualities of the film medium' (Peterson 1994: 77). The material nature of the filmstrip as the outermost part of the cinema apparatus is reconfirmed by skin as the outermost layer of the body. Film as a surface carries 'grain', which is the texture of the photographic emulsion. When Hart joins her skin layer to film, as with all camera-less film, the photographic deep and illusionistic space is bypassed in favour of its shallow surface possibilities, activated by the 'grain' of skin. The support makes it possible for the skin to become visible, and the light permeable character of skin allows the film itself to be seen, both illuminated at the moment when the projector beam passes through these two joined 'skins'.

Material and Sensual: Embodied Knowledge

The structural film reading can be complimented by analysing Hart's embodied relationship to the film medium. To make the self coextensive with materials, as she has done, is a process involving decisions about whether to observe cinematic

³⁷ Information gathered through email correspondence with Hart, Nov 2010.

conventions and calibrate her body to single frames or to divide herself into strips and passages (the method of frameless film identified by Hamlyn) to record longitudinal sections of her anatomy. Despite the segmentation of the skin into strips, its appearance in motion is not discontinuous; the even-ness of the dermal covering creates a smooth and regular momentum and progression of delicate patterns.

Unlike in *Fuses* or *Blutrausch*, we never get a sense of travelling into the bodily interior or subjectivity, and yet the work is highly intimate in that we get to see private parts of the artist's body in microscopic intricacy. The pores are so enlarged though, and fly by at such a rate that a haptic viewing is forced, one which skims the surface and thus protects the image of female body from a penetrating gaze.

Encountered on a frequent basis, the artist is as familiar with her with her own body and skin as she is with her materials, inseparable from the technologies that surround her; the material is, not simply in her hands, but her actual hands. It is therefore a mimetic representation, as it involves a continuum between the world and the production of signs about that world (Marks 2000: 139). Unlike West's multiple forms and reference to outside events, or *Fuses* spilling out and reabsorbing everything, *Skinfilm* does not involve intermingling or interiority. It does not beckon the viewer in, but instead keeps flowing past at a regular pace. The film is self-contained, referring to nothing outside the artist's own embodied self, a compact and unaltered trace.³⁸

Rainbow Party: Colour – Freedom – Labour – Severance

After *Skinfilm*'s restraint, the lipstick traces in Jennifer West's *Rainbow Party* (2007) seem gaudy and chaotic, using the strikingly simple method of kissing film to refer to a complex cultural problem of parties in which teenagers perform oral sex (West, 2009): 'A type of party where a large group of young girls compete to see who can mark their unique lipstick color furthest down on the shaft of a boys penis.'³⁹

³⁸ It is important to mention the Arte Povera artist Giuseppe Penone, whose work over many years has employed similar methods as that used in *Skinfilm*. 'Penone's images adhere ... because they have to do with contact and attachment – with touching or pressing or rubbing something. It is no coincidence that he often uses sticky tape to pick up the pigment dusted over his own skin to create drawings' (Newman 2004: 101).

³⁹ <http://www.urbandictionary.com/define.php?term=Rainbow%20Parties>.

West and her contemporaries repetitively 'kissed' 35mm clear film, imprinting the stock with their lips. Their mouths were coated with various shades of lipstick and these bright artificial colours form vivid shapes on the film. As previously stated, film's capacity to hold intense colour is an outstanding feature of direct on film, alluding to camera-less film-makers, because the saturated tones, absorbed into films gelatin coating, retain their luminosity. Much early camera-less work explored colour as an abstract element, with Lye celebrating this technique in his earlier *Colourbox* (1935) and his *Rainbow Dance* (1936), an energetic celebration of the vibrant fullness of the spectrum of 'rainbow' colour. As Smythe observes,

Merging several cinematic idioms and making inventive use of the new Gasparcolour printing process, *Rainbow Dance* ... was a heady paean to bodily vitality, as figured by a lone silhouetted figure's jaunty and increasingly rapturous engagements with his worldly surroundings. (Smythe 2013: 85).⁴⁰

As Smythe describes, Lye found a method for using colour directly onto film as a means to represent the pleasures of a full bodily engagement with the world, with the intention that these energetic forms elicit a somatic experience from his viewers – an alternative to the 'somatically deadening' and corporeally alienated dominant cinema which Smythe suggests Lye was keen to get away from (Smythe 2013: 74). It seems that for Le Grice at least, Lye's method was effective; that his experience of *Rainbow Dance* is an energizing one is reflected in his description: '[the film is] deliberately boisterous and amusing ... the images bounce along in a cascade.' (Le Grice 1977:71) The gaudy colours of *Rainbow Party* might similarly seem 'amusing', used once more to denote sexual freedom, yet a less playful message underpins the imagery.

The rainbow with its harmoniously co-existing colours has been claimed as a symbol of freedom, tolerance and inclusion, and, as a viewer, to be smothered in kisses is a pleasurable experience. The symbol fits, therefore, with the polymorphous collaborative production method, in which bodies join, separate and merge on the screen. The animated dancing lips, while leaping and cascading

⁴⁰ 'Gasparcolour, like the Technicolor system which followed it, is based on the separate application of the three light –primary dyes, cyan, magenta and yellow from which all colours can be obtained by mixing' (Le Grice 1977: 71). As an earlier, less standardised precursor of Kodak Eastman colour, Gasparcolour's unevenness relates to the hand wrought terms of this thesis.

about the film frame, actually refer to a more limited somatic capacity, with the mouths of young women reduced to monotonous repetitive movement. These actions, in which only one part of the body moves in unison with other figures that move in the same restricted way, can be compared to the ornamental configurations of the Tiller Girls. As seen through Kracauer's linking of the entertainment and the war industries, the Tiller Girls might have the appearance of jaunty vitality, but the decorative formations they describe carry deeper implications of a repressive political regime. The marks on film in *Rainbow Party* are printed randomly, yet they refer to consumerist conformity, in which individual choice extends merely to the problem of which shade to purchase. As Leslie describes in the topsy-turvy world of the turn of the last century, commodities have become more valuable than their consumers, and signs are fetishized with powers that make them seem more animated than humans, who, used by industrial machinery, have become relatively lifeless (Leslie 2004: 7-8). In terms of the overall enquiry of this thesis, the debate relates to decisions to refuse commercial pressure to upgrade technologies, using instead materials that are inexpensive and no longer worshipped.

Long Term Material Relationships

Once again, issues relating to the medium need to be considered in terms of how film material elicits certain responses from its users. For Lye, film's flatness and movement allowed him to explore his concerns with motion, the 16mm gauge being of sufficient size to carry the crude marks which he designed primarily for their kinetic potential. While the 16mm frame possesses ideal proportions for holding the impression of a fingerprint, a moth wing or a zigzag, *Rainbow Party* takes 70mm film as a suitable gauge for accommodating the size of the human mouth. Yet despite the larger frame capacity to contain prints of puckered lips, they appear to be printed randomly, overlapping and unevenly spaced. While animators such as Lye use techniques to create the illusion of one object moving continuously through space,⁴¹ makers of camera-less films may not possess this specialist knowledge. The irregularity of these markings could also be explained by West's use of clear film material. The frame lines of the clear leader are not visible and the numerous female participants, choreographed to form a set of images, may be unaware or unconcerned with registering the image repeatedly in

⁴¹ Experimental animator Robert Breer worked directly against principles of cinema continuity by using rapid discordant single-frame image juxtapositions.

the same place in every frame. Consequently, while the lip prints might be joined together when the filmstrip is lying flat, the projection apparatus wrenches them apart as each four-sprocket section is briefly held and then transported. It is, as Hamlyn noted in Chapter One, the projector that imposes a secondary pattern on the strip. A pattern is not apparent in *Rainbow Party*, as the top and bottom lips are dislocated, stacked up, or fall in-between frames (see Figure 18). The appearance of these severed mouths can be read as encouraged by the artist, to convey the film's theme of loss of physical and psychic self possession of the individual subjected to peer pressure and a part of an industry.

The reflection on how technology animates film-makers can be valuably examined in relation to how machines were encountered at their beginnings. As discussed on page 39, the discourse of the early 20th century was concerned with the exploited worker's loss of control over their labor, the impact of industry on the body and how technology might be mimetically absorbed. Benjamin initially embraced mechanical reproduction as an accessible alternative to the rarity and over-valuation of fine art. Today, contemporary artists choose physically demanding methods of making marks directly onto film. To make sense of why difficult processes are preferred, I follow Cartwright's suggestion that the somatically deadening alienation of paint and trace also energised and afforded pleasure for the creative individual (Cartwright 2012: 52). The stakes of image making for independent animators are not so high as with the actual toll and trauma of industrialism on the labourer's body, but analogies with how machinery both damages and liberates the body are to be found in tactile camera-free film practices: here the artist, rejecting industry designs, moves their body in non-normative ways to make film, and failure to sync with or mimic the machine creates imperfectly registered imagery in the film itself.

In all the studies so far, the artists possess varying degrees of knowledge of analogue formulae and the limitations of their chosen technical support. These constraints help generate a creative response as to how to work with and transform the material resistance of film. The frenzied kisses in *Rainbow Party* intermingle as layers of differently coloured lips combine and veer pell-mell down the filmstrip. But the depiction of the sexually aroused body differs to Schneemann's approach of layering sexual imagery. While Hart and Schneemann meet film in such a way that appears in harmony with technology, with the print

gradually changing in a rhythmic flow, the imagery in *Rainbow Party*, though film is briefly held in place by lips mimicking a pressure plate, is irregular and jarring. Len Lye adopted a peculiar choreography for the mode of repetitive frame by frame marking of film material, yet his multiple hand-drawn staccato forms create the impression of a single entity. In the case of *Reel Time*, the marks are not made directly with the body, but with one form of technology as it mingles with and mimics another. These machine inscriptions zip across the frames, puncturing the image of the artist's body as it attempts to keep time with the machines.

It is possible to understand an insistence on such medium-specific practices by reading them through a model of aura and inter-subjectivity, a desire for a two-way relationship in which the artist is sensitized by, and pushes against, her materials. The artist handles her tools and materials to the extent that they both wear her, and are worn by her. An example of this notion of reciprocity can be found in West's *Film Wearing Thick Heavy Liquid Black Eyeliner That Gets Smearly* (2008). Here West conceives film not simply as an inert surface, which can be daubed with cosmetics, but one that actively sports and wears its adornment. Through analogue film the mimetic drive for copying is enacted: film's porous surface absorbs fluid, permitting the printing of the wetness of human bodies onto it.

Benjamin's aura has been interpreted multiply, but the understanding of it as an object which takes on its makers or wearer's shape is the one which most resonates with West's work and with my enquiry into the transfer of the physical to the material. Hansen describes the quality of presence that a garment assumes from the seepage of its wearer's body:

The aura of objects such as clothing or furniture stands in a metonymic relationship to the person who uses them ... The aura of Schelling's coat does not derive, say, from its unique status as a handmade, custom-made object but from a long-term material relationship with the wearer's physique, or rather, physiognomy (Hansen 2008: 340).

As Hansen reads Benjamin, the aura is not, as is commonly held, brought about solely to the expert crafting of an object, but in fact, a garment can acquire an auratic quality from extended contact with its wearer. Hansen here identifies what appeals to me about the figure of the aura: it is a quality of permeability that comes

about as objects seep slowly into each other. It is possible to understand that film materials become auratic through a metonymic relationship to the artist who uses them. Film made without a camera is touched repeatedly, and, as with *Fuses*, carries layers of the whole body. Film can be physically 'worn' by its user, as it is in *Skinfilm*, shaped to Hart's physiognomy, and it can also 'wear' traces of human contact, as in West's *Eyeliners* film. Possibilities for this type of osmosis and reciprocity bring me to the next case study: Thorsten Fleisch's *Blutrausch*.

Inside the Body: *Blutrausch*

The idea of objects becoming imparted with the essence of their human subjects threads through this thesis. Cartwright draws an analogy between Winnicott's soiled blanket and the rotoscope screen, and Takahashi analyses the trace of the artist's process as it is imbued on film, which she reads in relation to *Skinfilm* and *Bloodrush*:

Many contemporary film-makers interpretations of the relationship between film and image have shifted from Lye's suggestion that direct animation is a way for the artists to imbue the film with the imprint of the filmmakers essential self and suggest that it is **human physical contact** with the materials of filmmaking that emerges as most important today (Takahashi 2005: 171).

As Takahashi speculates, the current emphasis of direct animation lies with the framing of an embodied relationship to specific materials, which, employed in relation to particular methods of contact, transmit the essential self. *Blutrausch*, my final case study, and the first to be made solely from bodily fluids, is evidence of Takahashi's claim. To make his film in which blood is rushed by film and the projector, Fleisch used various methods. He dropped blood directly onto the transparent film leader, fixing it there with splicing tape, spreading it around over the surface, and he also pressed the film leader straight onto his cut skin (Furniss 2008: 157). The mixing of direct and indirect levels of contact between his body and the film material affect the appearance of the film. There are passages in which the fluid seems to flow in an uninterrupted rush, replicating the rhythm and velocity of the bloodstream. These frameless lengths are edited alongside single-frame discontinuous flashes where congealed and cracked puddles of fluid take on the appearance of blood clots. The film involves high levels of physical contact,

made by touching blood to film, and it is highly haptic in that the blood seems to be heard as much as it is seen. Kim Knowles observes,

[The viewer not only] ... sees but also hears the blood in a compelling example of cinematic synesthesia ... sounds of rubbing and scratching on the soundtrack emphasise an internal experience over an external one ... the viewer is positioned in some sense within the body of the film-maker. (Knowles, 2013)

Knowles, referring to the possibility of the image as audio, reads the film as it appeals to all the senses. As she claims, the feeling of being immersed in the actual body is created through Fleisch's synesthetic treatment of the work. The seepage of blood from the image into the audio track makes a rubbing and scratching noise, creating the sensation of the bodily interior and of listening to blood as though it were rushing through our own ears.

Mimesis and Medium

Fleisch's work entails exploration into the behavior of materials and substances that don't ordinarily belong together; likenesses between film chemistry (the wet laboratory stage in film processing) and the human body are cultivated by him, for example, film's capacity to absorb and repel fluids. The artist speaks of his desire of wanting to conserve the secret and colour of life. The direct onto film frameless approach in which blood runs down the strip provides him with the means to do this. As Furniss states,

His *Blutausch* is similar to Brakhage's *Mothlight* in that it was created by placing natural objects on the surface of film ... Fleisch applied his own blood to the film, to create "a very direct and immediate man-machine dialogue ... I gave the machine (the film projector) my blood (fluid of life, secret of life, colour of life) for digestion/analysis and am rewarded with a new perspective on life itself (the projection), the perspective of the lifeless machine" (Furniss 2008: 158).

Furniss observes that, through its use of common objects, *Blutausch* is placed in a line with Brakhage. It is worth reiterating that all of the artists I am working with make use of found things from their immediate environment with an economy of

means. It is apparent from Fleisch's own statement that his intention with *Blutrausch* was to observe machine/human reciprocity, to draw parallels between the film apparatus and the human body as a fusion of the organic and the mechanical. He speaks about giving something of himself directly to the technology⁴² as though film has become part of the way he thinks about and defines himself, literalizing this idea that film is his identity. As much as human attributes are projected onto film machinery, there exist reciprocal possibilities whereby the artist locates sensuous similarities between his body and the medium. Reynolds' theory about artists' relationship to their materials as a 'material equation' is applicable to understanding how Fleisch identifies with, and invests in, the film medium to the degree that he will donate his vital fluids to the material support.

We recall from Chapter One that Barker organizes her thesis of the tactile eye along the lines of a fantastic journey through the layers of the body to argue that the viewers engagement with cinema is deeply embodied at all levels of the anatomy. In line with Marks and Barker's metaphors of film and screen as skin, cells and muscle we see how such affinities between human and film bodies are cultivated by the makers of film. We can read Fleisch's bloody lengths of film as corresponding to the network of veins that circulate vital fluids around the body, while the projector which pumps the film is the heart. The film/body analogy has a history in apparatus theory and also in contemporary film practice. Film-maker Bradley Eros, for example, elaborates a metaphor of the projection apparatus as a human nervous system: lubricated and circulatory with mechanical gears and a skin of film emulsion (Eros 2012: 45).⁴³

Rhythm and Order

Fleisch deploys a systematic process claiming to use test tubes as a container for his drawn blood (Furniss 2008: 158). Given that any old jam jar would serve the purpose, he is self consciously bringing a scientific, forensic metaphor into his

⁴² There has been little scholarly analysis of *Blutrausch*. The unnatural practice of stilling fluid onto single frames, which are then re-animated, gives the film an affinity with animation theory and practices. It has been spoken of in this context by Maureen Furniss. She addresses the film in terms of its production techniques and as a part of her survey of the 'direct-on-film' genre (2008).

⁴³ To relate to film as corporeal is an anthropomorphic tendency that has threaded through cinema. The avant-garde strategy of reflexivity has been read as a tendency to overly invest in technology such that the means of film production become fetishised as ontologies (Wollen 1980: 21).

practice: one which takes an emotional and clinical distance from the treatment of matter which might be thought of as unhygienic, or taboo, and causing recoil therefore. Though blood flows and sticks and is hard to control, Fleisch has treated the fluid in an orderly fashion, and, as with *Skinfilm*'s use of skin alone, he has exercised restraint by limiting his use of body to its blood, and not messy and 'all at once' like *Fuses* mixed-media of cat hair, dirt and sea-salt. The problem of how to translate mess into art has received attention from Rosalind Krauss in her project of the formless (exhibited at the Centre Georges Pompidou, 1996). Formlessness has occupied a central discursive position in theory and does inform my practice, but I will not pursue the debate at length here.

Methods of controlling unruly and shapeless substance can be found in feminist body art. Judy Clark in 1973 used blood as art material, this time from her menstrual flow. Her work *Issues*, shows evident technique in dealing with bodily waste (which anyway has an order imposed on it by the regular once monthly cycle). Battista points out the affinities between the serial character of internal economies and the intermittent character and units of film frames (Battista 2013: 36). Clark states that if this matter were not presented in an orderly fashion, it would not have been tolerable as art so she laid it out in a systematic way, framed and labelled behind glass, so that it might be inspected from a viewing distance (Battista 2013: 32). Using a similar orderly treatment of bodily matter, Kathleen Rogers arranges an umbilical cord into a glossy black and white photographic still life. Over the succession of several images, the focus is lost and, in line with Marks' thesis on the haptic as a channel for memory, the sequence can be read as a fading physical connection to the mother. There are multiple examples of sculptural, photographic and installation artworks that tackle the problem of building order out of bodily substance. These relate strongly to my own use and study of the physical on film, but in this thesis, I will not digress too far from the direct on film medium.⁴⁴

In this context of how order might be brought to the formless aspects of the female body, it is important to briefly consider new work which was made as a direct response to Fleisch's film: Patti Gaal-Holmes' *Blutrausch: Das Ende der Geschichte* (2013). The title translates as 'the end of history' and points to a

⁴⁴ Feminist artists using blood and bodily waste also include Vera Neubauer's film *Mid Air* (1986) which proposes a menstruating husband, Jayne Parker's film *K* (1989) which uses intestines, Helen Chadwick's *Piss Flowers* (1991-2) and as a series created over time, Schneemann's *Blood Work Diary* (1972).

personal narrative which is absent in Fleisch's film. Gaal-Holmes points out the different method of sourcing the body fluid: while Fleisch cut his body to release his blood, she worked with its 'natural emanations'. The gathering, recording and printing of waste, forgotten substances that she frequently encounters, defines Gaal-Holmes' oeuvre. With respect to her everyday diaristic hoarding and studying of the seriality of stains (from tealeaves) and otherwise disposed of matter, her work is closer to Brakahge's *Mothlight* and its themes of the end of a lifespan. In her titling of the film as an 'endpoint', Gaal-Holmes is referring, among other things, to the finite human biological time-clock in which certain bodily functions alter with age.

While Fleisch assembled his film adhering to a chronology of practice, according to the order in which he made it (Furniss 2008: 158), it is Gaal-Holmes' experience of female embodiment with its 'cyclic time-clock' (Gaal-Holmes, 2013) that determines the structuring of her film. Much like *Fuses* sensibility to the cosmos, then, the influence of planetary patterns on the menstrual cycle is made visible in the film. Gaal-Holmes' blood film has a different appearance than Fleisch's film. It contains more pauses and empty passages, and sections appear in which the blood is thinner, streaky, bubbly and seemingly more liquid than in Fleisch's work, and this affects the film's rhythm and sense of presence. During the screening of the work at *Living Film* (discussed in Chapter Four), the sticky surface of the film caused the projector to stop. The difference seems to be that blood is used by Fleisch as though it were paint, while for Gaal-Holmes, this fluid belongs more distinctly to the order of the trace.

Frames/Strips/Sections: Animation as Technique and as Metaphor

Animation is defined by its technique of registering images across a series of single frames; though *Blutrausch* works across sections of the filmstrip, and is therefore not strictly animation, it is included by Furniss in animation studies. Perhaps this is because the film is animated at the metaphorical level of giving life and movement to that which has been previously been inanimate. Early cinema historians⁴⁵ noted how animated film made possible the cultural fantasy of raising life in inanimate objects. For animation scholars Stacey and Suchman (2012: 30) movement is taken as a sign of life, and Leslie reports that during the advent of animation, cinema's animation of life, or of the effect of life, seemed to engender

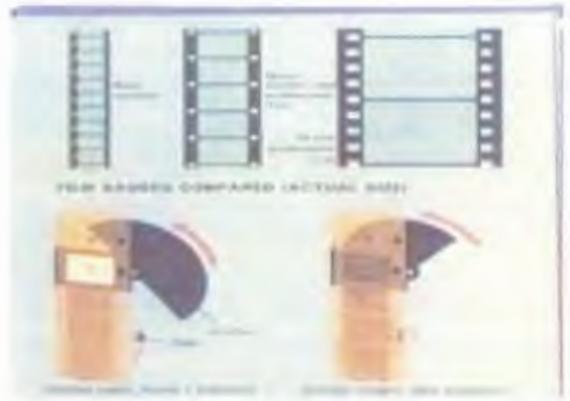
⁴⁵ Donald Crafton's *Before Mickey, From Stage to Screen* (1993) maps this early cinema history.

life (Leslie 2004: 6). *Blutausch* creates a brief interruption of the flow of life, during which blood is transplanted to the film, which is then rushed and re-animated by the projector. I have spoken of the importance of the projector in animating the filmstrip. As Fleisch states, its role is central here in bringing motion, magnification and presence to the filmstrip,⁴⁶ and each projection testifies to this.

Knowles also comments upon the sensation of presence that is imparted to this work, as Fleisch stages, 'his corporeality through cinematic materiality' (n.p.). In both works by Fleisch and Gaal-Holmes, considerations of 'material equations' and fusions are central. The films are quite literal: no figuration has occurred, simply fluid has been transplanted from one vessel to another.⁴⁷ The bodily trace is allowed to seep into the fabric of its support such that the film material actually becomes the human body. In this model of filmic reciprocity, the bloody filmstrips exist as a continuum between the physical and its sign. By drawing on his own physical substance as a resource, Fleisch embraces as a medium the most primeval aspect of embodied humanity.

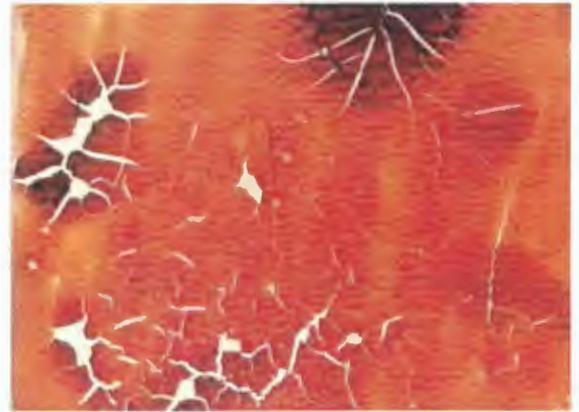
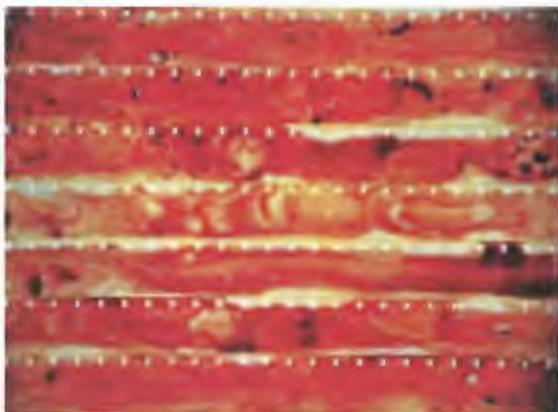
⁴⁶ In thinking about the significance of the medium in *Blutausch*, an interesting comparison is photographer Juan Fontucuberta who created a series of blood samples (*Hemograms*, 1998). In their stillness they have the quality of specimens, seem to exist very much in the past, and are markedly different to blood reanimated.

⁴⁷ Didi-Huberman's essay 'The Index of the Absent Wound' (1984) discusses the phenomenon of the stain that is inseparable from the texture and weave of its support. Because no figuration exists, the stain on the Turin Shroud is taken as proof of Christ's body.

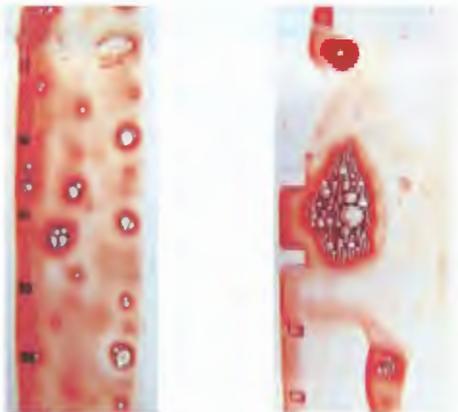


19. *Rainbow Party*: inscribing lengths of film.

20. 16mm has one sprocket hole per frame compared with 35mm four sprocket sections.



21. 22. Thorsten Fleisch's *Blutrausch* (1999).



23. 24. Patti Gaal-Holmes' *Blutrausch: Das Ende der Geschichte* (2013) at Living Film.

His blood is vigorous, a life sustaining fluid common to humans, and a source of intoxication (translation of *Blutausch*).⁴⁸ Along with Gaal-Holmes, these bloody films, colourful and energized like Lye's somatic works, enact the desire to preserve that which makes us feel alive and connected to the cosmos.

Certain key works that exemplify a full bodily engagement with film have been examined. These practices operate from within the body to its outer limits and use the surface of film to hold on to, and make tangible, this movement of substance. Matter from inside the body (fluid, cum, spit, blood) is used as a means to discuss, not so much the body as it is seen, but on that which is intangible and interior. Tidy and compact, Hart's film does not refer to any other body than her own. The film is personal and carries the whole body as an image, but only its surface level; for West, film holds the messy dispersed physical sweat and made-up traces of multiple anonymous bodies; Schneemann sources the fluid of the ocean and semen; and Nicolson engages with film indirectly via invention with bodily prosthetics. This work constitutes a wide range, then, of full bodily practices made directly onto film. The inventory is incomplete though without my own work, which differs from all these case studies in its different methods of contact and the customization of tools and instruments previously unused in direct-on-film practice.



25 Andy Warhol, *Piss Painting* (1975)



26 Mary Kelly, *Postpartum Document* (1973-79)

⁴⁸ There has been use of blood in art by Viennese actionists such as Otto Muehl and Hermann Nitsch. *Blutausch* can be seen in this tradition.

Chapter Four. Evaluation of Practice

Having built and theorised a tactile inventory of different ways of making physical marks on film, this chapter, following on from the work of other practitioners, critically evaluates the achievements of my practice. I clarify the purpose and relevance of the practice in terms of meeting my initial central thesis enquiry: how to join the whole body to film and what that did to both the body and the marks on the film. I explain how the irregular process and practice of camera-less contact film work is arduous, painstaking and rigorous in terms of theory and innovation, and how the development and refinement of my enquiry led to the final piece, which attempts to perform and integrate in one physical film performance the methodology of the animator's body: feeling and moving.

2010-2011: Self and Solitude: Body as Resource

At the outset of the project, I had the aim of finding new ways of making imagery directly onto film by using the full body. I anticipated that the research might initially involve traditional hand-made methods, which would then expand to a broader, fuller use of the entire form. Also my concern was for the aesthetic variations of abstract mark making. Within the canon the practice of camera-less film has been documented as sharing certain generic elements such as geometric forms, patterns and lines, and in nearly all analyses of this work the abstract qualities of the work are privileged. As Le Grice defines it, in the abstract film, the object reference is less important than it's visual qualities (Le Grice 1977: 34).

Imagery of the body in camera-less work is less common, but there is a small corpus of work, which includes Lye's lexicon of stenciled representations of human figures, as well as Brakhage's collaging of actual moth corpses directly onto film. In *Mothlight*, the abstract visual qualities of the wings as delicate, translucent and frayed are important, and so is the reference to the expired, disintegrating moth corpses.⁴⁹ Thoms and Fleisch use bodyfluid on film, and Hart transferred her own skin to film, while in *Fuses*, semen and cat hair were part of the imagery. I had always worked with representations of the human figure and with re-animating stains and residues of the body, and I believed it possible to carry this concern over to film made without cameras.

⁴⁹ Several *Animate* projects use imagery made direct onto film. Kayla Parker devised her own distinctive graphic lexicon of revolving forms and vivid motifs to describe the experience of menstruation and family history. Paul Bush etched *His Comedy* (1994) onto 35mm film in which the figures depicted have the quality of woodcuts. The US has a strong direct-on-film community. Some work with figurative forms, and most are making work to illustrate a narrative, and not to enquire into the medium (see Furniss 2008).

At the outset of my research through practice, economically restrictive circumstances forced me to work alone, using my home as a studio. In this context, searching through reels of discarded often unidentified found motion pictures, I felt empathy for certain tiny shapes and figures amidst the thousands of inanimate pictures embalmed in their 16mm frames, and my curiosity to see how they moved drove me to search for ways to reanimate them. I related to Hollis Frampton's experience of making *Travelling Matte* (1971), in which the artist used his hand to mask the lens and which was '[a]bout being alone and about having not very much but your eye and two hands at a particular time of life' (quoted in Sitney 2008: 116). Solitude and resourcefulness are often the rationalising conditions of experimental film, yet the artist necessarily working autonomously, and outside of commercial interests is, paradoxically, freed from representational straitjackets. Following Frampton, I too looked toward the adaptability of my own body as a resource for film analysis, which could replicate the functions of a film-viewing machine. I held film to the light, aligning the filmed figures with a strip of clear leader, which made it possible to come into contact with and physically trace their outlines.

To my mind, leader was not neutral, as Wees suggests (Wees 1993: 31), but a subtle and delicate skin-like material; its clear surface could be reiterated with colourless imagery and its intrinsic plasticity and surface qualities supported marks made directly from traces of my body. When I scraped imagery into it, the gelatin coating coiled away, like a rind. In its role of protecting the layers of photographed imagery underneath, it behaved as though it were skin, responsive to touch, and with a capacity to be held and charged directly with marks of the body and fur, fluid and make-up. Marks refers to film's 'skin' in terms of how film signifies through its materiality and also in a metaphorical sense, as a reciprocal screen in which film and viewing bodies come into contact with one another. My use of the term acknowledges Marks metaphor and my research approach considers film as skin in its literal sense, as a coat of emulsion, which can absorb or repel, and as its being derived from animal bones.

In the first phase of practice the research approach considered ways of devising systems to control the markings in order to stabilize the image and to minimize the boiling effect that arose with multiply hand-drawn forms. Lisa Cartwright's study of the animated body in the drawing aid of the rotoscope was key to this first phase

approach. I had adapted existing tools for the purposes of frame-by-frame copying of the found film, and I recognised that the method I was using of back projecting and tracing this image was a re-versioning of a Rotoscope (Figure 29). Cartwright's central concern is how the animator's physical relationship to their tools importantly drives the very nature of the creative enquiry. In her writings, she observes that what gives meaning to the Fleischers' animation, and their rotoscope patent drawings, is the overlap and intermingling of bodies that occurs through this method (Cartwright 2012: 47-77). Her meditation on the inter-subjective layering and yoking of bodies revealed to me my own desire to connect with the bodies in the found films, by touching and copying them. Like the Fleischers, I was curious to feel the contours of these tiny forms and explore the mingling of my own trace with theirs.

In making these self-conscious tracings, I sought to locate what Laura Marks, following Benjamin, calls a 'sensuous similarity', to describe the correspondences between one's body and the world (Marks 2000: 140), and which, in the context of my research, I translated to mean a yearning to know oneself by reaching out and copying the gestures of others through a haptic stroking and coaxing into life. For Marks, the interface between viewer and film is its skin, while for Cartwright the screen is a membrane which allows bodies to come into contact with one another, and for me the 16mm frame is a surface onto which other bodies can be traced and which can also hold traces of the artist's body.

Body as Resource: Boiling and Failing

By holding two strips of film together to reanimate the imagery, I had devised a new method for controlling the picture. Other earlier camera-less animators had employed a variety of systems of registration in order to control or disrupt the image when it is manually recreated over thousands of frames. The avant-garde film-maker Harry Smith is credited for devising groundbreaking techniques. Le Grice elaborates:

Working on 35mm, he came to achieve a precision of registration in his third film which often makes it difficult to realise that the film is not photographed as conventional animation. His method in these films has been reasonably described as 'batik', in which he applied razor-cut masking tape or manufactured gummed circles to areas of the frame and then

sprayed it with colour. The coloured areas were then treated with a protective resist like vaseline ... Much of the 'jitter' and frenetic pace of the hand-made film was eliminated by this laborious technique (Le Grice 1977: 78).

Here Le Grice remarks that Harry Smith's method of producing and controlling image stability is so successful that it cannot be distinguished from filmed animation. Smith's use of 35mm stock helped him position his marks more exactly than with the quarter sized 16mm frame. It could be argued that with his reliance on mass-produced uniform materials such as stickers, his work was not purely handmade, yet like my own project, sought methods beyond both the camera and the manual, to develop new forms of camera-less film.

In making my own customized systems of non-camera precision instruments, it was evident that the copied line could not remain identical. Each mark in the tracing process was like a unique signature and every figure was one of a kind, boiling and quivering through its designated action. Unlike Smith, my own research embraced the surprising vibrating forms, as they seemed to index my own feeling of fragility.

In terms of making and holding traces of the animator's body, evidence of boiling in this method lent the work a high degree of authorship, directly indexing the hand generated procedure: by accident, fingerprints of raised seams were impressed onto the frame alongside the little figures – an indexing and forensic contact of the maker which was hard to avoid. The singularity of drawing as a handmade activity is read by Krauss as a statement of autonomy in which the artist encourages her physical rhythms to penetrate the support as a method of graphic resistance to a technologized industry (Krauss 2010: 82). In contrast to Krauss, William Wees states that film-makers frequently deny the trace of their hand, taking found film and simply reassembling it (Chapter One). These differing approaches helped clarify for me the direction and priorities of my own interventions with found film: rather than simply re-edit it, I saw many opportunities to manipulate the material to emphasize my physicality, even if the trace of these somatic energies were not directly visible in the film.

The Animator's Body: Integrating with Materials

Cartwright states, 'To get that movement right, the animator had to assume a comportment and repeat movements that were difficult if not painful to perform' (Cartwright 2012: 68). Cartwright's observation that in order to render smooth moves onscreen the animator's body must be broken down helped me to develop awareness of my own body, which, in order to produce a cycle of a figure in action, with the reconstitution of parts into a whole, bore the brunt of fragmentation. In developing the research further I devised techniques that heightened my awareness of the toll of the repetitive manoeuvres entailed in rotoscope production, and of the precision and pressure required to engrave the essential line. I paid attention to other corporeal withholdings, aware that during each encounter with the frame I was holding my breath for steadiness while, recalling Lye's observations of his compressed and energised marks, I pounced on and incised the emulsion.

I was encountering limitations with the rotoscope technique – the figures I had traced lacked a corporeal quality. I had attempted to suppress the characteristic jitter of the direct-on-film approach by using the rotoscope to describe a sequence in which the figure remained still, but nevertheless they retained a boiling quality. The experience of intermingling with other bodies and various technologies is borne out in this phase, yet the sense of vulnerability is conveyed mostly through the trembling outlines of the figures. For the most part the film does not have an appearance of being carved directly into as the imagery does not cut across frames, and could have derived from drawings that had been photographed.



27.28. The proportions of 16mm film as it relates to the human hand.

Bodyfluid Films: Phase 2. 2011-12

The first research approach of scratched sequences of rotoscoped figures (*Found. Feeling. Figures*) enabled me to re-examine the use of the artist's body as material. It is possible for industrial tools (or fingernails) to make scratching marks, and I wanted to get further away from marks that could have been done by a machine. *Fuses'* rationale of using one's own body as material, enfolded within practice, informed this next phase of work. My film-making approach has always been messy and painterly, and *Fuses'* emotive and sticky openness resonated to a greater extent with my practice than *Skinfilm's* complete and tidy self enclosure. Whilst having great admiration for the tight structural control of Hart's conceptual approach, which referenced both her own female body and the conditions of the medium, I found I was more interested in spills and stains. Making full physical contact with film meant that the practice would have to be structured around using my entire body, inside and out, to make contact with film, and using my own oozing, seeping, and dribbling.

Due to a personal and emotional crisis, I couldn't stop crying during this period. I couldn't bear to lose anything else and so archived my own tears and this salty transparent fluid almost matched the colour of the film leader. I was reading Julia Kristeva, who theorises the impact of melancholy on language, in which the sense function is abandoned for more immediate affective utterance. Her analysis helped me to understand the impossibility of my doing very much at this stage but weep, collect the tears and spread them onto the film surface – a literal and metaphorical solution for developing the research, which linked directly to my emotional state and was sourced from my body.

Although this new method was less systematic than the rotoscope technique, neither was it purely an emotional discharge. The gathering of fluids had the effect of arresting the outpouring. There was a system and rules: as with Schneemann's *Fuses*, I used body fluids associated with heightened emotional states: saliva and tears, rather than automatic functional fluids (urine, menstrual blood). Over a six-month period, I devised methods for controlling the formless flow, for printing its textures and rhythms by fixing it through processes of evaporation with differential treatment of saliva flowing across frames, while single teardrops formed puddles held static within the frames. The fluid matter was artificially suspended and reanimated, and strange therefore, and the practice increased my methods for

handling and balancing of actual substances on the narrow filmstrip and the ensuing patterns.⁵⁰ When saliva and tears are solidified, magnified and turned into objects, it effects a disruption of distinctions of fixity and absolutes of in and out, posited by Blackman as a character of the unbounded 'felt body' (see page 49).

The practice of sticking bodily matter and other marks, scratches and traces on clear film leader was resulting in images that were very different in appearance to those of Ray's chemically developed contact strips. The stain as image is not high contrast, bold or well defined black and white, nor is it of primary or secondary rainbow like colours; rather it is pale, brownish, seeping and uneven, and its irregular shape may give it the appearance of an accident. (See Figures 25 and 26). Increasingly the films were collapsing sign and referent; they were both about my body and composed of my body.

At this point I examined with greater attention the role of the artist's own body in art, and how it is framed in the work itself. While the broader area of the artist's body had received academic attention (Warr 2006), with the exception of Cartwright the *animator's* body had not been fully theorised. Warr refers to artists from Warhol, to the Vienna Aktionists, to consider how the body and bodily matter can be used as art material, 'to emphasize their beauty as substance' (Warr 2006: 65). Andres Serrano made close up images of semen in which the photographic shutter suspends ejaculate as it arcs diagonally across the frame in a creamy flow (*Ejaculation in Trajectory*, 1987, cibachrome). Nam June Paik, loading his hair with ink, used his head as a brush (*Zen for Head*, 1962. Figure 62). In *The Smiling Workman* (1960), 'Jim Dine extended the physical relationship of the artist with his paint and canvas to new levels of bodily connections' (Warr 2006: 59). In this work, much like Schneemann did with *Fuses*, Dine integrated his practice and materials into the everyday, wearing overalls to frame the work as necessary and procedural,⁵¹ and using common foodstuffs such as tomato juice, poured over both artist and canvas, fusing himself with his materials.⁵²

⁵⁰ The film industry uses systems for storing film on cores and with 'a' and 'b' wind rolls which refer to the order of the sprockets, and emulsion. Base repels emulsion absorbs

⁵¹ George Saxon and I performed directly onto film at *Vivid Media Arts* in Birmingham, 2009, as a part of the exhibition *The Act of Drawing on Screen*. We wore lab coats and head torches to perform the technical procedural role as projection artists.

⁵² Significant works of this period also include Jasper Johns' *Skin* (1964), in which he rotated and pressed his head against mounted paper, and Paul McCarthy's *Face Painting Floor -White Line* (1972), in which he pushed a bucket of paint with his head leaving a white trail across the gallery floor.



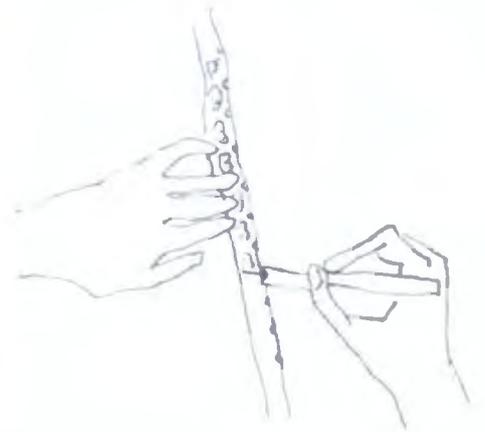
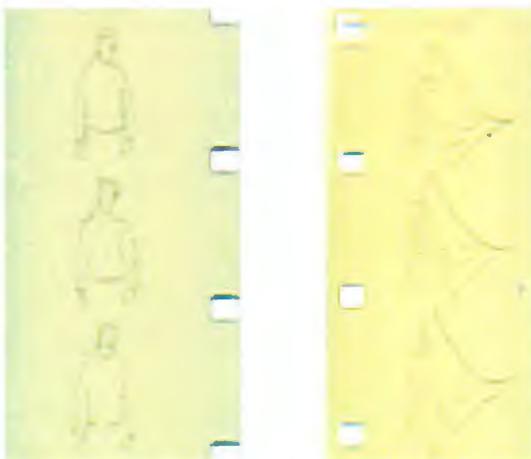
29. Rotoscope patent drawing (1915) depicting film back projected frame-by-frame onto the screen.



30. V. Smith: the process of aligning strips with clear leader for tracing



31. 32. The 16mm frame carries intermingled proportions of the tiny figures and the impressions of a fingerprint. Coiled off emulsion clings to the outline of the bodies like a rind.



33. 34. 35. The rotoscoped filmstrip shows attempts to duplicate the same pose over several frames resulting in the boiling phenomenon. V. Smith, process drawing to show the scale of the tool and the tiny figures.

As was discussed in Chapter Two, the 1970s was a fertile period for female image-makers using their own bodies as a means of representing interiority (Juhasz 1994: 12). Unlike *Fuses*' feminist orientation however, Dine frames his art through a Marxist inflection, as labour, an occupation. That his task is undertaken with pleasure is proclaimed in the happening itself as he paints on the canvas, 'I love what I'm doing'. One is reminded of the Fleischer Brothers emotional satisfaction, as imagined by Lisa Cartwright, deriving from their intensive labour and informed by their desire to push the limits of their form (Cartwright 2012: 50). The artist's job is shown to be unpretentious, exploring the value of matter and the sensuous pleasure to be had from intermingling with the stuff of our environment, covering our skins and merging with sticky foodstuffs and materials. In this 'material equation', matter is inverted, in that foodstuffs that should be inside and ingested are daubed over the skin. Once again, the skin is conceived as a permeable envelope, emphasizing our interconnectedness with worldly objects.

I've discussed approaches to making a semblance of containment and order from mess. Rethinking *Fuses* alongside Dine, McCarthy and Serrano helped me to recognize the overlap between painting, performance and animation that had always been present in my own practice. In previous work I had coated my entire body in paint and printed it onto the canvas; I had sweated onto and stained photo paper, recorded the frame-by-frame moisture of my breath, shed tears and hair and pushed it through the camera aperture. As well as Clark's *Issues* (discussed previously), in which art made from physical residue was subjected to objective scrutiny, Mary Kelly made groundbreaking feminist art in her methods for analysing the stains of her child's body. In *Post Partum Document* (1973-79) (Figure 26), she presents soiled nappies alongside charts, which analyse the child's diet and his moods. Using this waste as material for objective analysis has the effect of repositioning the role of the mother and artist to that of a scientist. Knowles brings a scientific analogy to my own body fluid film observing that the film elicits a clinical gaze:

Smith invites an almost clinical engagement with these internal fluids. Enlarged on the screen, they resemble scientific microscopic images that bring us into an uncanny physical proximity with the artist's body. The choice of material support – clear leader rather than negative stock –

bestows on the film an ethereal quality that elicits both fascination and discomfort (Knowles 2013: n.p.).

Knowles raises the issue of her sense of discomfort elicited from this material as a result of being thrust into close immersion with it. Her account is helpful for me to ascertain the problem of whether the tactile making approach becomes part of the viewing experience. She describes the work as one in which the viewer comes into uncanny proximity with the artist. In the light of my research I would suggest that what Knowles witnesses is the haptic nature of the work. As Marks describes it, the haptic image may hold so much detail that a distanced view is insufficient and invites instead a look that moves on the surface before the viewer realises what she is beholding. The object is recognized only gradually, through haptic visuality, and requires committed and active viewing therefore and this can provoke a strong aesthetic experience. For Sitney the extreme detail of matter directly on film has such intricacy and an unfamiliar perspective that he experiences it as 'terrifying' (Sitney 1974: 158).

Fluids applied directly on film create distinctive imagery that would be hard to capture with a lens due to the extreme micro-detail. A single teardrop on the face is scarcely visible, but when it is held static and magnified it fills the screen with rich detail and depth and appears to be large enough to drown in, the vast magnification forcing us thereby to notice something that would otherwise go unseen. Furthermore, the work is highly auratic in that the film that is projected is the original fabric upon which the body has leaked, a wholly unique trace of actual DNA cells and enzymes. Knowles suggests that the work invites a clinical reading. Droplets of fluid captured and deposited in the clear film frame, surprisingly retaining their circular forms, are like a stage under a microscope and do resemble laboratory specimens. My intention, however, is not to stimulate a detached reading, but to discover methods for creating form from flow, for making the physical compatible with film and in relation to a practice and materials that were (at an industrial level) devalued.

Initially my research approach was to use only body fluid on the film, but ideas were arising in relation to theories by Reynolds, Cartwright and Jones for 'intermingling' and mixing or fusing with materials and technologies. Studying *Reel Time's* strategy of the mise-en-abyme of sewing over previously filmed

imagery, I considered possibilities for combining my own earlier material with newer over-laid inscriptions. To this end, I covered over the rotoscoped figures I had scratched in Phase One with stains from my body and this allowed me to engage the figure of the trace on two levels. In this work, a trace is both *made* by rotoscoping onto clear leader, describing the outlines of figures by touching them lightly and duplicating their forms, and a trace of my body is *left* as it passes through encounters with the film. As Benjamin describes it, the aura of a distant object such as a mountain is brought closer by tracing its outline in the air with the outstretched finger. When I copy figures from the distant past by touching and tracing them onto a translucent surface, I make them proximate with my own body and can reimagine their fullness, whereas the trail of marks that I leave behind on film are of a presence that has become distant: a trace which is the inverse of the aura (Hansen 2008: 340). With the combining of phases 1 and 2, all possibilities for differential application of fluid had been exhausted. At the same time the work was invited to screen at Edinburgh Film Festival in June 2012 and marked a completion point of this phase. I gave the film the title of *Scratching, Sobbing and Spitting*, which was an indexical reference to the actions that informed the work (Figures 31-34).

Colour and Noise

The need grew for greater levels of control and shape from the apparent formlessness of body fluids as medium. As previously discussed, the naturally tinged fluids of saliva and tears almost matched the tone of the clear leader and, by structural-materialist terms, this effected a reiteration of the material. Yet by using only monochrome, I was not exploiting one of the most acclaimed direct-on-film differences to in-camera film – its capacity for rainbow, iridescent colour. In *Rainbow Party*, Jennifer West had repeatedly kissed and impressed film with bright hues, and the grease of lipstick meant that the lines that demarcated the bodily surface could adhere to the film. To use the *insides* of the mouth however to mark onto film was not an obvious choice as it presented the challenge of how moisture and slipperiness might be attached to a resistant surface.

West used her lips to hold film in place while she kissed it, as if in mimicry of a camera pressure plate. I reflected on the organ of the tongue as a solid bodily entity amidst slipperiness and the repetitive reflexive actions of licking (of, for example, certain foodstuffs). The human tongue has a sponge like surface, which

suggested to me various ways that it could be used as though it were a stamping pad. Through my research I developed ways of applying colour to the tongue in order to make its subtle cracks, lumps and grooves more visible. Hannah Landecker discusses procedures of micro-cinematography and histology in which imperceptible tissues are stained for scrutiny under the microscope (Landecker 2006: 121-132). By staining my own tongue in order to define its shape, I was increasingly using my body as a forensic analytical research tool, objective instrument, and 'material equation'.

Using my tongue in this way, I made the first colourful impression 40 frames (1 foot) in to the film and reduced the print by 1 frame with each new mark. In this way the 'licking' gathers speed until the prints overlap, at which point the stained saliva bursts over the film: an intersection where methods of printing and painting are brought together through the physical. I had not masked off the sound area, so the vividly coloured dyes leached into the optical track. The sections I had licked could be heard as regular rasps that accelerate and cue the viewer to a sense of climax, which is realized as the rolls of spit intersect with the metric licks. This element of predictability, characteristic of a structural materialist perspective is present in *Reel Time*, as there is a realization at a certain point that the loop is destined to disintegrate due to the sheer quantity of holes in the strip, so the audience helped the broken film back along from the sewing machine to the projector.⁵³ Due to its factors of film duration, framing and speed, the final image in the canonical structural film *Wavelength* (Michael Snow, 1967) is inevitable and leads the viewer to a self-aware satisfaction gained from anticipating the denouement of the work. At only three minutes long, *Noisy Licking, Dribbling and Spitting* is too quick for an audience to have much time to reflect; nevertheless, I hope that the building pace and momentum cue a climax simply through the film's abstract elements. My developed awareness of the aesthetic possibilities of pace, shape, pattern and texture is an unforeseen outcome of the work.

Noisy Licking, Dribbling and Spitting can be equated with synaesthetic phenomena and transduction of the senses, in that colour and texture can be equated with volume, heard as well as seen. The greater the color density, the more noise in the audio track: a differentiated score of regular rasping contrasts with the rumble of congealed saliva. Marks, following Derrida, observes that speech is tactile as it

⁵³ From a conversation with Felicity Sparrow, who had witnessed the event.

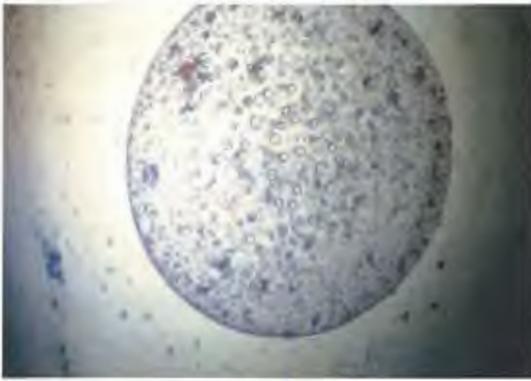
is formed by the mucous membranes and by saliva, and then spat out (Marks 2000: 142). *Noisy Licking, Dribbling and Spitting* conceives this tactility through the materiality of the mouth, which is a source of both saliva and speech. This dynamic, in which the sense of language is combined with noise and mess, reflects the larger thesis concerns of harnessing pure discharge, energy and chance, and tempering it with order, the mechanical, technique and method.

I had tried using blackberries to stain the film but the juice was too pale. The earliest version I gave the title *Eating Berries*, as an acknowledgement of West's juicy and messy, highly synaesthetic works which appeal to the combined senses of taste, smell, vision and hearing (Schlict 2010: 40). However, pointing to a narrative outside the text had become for me less relevant than how the use of colour on film might influence a sense of vigour and vibrancy, and also how the two distinctive methods of metric and random could combine. The physical and the material synthesis reflected my controlled and deeper knowledge of medium specificities, while also highly physical and messy.

Dissemination of Research

In early 2012 I began to disseminate certain key ideas arising from the research. I wrote an essay for *Sequence* journal, which tied up phases 1 and 2 of the practice. The essay 'Full Body Film' drew links between artists using their body as a resource for contact-based representations on a filmic medium that could support physical substance and the demise of film in the industry. It presented investigations into how I tried monitoring the contortions of my own animator's body, and which, though it was a source of abundance, was not necessarily easy to join to film. Writing this helped me to think more deeply about the correspondences between analogue film and the body.

In April 2013 I presented research at the Postgraduate Animation Research Group at the Royal College of Art. The group's focus on 'the animation body' clarified for me the emphasis of my own research, which was the animator's body working behind the scenes. With reference to Cartwright's analysis of the animator's experience of making instruments to analyse human movement, the paper addressed how animation technology informs a corporeal attitude in my own body, and that by holding film in place for manual marking and physical printing, I was forced to move in ways that affected my posture and co-ordination.



36. 37. One drop seen on the screen of the film editing machine and on the filmstrip itself. Though placed in every other frame, the impression is of one form pulsating through time.
 38. The open surface of the strip can be multiply glazed forming a thick 'auratic' crust. Damaged sprockets indicate problems of passing through the narrow projector plates.
 39. Saliva rolls down and along the frame lines and stops in a globby lump.



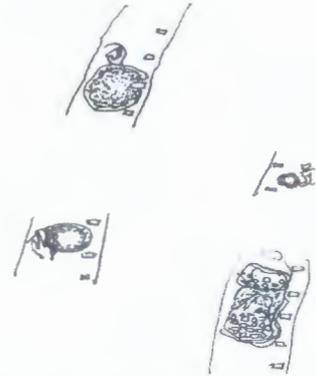
- 40.41. Self portraits of process: the transparency of tears, saliva and the filmstrip allow light to pass through.



- 42.43. Traces of body fluids combine with traced figures.



44. *Noisy Licking, Dribbling and Spitting.* From left to right the marks begin to overlap and give the impression of accelerating pace.



45. The system for storing the fluid while drying in a dust free drawer.
 46. Drawing plans for how goo could overlay previously scratched figures.



47. 48. *Scratching Sobbing, Spitting* projected at *Living Film* (2013).



49. 50. Marks made with the mouth alone by dribbling and spitting stained juices.



51. Marks painted on the optical track correspond to pitch change.

52. The tongue at full stretch is equal to 6 frames of 16mm film.

Though strongly associated with implementing the smoothness, continuity and flow of live-action film bodies into the animated life-form, the pre-digital rotoscopic film body ... was in fact produced through a process that involved intensive fragmentation, discontinuity projection and condensation in the animators attempts, to borrow a phrase from Sarah Ahmed, to overcome the 'queer effects of bodily orientation' (Ahmed, 2006:65) in the space of the rotoscopic film production (Cartwright 2012: 51).

Cartwright points out that the rotoscope device offered animators the means to distort the movement of the bodies onscreen, while I focused on the strange choreography of my own body as it makes marks on film – a reversible process in which film is made more physical, with the trace of bodily flows and pulses, while the body is required to move mechanically to film's beat. With my background as an animator and breaking actions down into increments, I had a feeling for these somatic intermittencies. Bringing these ideas into the public forum helped to focus the research problem of how to reflect critically upon the task of physical replication of image reproduction. It prompted the step of turning toward Benjamin and Leslie's theories of mimesis and how machines could be productively partnered or mimicked by the human body.

Living Film

In mid 2013, the film-maker Karel Doing, inspired by the essay I'd written for *Sequence*, proposed that we jointly curate an event. This provided me with an opportunity to test the shift that was occurring in my project, of relocating the *production* of the physically made film into a live performance. The work I had made to date represented a fairly comprehensive tactile connection with film. Yet the role of aesthetics was important: the project would be accomplished not solely through *my* connection with film, but also through the types of viewing experience that this direct-on-film work instigated. The premise of *Living Film* (exhibition at No.w.here, London, October 2013) was to enquire into what physical film as a live event could mean, and to examine the performative value of the wide forms of tactility and activity required to make contact film. The noise of the projectors mingled with the imagery on the screen and with the bodies that occupied the venue, and the synesthetic, haptic qualities of the works were foregrounded.

While all the works exhibited in *Living Film* are pertinent to the concerns of employing the body as medium and as performance, I will comment here only on those works made directly onto film. The audience was invited to digest food while also watching contact film imagery of that same foodstuff, thereby turning their attention inwards to their guts (Viktoria Schmidt's *Foodfilm*, 2013). Another piece in which taste is made visual, *Rosemary Again, Again* (Cathy Rogers, 2013) is an index of the absent action of repetition, reiterated in the title, of circling round the bush at night to wrap unexposed film around it. The film not only evokes the fragrance of the herb as it is released through the contact print method, but its spiky texture can also be felt on the surface as points of light brushing against the film. Extending the appeal to the senses, the aroma of scorched hair filled the auditorium in James Holcombe's enactment, composed directly on the strip, of the potentially hazardous physical role of the projectionist, *Hair in Gate*. Some of the work was freshly made and sticky therefore: Gaal-Holmes' *Blutausch: Der Ende der Geschichte*, though referring to the finality of physical processes, was very live and present; Alia Syed's buried film *Priya*, made in contact with the earth, is filled with live bacteria, as is my own *Scratching, Sobbing, Spitting*.

2012-14: Physical Films

The *Living Film* event, along with Cartwright's suggestion that emotional satisfaction is gained from media innovation, led me to think more about that which animates us as artists, both in terms of feelings of motivation and curiosity, and the liveliness of our bodily orientation in production (Cartwright 2012: 72). Merleau-Ponty observes that physical proximity to things prevents an intellectual detachment from them; in this sense, touching is reversible, in that it is not possible to touch an object without being touched by it (Merleau-Ponty 2004: 50-51). As the subject I touch film, yet film materials and technologies also touch me and force me to move in a different way.

The artists I was working with were had to adopt an unusual physical orientation of production. Nicolson was forced to pump furiously while transporting film through a sewing machine, while Schneemann spread herself, scroll like, across the filmstrip. These artists had relocated their physicality of practice onto the stage, thereby taking experimental film into new directions. The more I found ways of regulating my self and moving in tandem with film, of making it physical, the more film moved me mechanically. Using my animated body instead of a camera and

fragmenting physical actions into parts, I recognized that the work is equally about what is made and the choreography of process; the performative value of these strange incremental and non-normative motions of making contact film. I began to plan how to extend the space of production into the space and stage of exhibition, as this would more fully demonstrate the breadth of my contact with film. In order to test this idea of potential benefits of coupling the human body with technologies of reproduction, I came up with a set of 'physical films'. *33 Frames per Foot; Head Roll* and *Bicycle Tyre Track* which attempted to capture on film the resources of the body that were without substance: energy, power and physical tenacity; its ability to maintain balance, to take aim and to complete an action.

Bicycle Tyre Track: Left In Passing

My enquiry into how to use the full body to mark film broadened at this point to encompass the body's proprioception. *Reel Time* and *Skate the Sky*⁵⁴ by West had not made direct physical contact with film, but neither had a camera been involved. In fact, one could interpret a sewing machine or skateboard as a surrogate form of camera. *Reel Time* made analogies between the needle and bobbins of the sewing machine, which perform similar functions to the claw, and spools of the projector. I wanted to respond to Nicolson's resourceful use of film by seeking correspondences between my life as a film-maker and the technologies I reached for daily. In his *Automobile Tire Track* (1953) Robert Rauschenberg had made art from the trash of the streets, driving over a scroll of paper, impressing it with dirty tyre tracks and generating a repetitive mechanical pattern. Fascination with the symmetries of the mechanical systems of my bike and the film apparatus led me to conceive *Bicycle Tyre Track*: I would ride my bike through a pile of dirt, over a strip of 16mm film, and then project the marked strip as a live performance. The execution of this is analysed by Charlotte Crofts who saw my performance at Exploding Cinema,⁵⁵

(a) performance cycling over a 16mm film strip with the painted wheels of a bike and then projecting it – announced with a ring of the bicycle bell to clear a path in the crowd and ending with a durational film strip projection of the resulting "indexical" imprint of paint on celluloid – a wonderful mix of the

⁵⁴ *Automobile Tire Track* might have influenced Jennifer West (although it is not acknowledged) as she redeployed the transportation device of a skateboard in her *Skate the Sky* Film (2009), in which a length of film was taped to the floor of Tate's Turbine hall and skateboarded over.

⁵⁵ Exploding Cinema, December 2012, at St James Church, London was held as a part of the *Beside the Screen* conference, Goldsmiths University.

mechanical and the organic with the wheel of the bike reminiscent of a reel of film (Crofts 2013).

As Crofts confirms, the commonalities between the technologies are plain to see. She also raises the question of the indexical status of the artwork. The impression on the film is not a representation (iconic) and neither is it abstract. It is a mark, or trace, that points to the action that made it.

The track is evidence of the wheel having made contact with the ground, and that a bike has passed through the space. Theory concerning the quality of the mark, or sign, of the index has been developed in relation to photography. Scholars have teased out the subtle distinctions between the aura and the trace. The track is a trace in the sense that it appears as closeness to a thing that has since departed and is far away. The aura on the other hand, has the appearance of distance to a thing that is physically close (Hansen 2008: 340). Krauss and Doane theorise the trace as sign: it is 'a direct emanation from the real' (Doane 2007: 1). There is no attempt to style the trace, it is just a mark that has been left and it 'disallows intervention' (Krauss 1976:206). As a trace, *Bicycle Tyre Track* is more successful than the previous pieces. The body fluid film used physical residue – it was a trace and yet it had been intervened with and stylised. The impression of the tyre on the strip of film on the ground, however, is executed swiftly and is not modified in any way. It may have the appearance of being unintended, and 'speaking itself' and raises doubts as to where the artwork is? The index/trace as image has been seen to be radical because it instances a real without realism (Doane) and troubles signification due to its rejection of styled art historical conventions (Krauss 1976: 206).

The filmstrip carries the impression of the repetitive units of the tyre tread. Errors that arose from the difficulty of cycling a straight narrow line, such as skidding off the filmstrip, can be read in the trace of the wheel on the film. As long as the aim is true, the mechanical pattern printed onto the film is uniform, yet with the inevitable swerving, the rim of the tyre enters the frame and side-to-side chevrons displace the forward momentum. These irregular markings, and the rhythm of uneven tracks on the finished film, index the difficulty of registering the wheel along the narrow 16mm gauge, showing the body to be fallible as it wavers from efficiency and regulation.

Feminist Structural-Materialist

Lucy Reynolds discusses how instruments from outside the cinema apparatus (the sewing machine and broom) were used by feminist structural material film-makers as a means to analyse the condition of film (Reynolds 2012: 139). Her reading prompted thought about how the machine that I had imported into the film event (my bike), and cycling over a line of 16mm, enacted a delineation of the dimensions of film – a long and narrow strip which was also much like a cycle path. The roller reiterated the rotating and revolving motion common to reel and wheel and chain and belt, I used to ink up the wheel (See Figure 54). I had to turn the bike upside down to grease the tyres and, upended, the wheels resembled the spools of a film projector. Yet beyond the many obvious correspondences between the two machines, the primary aim in *Bicycle Tyre Track* was to use the full body to mark the film. Although I was not directly making skin contact with film, the performance manifested a broader idea of the whole body: the live event stimulated my embodied knowing and my ability to make quick decisions, to assess my overall position, to judge when to accelerate and how much effort to employ in movement.

Furthermore, like *Reel Time*, this piece performs the operation of self as a technician: familiar with tools and in charge of self-powered technologies, I draw on my own energy, with my body as a resource. Nicolson sutures together her own body with machines mixed from the textile and film industry as I mix machines from the transport and film industries. My performance draws out the ways in which machines of bike and projector mimic each other. As with Dine's performed role of the artist as a trade, what is performed here is the animator's body in her chosen livelihood and occupation.⁵⁶ I set out to research the possibility of making the filmstrip thick with contact: both the strip itself as material, and the space of the projected immaterial image. In *Bicycle Tyre Track* the space is made thick by the multiple passages across the gallery site, and by the joint activities of production and exhibition.

⁵⁶ Cartwright discusses the pleasures of assembling instruments that she speculates had motivated the Fleischer Brothers to pursue their invention of the rotoscope. (Cartwright 2012: 67-68). Since working at the LFMC I had gained a sense of satisfaction and empowerment from being able to dismantle and reassemble basic film machinery – to perform a connection to the objects of my trade.

Dirty and Precious

I wanted to retain the aesthetic of seepages and stains, to underscore the theme of disposability, and for the mark on film to seem as though it were a trace of my bike tyre, an accident left in passing. I coated the tyre with rough materials: a clay/paint mix that I hoped would look like mud or oil. Upon projection the film looked dirty, uneven, imperfect, a bit torn and still sticky. The 'track' had spilt into the optical sound area. The volume was up and tuned to amplify the bass frequency. The print was synesthetic then, as dirt and oil could be heard as well as seen and both looked and sounded dirty. When the film was projected it rumbled and the vibration could be felt on the ground. I was pleased with being able to feel the sound through the feet as it reiterated the connection to the earth and the element of gravity that was key to the performance. By scratching, scraping and puncturing film, Brakhage and Nicolson had assaulted and damaged it. Cycling over film soiled and stained it, making it un-precious and contradictory to the treatment of film in the industry, yet the dirt track also coated the film with a protective covering and invested the surface with a tactile layer. In this respect, the theoretical premise of the haptic is raised in the artwork.

Failure and Capitalism

As Leslie recounts, in Benjamin's reading of the ways in which technology could have a beneficial effect on the masses, he observed that Chaplin's mimetic imitation of assembly line production had the effect of generating humour in the audience. The mechanism of laughter had the directly opposite effect of bodily fragmentation, releasing a holistic and full-body response and encouraging the acceptance of technology by ridiculing it (Leslie 2012: 31-32). Joining together technologies that are common to my everyday environment, *Bicycle Tyre Track* forms a critique of consumerism, yet my mimicry of the film apparatus elicits a different quality of engagement. Ideology makes it seem 'natural' to want the newest, quickest and easiest technologies, and this is framed as progress. (Bronner 2011: 5). *Bicycle Tyre Track* draws an analogy between my own choice of a bike rather than the dominant (and Rauschenberg's) use of the motor vehicle, and my preference for working with film rather than the prevalent digital technology. The track in which I mimic a narrow strip of film is evidence that the human body can attempt to regulate itself as though it were a machine but the swerves on the film point to the impossibility of this feat. The film however, has no ideal outcome and is a record of the completion of the process.

Mid 2013: 33 Frames per Foot

Bicycle Tyre Track is a piece which is effective in partnering and mimicking technology, but I wanted to find ways to physically mark film, less as a continuous strip, and more in line with the animator's body, oriented to the single frame and the incremental character of film. Furthermore, the tread of a tyre derives from an industrial source, whereas marks made with the foot, saliva and tears are entirely unique. The potential of the earlier rotoscope stage of emphasizing corporeal foibles provoked for me ideas as to how the deviant motions inherent in my own method of using my self as a printing/copying machine could be made more prominent in the work.⁵⁷ While I had used it to capture the essence of the moving figure, I wanted to explore as a live event the potential for a strange type of motion in preference for the normative rotoscope effect.⁵⁸

I conceived a second physical film performance: *100 Feet*, renamed *33 Frames per Foot*. In this piece, I perform direct corporeal contact with film using my painted foot as a mark making tool – substituting the camera's reprographic function with a different order of semi-mechanical impressions by walking, tiptoeing, stamping and hopping along a transparent 16mm strip which is then projected.

My foot corresponds to 33 frames of 16mm, shorter than the industry standard of 40 frames. In this regard, now that analogue film is rarely used in industry, its rules, measurements and systems no longer have meaning. Having lost its industry armour, it is up for grabs, and a response is to inhabit or occupy and feminize it, much as Eatherley did in *Light Occupations*, by forcing it to correspond more closely to the female body. The female frame tends to be smaller than the universal measuring units which are based on the male form. In this respect, *Skinfilm* is a precedent of body-mass converted into film duration, and the film running time of 11 minutes is an analogue of Hart's slight frame.

In my equation, film is feminized and each foot takes just 1.5 seconds to view. Given that each footprint takes less than two seconds to watch, many steps are

⁵⁷ In her essay, *Animating in the Moment* (2014) Birgitta Hosea discusses *33 Frames per Foot* in the context of linking performance, drawing and animation.

⁵⁸ Robert Breer and Nicky Hamlyn have both explored the formal limits of rotoscoping, by tracing, for example, backgrounds and non-figurative scenes, and shifting between the photographed image and its rotoscoped trace.

needed to generate a short film sequence. This fact brings us back to the problem of how to join the body to film. Given the great quantity of images needed to make a strip of film, as a physical method of creating almost identical multiples, walking is relatively effortless. 'The Greeks knew only two procedures of technically reproducing works of art: founding and stamping. Bronzes, terra cotta's and coins were the only artworks which they could produce in quantity' (Benjamin, 1968: 218). In his reflections on the development of early image reproduction, Benjamin points to how these methods limited the types of objects that were reproducible in mass quantities.

Elements of melting, pouring, molding and stamping absorb great amounts of energy. I thought about the power consumed by the film industry in order to perfect the mechanism of cinema and the thousands of pictures that were needed to make a film. Why go to the trouble of reinventing physically, with arduous making by hand, foot, mouth, skin, lips, a mechanical system perfectly suited to the task of mass imagery? For me the answer lay in Marxist theory in which the labourer who loses physical connection with the things he makes also loses touch with his own body, 'The alienation of labour estranges human beings from their own bodies'. (Macey 2002:7). As Marks, following Marx, reminds us, the modern individual's alienation is not solely from the products of labour but also from our own body and certain senses; sensuous knowledge of touch and smell has atrophied while the visual is privileged. (Marks 2000: 139). Mechanics of pressing and stamping could also be made by physically banging repeatedly and emphatically on the ground with feet or fists. The return to these most basic methods is prompted by the desire to reconnect to the labour of making, to locate in the mechanisms of reproduction the repetitive gestures and actions of the body upon which industry surely fashioned its prototypes. *33 Frames per Foot* is an enactment then, of an industry of integration with, and feminization of, film material.

Footprint as Trace

Doane interprets Peirce's semiotic taxonomy explaining that the iconic sign has a relation of resemblance to its object, while the indexical sign bears a relationship of contact (and also sometimes a resemblance) to the original. The example of smoke as an index of fire is given: the smoke touched the fire and would not exist without it, and yet it does not resemble the fire. A footprint though, does resemble

the original, and it is also identical to it, but as a negative impression. For Doane, 'the foot touches the ground and leaves a trace'. The trail of foot -prints in the sand is one of the first measures of the indexical sign and a guarantee that contact has occurred (Doane, 2007: 130). As we have seen, Krauss reads the trace of the handprint as a primary mark, yet the footprint is even more so. To press the hand or finger onto a surface is often a conscious and intended gesture, but the act of walking is almost always fully automatic.

The idea of trace, central to this thesis, is communicated by both film/performances of *Bicycle Tyre Track* and *33 Frames per Foot*. As discussed on page 90 the sign of the trace appears as an accident. The trace itself is un-encoded and simply leaves clues, providing forensic interest, about that which has departed: who passed by, why and how recently? In this regard, the 'object haunts its index'. (Doane 2007: 131). In *Bicycle Tyre Track* the possible range of tyre treads, as manufactured objects, have a limited range. The marks left in *33 Frames per Foot* however, are particularized impressions of an individual human foot, and the closeness of it's passing on the ground provokes these questions of source more insistently. The rough skin of the soles of my feet gives the tarsal prints the appearance of etchings with a textured directional pattern. When I walked sideways along the strip, the impressions of individual toes are almost contained within the frame-lines, a reminder of film as a series of units, and the proportions of film as sympathetic to those of the human body. When I took forward steps, the longitudinal grooves of the soles create a slow more rhythmic momentum.

'The rotoscoped body sometimes performed in ways that pushed the limits of viewer expectations about how a given body will, or should, move, in space or across the screen' (Cartwright 2012: 48). The trail I leave behind is uneven and evidence of erratic progress. Though devised as a tool to develop realistic motion, Cartwright suggests that the rotoscope is used by the Fleischers to digress from the norm, and to effect jerky movements to highlight the individuality of the body. The Fleischer character Koko the clown, contrary to industry claims of graceful normative rotoscope movement, mooches and saunters across the screen not heading anywhere directly. Cartwright's analysis of locomotion helped me to reflect on my own performance of awkwardly walking across a stage in a halting, brusque, anxious and effortful way with the body in its individuality sweaty, heavy

and succumbing to gravity. During my first public performance of *33 Frames per Foot* at Lo and Behold (London, 2013) I experienced a dramatic learning curve of the different physical and emotional demands of film-making and film performance. Although I had sought to mingle with other figures in the rotoscope phase of the project, in the live event to be so close to the bodies of the audience, feeling their breath and hearing their comments was extremely disconcerting (see Appendix Three for a subjective account of this performance).

Early 2014: Final Piece: Reverse Engineering in *Head Roll*

I started putting together the final piece and findings from case studies and theories, which I hoped would resolve my thesis concerns. To complete the set of physical films, and the practice as a whole, I wanted to achieve a piece in which I would seem fully incorporated into the medium and the film apparatus, and that the technology and materials would be mutually saturated with my physical body. I felt that this would best articulate the conflicts, affinities and tensions between my secreting moist body and the regulated and indiscriminate character of technology. As with *Reel Time*, I wanted to test my tenacity and resourcefulness by trying to register marks on the film loop while it was travelling around the space, to make art under the same type of pressure as Nicolson, even though this felt risky and stressful. The complications arising from joining human and film bodies were part of the initial enquiry, and it is precisely these failures and contingencies that give to film a new vocabulary of richness and fragility.

I considered options of performing a *mise-en-abyme*, by cycling over a revolving strip of film, which bore imagery of me cycling; this would have the effect of reiterating the bicycle chain with the cyclical shape and momentum of the loop. I conducted a number of tests of cycling over the moving filmstrip, but the film always snapped with the strain. Nicky Hamlyn advised making a compensator to alleviate the tension on the film. As usual, when I tested this out, in the first instance I used my own body, with my arm as a cradle to ease the tension on the moving film. I thought about how the shape of my own head on its pivoting neck, could substitute for the roller/compensator. The skin is responsive to the lightest touch, and the head, more sensitive than a bike wheel, can detect the fine movement and resistance of film as it strokes my hair. Nam June Paik had disrupted the (Cartesian) hierarchy in which the head is the source of intelligence

by lowering it to the floor to use it as a brush and as a mere component of the overall work.

Headroll is the outcome of these reflections: I coat my hair with ink, set the film loop in motion and allow the film to pass behind my head. I rock my head from side to side and nod up and down. When I am able to pin the film down, it makes a sharper impression of hair strands. If I hold it in place for too long, I feel the tugging of the apparatus and have to quickly release the pressure or the film will snap. The projector acquires an active role in this piece, and different models, such as the Specto motion analyser which runs at the slow rate of 2 fps, helped me to find a synch which was less taxing, and which aligned with my breathing; as the lungs fill and collapse, so a frame is pulled into the gate, filled with the breath of light, and released. The machine pulls the clear film loop over a 15-minute period, and the film is gradually filled with colour. The resulting *Headroll* print is a record, combined in one strip, of the balancing act in which the head pins down and registers strands of hair, creating sharp and focused marks, up until the point when the film becomes too taut, whereupon it is pulled by the projector, and the print of hair becomes a blur of motion (see Figure 74).

'The animators body is in fact also, like the Moy, available for reverse engineering' (Cartwright 2012: 63). *Head Roll* enacts Cartwright's suggestion that the body could play the roles of both projector and screen. The head is incorporated remotely into the projection mechanism and it also forms a screen onto which the traveling loop is directed. The environment is fully automated, and the way I move is determined by the film tension; operated by the projector, the head turns in time to this imperative, as if on a treadmill. With its reference to the toils of assembly line production and the certain failure of the human body to perform as a machine, this piece of physically feeling and moving with film enacts a human/machine equilibrium. The body reacts to the dislocating rhythm of technology and incorporates this machinery. In this respect, the subject takes on the qualities of objects and imitates technology, while the film apparatus is made more singular, ritualized and auratic. As with *Reel Time*, the image of the female body is dispersed across the performance space, as the actual head, its image onscreen and its trace are spread over the traveling loop.



53. I used the bike rack to transport the tools I needed in the performance itself.

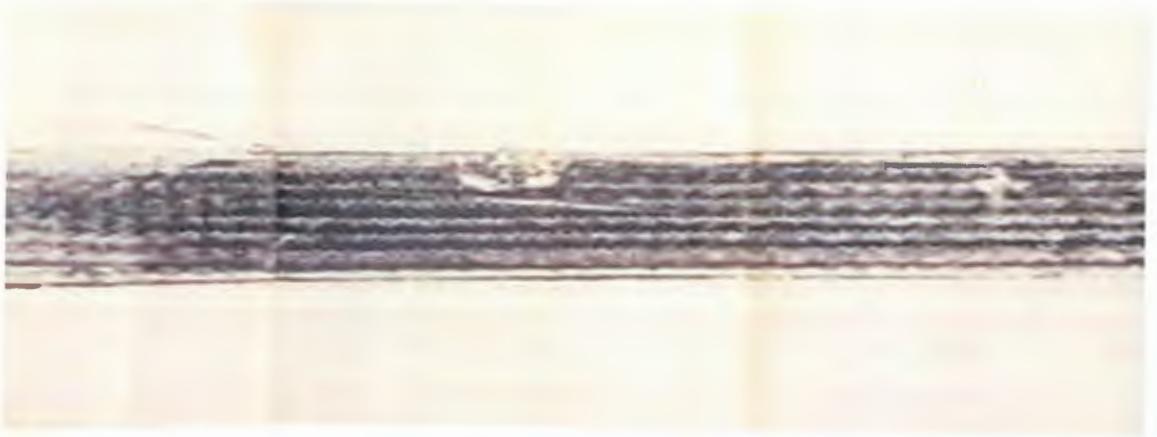
54. An example of how I used rollers to reiterate the themes and movements of rotations.



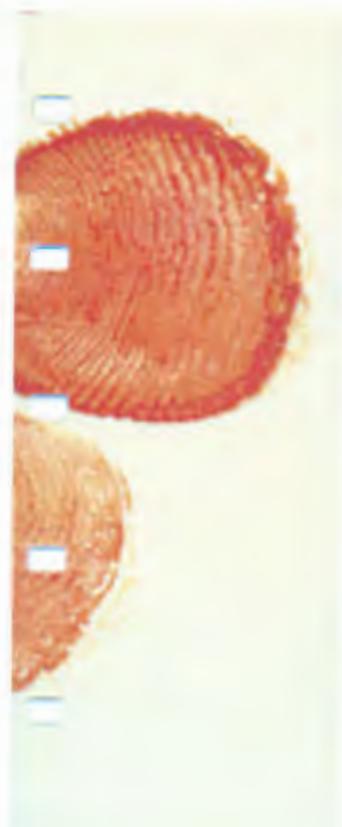
55. *Bicycle Tyre Track* at Exploding Cinema (2012).



56. Vicky Smith, *Bicycle Tyre Track* (2012)



57. Robert Rauschenberg, *Automobile Tire Track* (1953)



58 - 60. Comparisons of different tracks of 'machines': sewing, bicycle and foot, as they relate to the 16mm frame-lines. The sewing generates evenly spaced holes of 3 per frame. Toes are shown to occupy a 2-frame space.



61. The foot is proven to measure 33 frames, not the 40 frame film industry convention.



62. The grooves of my soles give the film a forward momentum, much like the lengths of grass and plant stalks give to the film pace in *Mothlight*.



63. Nam June Paik, *Zen for Head* (1962)



64. V. Smith, *33 Frames per Foot* at Lo and Behold shows the proximity of the audience



65. 66. Problems at Lo and Behold as the pigment was too wet and painterly.



67. 68. The first version of *Headroll* placed tremendous strain on my neck.



69 - 73. Tests for *Headroll*. The head moves mechanically, from side to side and up and down.



74. The development of dynamic markings on the strip. The distinct inscriptions are evidence of pinning the film down. The sweeping blurred marks indicate where my hair was dragged along by the projector.

Practice Outcomes

Unfamiliar Procedure, Experiment and Medium

No longer used for its mechanical reproducibility, film in this project is investigated for its plastic possibilities and these works show us things that we are unaccustomed to seeing and perspectives on the body that are uncommon with in-camera film: images of enlarged tears and pores of the tongue, solidified saliva, stilled tears and soles of the feet alert us to the different procedure of camera-less film-making. It is because images made directly onto film do not remain in the same place over a series of frames, and often break the frame altogether, that we see that they have been made by physical contact. The sets of markings boil in their frames and cut across the filmstrip, transmitting energy, individuality and fallibility.

The Boiling, Irregular Animator's Body

Attempts to control image unpredictability have been a chief concern for handmade film-makers. In this research, methods for duplicating a set of near identical images have been devised and explored through processes of reversibility, in which film is made more physical, while the artist moves in restricted mechanical ways. Yet while the human body can be controlled and regulated up to a point, feelings of fatigue or sorrow impact on the possibility of behaving efficiently like a machine, and on the subsequent sequences of film colours, shapes and kinetics.

Partnering Technology: Reverse Engineering

Possibilities for staging the corporeal self as a reversible mechanism, and playing the role of the camera/screen framed the research problem. This physical challenge connected the strange broken and frozen motions of the first rotoscope scratching phase and my later film performance of awkward walking. I was unaccustomed to certain manoeuvres that are required for making film without cameras, and being forced to move like a machine entailed pain and difficulty. Solutions were found by drawing on the aspects of the physical that were already semi-automatic, such as contraction and release. Barker notes that our bodies are a series of intermittent and separate motions, which ordinarily recede from consciousness (Barker 2007: 128), but with the examination of the role of the animator's body and substituting the mechanical with the physical, I had in

different ways, renewed my awareness of how the whole body was moving. In the rotoscoped work respiration aided steadiness; in the body fluid films I had regulated the gathering and release of saliva and tears by ritualizing and holding back swallowing and crying; in the physical films, *33 Frames per Foot* in particular, the attention to placing one foot in front of another prompted reflection on the otherwise automatic repetitive action of walking. In this way, the work mimetically partners industry's conveyor belt, and at the same time discovers advantages of matching and syncing of the body to features of film material, in terms of the imagery that this permits.

Presence and Aura

In all the films the aspect of presence is pronounced and each film is unique and one of a kind. The body fluid films place matter directly onto film and allow it to mingle with film's own emulsion so that, soaked with residue and soiling, each edition is auratic. Likewise, the physical films series are one off events and the audience has to travel to experience the work. It is not close to hand, and in this sense its cult artisanal value is restored. Were I to perform any of the physical films again, the print would vary according predominantly to my stamina, which is variable. These issues of reproducibility are all part of the condition of film. Using my physical system the prints are copied, but the fallibility of the human as copying machine means each version remains distinct and auratic. As film is freed from its concerns of reproduction, so the projector is liberated from its behind the scenes role of screening prints, to one in which it comes into contact with original irregular dispersed organic matter. In its more forensic capacity, the projector enlarges and animates auratic material. It is active in transforming familiar substance into rich, terrifying, intricate and beautiful filmic imagery.

Conclusions, Findings and Original Contribution to Knowledge

The Work

One of the main areas this thesis has dealt with has been to analyse the type of filmic imagery that is generated by physical contact with film material, and to argue that marks made directly onto film using physical methods are unconstrained by cinematic norms of repetition and frame lines. The 16mm medium, along with the tactile contact method, is particularly suited therefore to capturing the energy, force and irregularity of the body.

The practices that have been carried out for this research have demonstrated that the body as an instrument for marking directly onto film is a rich resource. The research has productively considered themes of locating and representing synchronicities between the artist, her tools, and her feeling for materials, in relation to theories of inter-subjectivity and the aura and the haptic. It has argued that a strong sensory experience is generated through direct-on-film work, and that this powerful aesthetic is brought about through unfamiliar perspectives on things that are familiar. In this respect the project contributes to experimental film theory and approaches to the plastic possibilities of the medium.

Several key avant-garde works have been discussed in terms of their haptic synesthetic qualities alongside a deeper analysis of five practitioners. Comparison of *Reel Time* with *Fuses* results in a greater understanding of the implications for the human body fusing and integrating with film technology and how marking film directly can give the work a sense of both harmony and discord. The novelty of pace and pattern that direct-on-film can give to cinema is furthered evidenced through analysis of *Skinfilm* and *Blutrausch*, in which smoothly moving traces of the body contrast to *Rainbow Party*'s ruptured physical rhythms.

Contribution to Knowledge

The originality of this project is the development of a new and unique form of direct animation that involves the whole body, inside and out, which is theorised in terms of a particular interplay of the concepts of fluids, skin, aura, performance, the trace and the haptic. The thesis has brought these concepts together in relation to the methodology of direct-on-film practice and as it exists in case studies to suggest that the artists' relation to materials is one of permeability, porosity and reciprocity.

The surge of 1960s and '70s artists using their body as material and as performance has been brought into debate with camera-less film of today. The originality of the premise of touching film in fully physical way opens into an important contribution to these experimental expanded and performed cinema debates.

The findings of this camera-less film research conclude that camera-less film is an area of aesthetic and intellectual richness. The artifacts produced (a series of physical films) are evidence that the vocabulary of marks that can be generated from direct-on-film practice have not been exhausted. These works expand the specific area of camera-less film and the broader field of film practice. The research contributes important insights into the current discourse of analogue film obsolescence the role of the index and the critical mass of why analogue matters now. It has generated a new taxonomy for camera-less film works: physical film⁵⁹; living film; full body and weathered film. Artists have responded to these new categories, with the *Living Film* event acting as a spur for building new avenues and context for celluloid practice (Holcombe conceived his work for this context and Gaal-Holmes created *Blutrausch, Das Ende der Geschichte* for the event).

⁵⁹ Al Rees uses the term, physical optics as a way to emphasise the viewing eye perspective on expanded film-making practice (Rees 2013).

Glossary

Boiling

A term used by animators to refer to the impossibility of registering hand drawn images in the same place over multiple frames, resulting in pulsating boiling lines.

Film Leader

Different types of film serve different functions: negative is the original from which positive prints can be reproduced; film 'leader' is imageless, acting as spacing and, placed at the beginning and end of film rolls, protects and identifies the feature film. Rarely exploited for its aesthetic potential, leader is referred to by artists who use it as "suppressed" (Morgan Fisher, 1973) and 'abject' (Sally Golding, 2014). In direct-on-film work, clear or black leader is mostly used: the clear film can be coloured, while the emulsion can be scraped from the black film, giving passage to light.

The Frankfurt School

The school, also known as the *Institute for Social Research*, included thinkers Walter Benjamin and Theodor Adorno. Their manifesto was to analyse social change with a view to a more equal, emancipated society. The relevance of the school to my research lies with their split positions concerning the possibilities and value of the mass-produced photographic/film image versus the autonomy of the artwork: while the traditional handcrafted object resists industrial conformity, it is neither accessible to nor appeals to the masses, whereas the multiple image is easily obtained yet tends to reinforce dominant ideology.

Haptic

The term was coined by Alois Reigl in 1927, and refers to an image in which an active look is required from its viewer (Marks 2000: 162). This thesis refers to Laura Marks' more recent use of the term in relation to filmic imagery that avoids illusionistic depth and perspective, but is rather textural and tactile. Marks see the haptic and mimesis as part of the same condition, in that both involve proximity and contact between subject and object.

Mimesis

The term mimesis has multiple definitions, but for the purposes of this research it is used to describe a type of sign that comes about through material contact with its object. The faculty derives from a pre-reflective drive for learning about ones environment by behaving like it, and is conceived as an empathetic type of sign in that the maker and object have to be close to each other for the copy to be made, asserting likeness rather than difference or distance. Benjamin, in 1933, observed that the copying impulse as an archaic magical form is carried over into the technology of photography (Buck-Morss

1991: 266). This thesis is less concerned with the mimesis of photorealism and more with how the artist locates affinities and equations between herself and the materials she uses.

Primitive

This enquiry into how to innovate with film using rough tools, old materials and artisanal tactile media is necessarily underpinned by the idea of the 'primitive'. For film studies and art history the primitive is understood in terms of its aesthetic innovation, linked by Reynolds to a pre-narrative period of artisanal film-making in which there was little attempt to conceal procedure (Reynolds 2012: 150), and embraced by modernist artists as a means to reject art historical conventions. The Frankfurt School were sceptical of the progressive character of capitalist consumerist technological: 'If capitalist development is connected with standardization and reification, then progress actually constitutes a form of regression' (Bronner 2011: 5).

Rotoscope

Patented and used by the Fleischer Brothers, the rotoscope (1915) is a copying device used in the early animation industry. Live-action film is back-projected onto a screen and poses are traced and later reanimated. I have customized this technology as a means to copy 16mm found footage to clear film leader.

Skin

In her use of the metaphor of film as 'skin', Marks refers to the materiality of cinema as an active agent of meaning. The skin or screen or surface is conceived as a site of exchange, in which tactile knowledge can be grasped through physical contact. The definition can be extended to phenomenological enquiry into the body as it exists in relation to space and the objects that occupy it: our awareness is shaped by our own embodied perception in that, because we see other objects we know that we ourselves are visible and that we too are embodied. Thus things and the self are interdependent and exist in relation to each other in space that is thickened through multiple passages and connections.

Structural Material

P.A. Sitney identified this tendency emerging in 1960s and '70s avant-garde film, as an enquiry with what the medium is capable of in terms of its plastic possibilities and material qualities: surface; interval; focus; sprocket hole; mechanics and chemistry. 'The Structural film is anti-illusional and reflexive, typically interrogating the factors, materials and forms of its own construction and in such a way that the viewing experience stimulates enquiry into the operative procedures (Peterson 1994: 77).

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33 frames per foot: first public performance at Co + Behold

The path for my performance will begin at the gallery entrance. Standing, ready at the doorway, I realise that this is a mistake as the proximity of the street makes it hard to demarcate the space. I begin, & sure enough latecomers enter & penetrate the performance zone. The space is anyway easy to destabilise due, in part, to my inexperience of using my body in this way, as a live medium. The uncertainty I feel is doubled due to a last minute change of detail: the original plan to coat the sides of my feet with a thin layer of paint had been modified. Instead a tray of pigment, in which I can dunk my whole foot, will be kicked along thereby avoiding the use of my hands. I dip my foot in the brown stuff & realise instantly that it's a mistake: the mix is too sloppy - everyone can see that. I smell peanuts on the breath of the latecomers. The paint laps over the sides of my feet. I plant my foot on the strip taped to the floor, but the slipperiness of the mixture makes it hard to grip the film & I know that the definition of the texture of my foot will be lost. The audience seems to be focussing on this vile paint mix, whereas what's important is the contact that I make with the

film. I must continue now & cross the space even though I feel exposed & that the piece has failed. Move forward, dip the right foot in the tray, press it on the film, balance, dip the left foot in, print it, alternate 3 times, dip the foot 'again', establish a pattern. Now sideways, walk sideways & print the toes in the frames. I am picking up a rhythm now, unquietly though it is. Now on the final sequence hop, skip, jump, almost there. My feet thud heavily on the floor & I wonder will I lose my balance & crash down. It's tiring. Why continue? People are watching. One bound & I reach the projector. Someone is crowding around & helping out, but I don't need them to. The film is projected. It runs for about one minute, the length of the gallery & represents many feet, several toes & much physical exertion. I know that the choreography of the performance has been unsuccessful. Richard Wright confirms my fear, reporting, 'it looks like you walked on the film any old how'. This is frustrating because I had planned carefully but the paint, the proximity of the people & the peanuts had put me off. As an animator, accustomed to controlling my mise-en-scene, I had underestimated the strenuousness & demands of the live event.

