Dust:

Exploring the relationship between contemporary modes of viewing the printed photographic image

Johanna Love

Thesis submitted in fulfilment
of the requirements of the
University of the Arts London
for the degree of
Doctor of Philosophy

July 2012

ABSTRACT

This practice-based research project was initiated through and informed by my own fine art practice, and examines how dust may be used as a visual element within contemporary image making to generate new modes of viewing and making. The practical work brings together the digital photographic print (as a landscape image) and images of dust to question how digital photographic surface and drawings of dust may sit together within the same pictorial surface to open up new possibilities of reading space and bringing about new apprehensions of temporality and mortality.

Theoretical and philosophical context is considered through two contrasting notions of pictorial orientation, the vertical (Alberti, 1435), and the horizontal plane (Steinberg, 1972) and of the interruptive, physical and metaphorical reading of dust within the reading of the photographic printed image. An assertion of the importance of tactile touch and proximity during image creation is made, referencing the thinking of Aristotle, Heidegger, and Merleau-Ponty. *Through* an analysis of a number of key artists' works, including Helen Chadwick's *The Oval Court, Carcass* (1986); Man Ray and Duchamp's *Dust Breeding* (1920); and Hiroshi Sugimoto's *Seascapes* – along with a series of practical investigations using a digital flat bed scanner, the research explores how shifts in making and viewing occur as a consequence of changes in image orientation and materiality, and offer the potential of disruption or interruption in the viewer's perception of photographic space. The experiments and analysis underpin the central argument of the research and demonstrate how materiality and orientation of making are key aspects of image creation, aspects which can be manipulated to create contradictory visual readings of surface and space. The tension brought about by this visual contradiction opens up new possibilities in the perceptions and meanings within the photographic print, tension further underlined by the significant symbolic and indexical presence of dust within the image.

ACKNOWLEDGMENTS

This research project would not have been possible without the continued belief and support of my Director of Studies, Professor Paul Coldwell, and my supervisor Rebecca Fortnum. I would also like to thank The University of Northampton, for supporting my research project. I would like to thank Silke Helmerdig and Geoffrey Batchen, whose comments and suggestions have led to new insights and directions; Magdalena Wisniowska, who has helped me with a number of philosophical texts; Mel Ramsden, whose help and advice around my research of the work of Ian Burn has been invaluable; my colleagues Michael Evans and Anne Ramsden at The University of Northampton for their stimulating discussions and thoughts; and my editor, Louise Stein.

Also, to my family and friends, who have faithfully supported and reassured me along the way – thank you.

CONTENTS

INTRODUCTION

This practice-based research project has been instigated by a number of questions raised through my fine art practice, concerning how surface and space are perceived and understood within an image, particularly where both digital and hand-drawn marks co-exist. Starting by asking how the plane of orientation indicated by the process of making impacts the image, for example in scanning, my research developed to investigate how the visual presence of (or illusion of) dust generates a fundamental shift in the perception and reading of the photographic printed image within contemporary fine art practice.

The central question within the research project has emerged as a direct result of the use of the digital photographic image within my practice, which has generated a profound shift in the way I am able to express visual ideas: this has opened new avenues of thought and expression. It was during a Fellowship in printmaking at The Royal Academy of Arts between 2001-5 that I first began to include the digital photographic print as an element within my work. I made a body of work where traditional, hand-inked intaglio plates were printed on top of digital photographic images. From that moment I became engaged with the dialogue between the photographic image and the handmade mark, questioning how the digital and traditional physical mark could exist together on the same surface. I felt I had begun to see a completely new and unusual *sense* of space emerging somewhere on the paper surface, between the digital surface and the hand-drawn mark. I began to question the different making processes, the digital photographic image and the hand drawn, questioning what happens to the perception of the picture plane by printing/drawing on its surface, and also how the image might betray the individual making processes. At this point two key questions emerged from my reflections and provided the beginning of the research project. The first: what urged me to make a physical mark onto the digital surface of the photographic print? The second: what happened to the resulting perceptual reading of the image picture plane when the hand drawing/printed mark was placed over the digital photographic image surface?

To enable a more focused enquiry, the different aspects of making the artworks have been identified followed by how the result opens up new perceptions. I pinpointed the following key aspects which may offer valuable insights into how and why a new perceptual space

emerges within the images: the visibility of the surface, materiality and time within the photographic printed image; experience of tactile touch during making of the image; the perceptual clash of the photographic illusory image, and the hand-drawn mark existing within the same pictorial plane. These aspects of image making were central to the making and analysis[1] of new bodies of practical work, which comprises the main body of the research project.

Historical context is given to the research in light of what has been described as the 'digital revolution (which) challenges the entire production and nature of images. Photography and printmaking bear the brunt of change and challenge because of their very nature.'[2] It is this question of the nature, or perhaps, the ontology, of the digital photographic print process, that locates my research. Photography and printmaking have traditionally had a mutually advantageous interwoven relationship since the invention of the photographic process (Newton 1979: 6). However close, each discipline has remained physically and aesthetically separate through their individual making processes, and histories. The digital photographic process, however, may now fully converge these two fine art disciplines into one unique process, opening up whole new possibilities and directions within image making (Miles & Saunders 2006: 28). What has resulted through the photographic digital process is the liberation of the artist from the specialist areas of the photographic darkroom and the print workshop, into the same digitally equipped suite.

Theoretical and critical context to the research is given through the two central aspects of the practice: the illusory photographic image, and the physicality of hand drawing. Separating out these aspects generates a grounded theory, inherent in the perception of each medium. However, what is central to my research enquiry is how these two notions of both the physical and perceptual may interrelate and inform the reading of the picture plane within the same pictorial image.

My research project sets out to examine, firstly, the perception of the photographically printed image and its relation to surface, questioning if/how the visibility of surface shifts perceptual reading of the image. This is framed through two orientations, Leon Batista

[1] A method identified as Reflection in action/ Reflection on action. (Scrivener 2000, Schön 2009: ix)
[2] Citation taken from a panel discussion on the topic 'How has the digital revolution altered the domains of printmaking and photography? Will they survive as distinct fine art media?' Art & Science Collaborations Inc. March 3rd, 2006. [Internet] Available online at www.asci.org/artikel1762 [Accessed] 06.07.10

Alberti's illusionistic *window* (1435) and Leo Steinberg's *flatbed picture plane* (1972). These two opposing orientations are identified as fundamental in the perceptual readings of either a vertical illusory space or a horizontal flat surface plane. In order to reveal how and where physical surface and orientation are made visible within the photographic print, I examine a number of print processes; this will include the Heliograph, Daguerreotype, Calotype and Photogram darkroom techniques, moving towards Photomechanical print processes, including Photo-transfer, Photocopy and the latest techniques of digital inkjet printing. This begins to open up an argument for the perceived visibility of image surface, as a direct consequence of orientation and materiality of process. In particular, I am interested in how the orientation of flatbed devices, such as the photogram and photocopy process, seen through the works of Man Ray, Lazlo Moholy-Nagy, Helen Chadwick, and Ian Burn, may offer insights into different readings of orientation and surface, through their horizontal capture. What emerges through the examination of the visibility of the surface is how orientation of print processes may provide the opportunity for other visual elements to occur within the photographic image, in particular the traditional enemy of the darkroom photographer: dust.

What is significant here is the ontology of the digital photographic print process, which is an immaterial process until the image is finally printed out. This difference may allow different possibilities in the reading of the picture plane. Here, the shift from the material to virtual image becomes central to an examination of a shift in bodily experience of the image prior to printing.

The Phenomenological approach I have adopted enables me to analyse how the particular aspects of making, via technology, material, and in particular through tactile touch, may have fundamental implications in our experience and perception of the photographic printed image. Three key philosophical thinkers have been identified to underpin and substantiate my argument here: Aristotle, Martin Heidegger, and Maurice Merleau-Ponty, who question our knowledge and understanding of the world through the experience of matter, touch, and technology. Heidegger's essays, *The Origin of the Work of Art* (1935/6), and *The Question Concerning Technology* (1953), frame a questioning of the experience of the photographic image from material to virtual, highlighting how the photographic image may be experienced and perceived differently through the computer. A deeper exploration of how we might engage with the digital photographic image through the somatic senses of tactile touch

departs from Aristotle's early philosophical thoughts on the human senses, whereby touch is identified as the most profound, indeed integral for human existence, and moves towards the Phenomenological thinking of Merleau-Ponty, whose key thinking centres on the notion of *embodied experience*, as fundamental in our understanding and perceiving the world.

What begins to unfold is the visual and metaphorical implication and significance of the visibility of the element of dust within an image, particularly the photographic image. Emerging through the analysis of the photographic picture plane, dust becomes increasingly evident through its indexicality, and as consequence aids in emphasizing and shifting readings within the image. This opens up a questioning of how the visibility of image surface reveals an inevitable intervention by the material world, and generates a question of how dust may become a significant visual element within an artwork.

Using a number of artists' works to examine the visual presence of dust within an artwork, I argue that the deliberate provocation of the visual effects generated by the settling of dust generates a fundamental shift in the reading and meaning of the resulting images. The photograph *Dust Breeding* (1920), by Man Ray and Duchamp, is a key work, which both drives and intertwines this analysis, questioning the role and implication of dust within a visual image. What emerges are the potential physical and metaphorical readings brought about through the presence of dust.

A series of practical experiments have been made throughout the research, to test out and experiment with a number of the key issues and theories, which I have identified around picture plane orientation, materiality and physical touch. As a fundamental part of my own art practice, I have used a flatbed digital scanner to derive the photographic image; however, by deliberately opening up the process, I expose the element of chance, and explore the visual occurrences brought on directly through the intervention of the material world, of light, space, and air.

A large body of artworks have been made consistently throughout the research project, forming the final and largest aspect of the research. In the final chapter of the thesis I introduce each body of artworks and reflect and analyse their resonance with the thinking and theories I have discussed. The artworks are crucial in demonstrating my research claim,

that by employing particular strategies of image making, I am able to open up new perceptual possibilities and readings within the visual image.

I have separated out the making of the photographic image, and the drawing of dust, in light of the strategies and key thinking which drives the work. Firstly, key thinking around the dissolution of the photographic image and the questioning of image clarity; the use of grey within the image; the notion of visual emptiness; the drawing in graphite onto the photographic print surface, as reassertion of presence, of touch and material. Secondly, the artworks are discussed in terms of the generation of a perceptual interruption, which, I claim, opens up a new reading of the picture plane through the assertion of surface, denying the illusion created through the photographic image. This analysis is framed by the recent research of Wendy Koenig (2009), through what she describes as *visual interruption*. The effects of perceptual interruption, where drawing blocks the photographic image, can offer insights into how new readings emerge within the artworks. An aspect of this is explored through Alois Riegl's art historical discourse on the perception of the optical and tactile surface, which he argues generates two distinct distances, the one tactile and the other optical.

A second aspect to the discussion of the artwork is the significance of dust: Dust as both matter and metaphor are discussed in relation to the reading of the photographic image, where I argue that it generates new readings, opening up new possibilities in perceptual understandings of image making. It is how dust may infer contradictory readings within an image, which seems to resonate with what I am trying to communicate through my artwork.

References

Koenig, W. (2009) *The Phenomenon of Interruption in the Visual Arts*. New York: Edwin Mellin Press.

Miles, R., Saunders, G. (2006) *Print Now: Direction and Definitions*. London: V&A.

Newton, C. (1979) *Photography and Printmaking*. London: V&A, Compton & Pitman.

Schon, D. A. (2009) *The Reflective Practitioner*. Farnham, Surrey: Ashgate Publishing.

CHAPTER 1. THE PHOTOGRAPHIC PRINTED IMAGE

Chapter 1. The photographic printed image

In this chapter I will introduce the notion of the picture plane and how it is perceived within the printed image. I will focus on the perception of the photographically printed picture plane, investigating visibility through materiality and orientation. The perception of the photographic picture plane will be the focus my investigation, a place where I will expose visual evidence of materiality and making, which may subsequently deny the illusory intention of the photographic image, opening up a new dialogue within the resulting image.

This exploration will be framed by Alberti's (1435) notion of the illusionistic *window* and Steinberg's (1972) notion of the *flatbed picture plane*. An exploration of photographic processes will reveal how physical surface and orientation may become visible through specific techniques, which will include the Heliograph, Daguerreotype, Calotype and Photogram darkroom techniques, towards Photomechanical print processes, including Photo-transfer, Photocopy and the latest techniques of digital inkjet printing. This will propose an argument for the perceived visibility of physical surface as evidence of materiality and how the implication of reading the surface of the print generates a subsequent questioning in perceived orientation of the image.

1.1 The visible surface

Firstly, I will define the terms in which I will be referencing the image *picture plane*, and the illusionistic *window*, as both terms fundamentally underpin my argument. When I use the term *picture plane*, I am referring to the physical reality of an image's two-dimensional surface, be it within painting or photography. The picture plane is commonly understood as the flat surface of the support (paper or canvas), onto which an image is made, 'as the glass of the notional window through which the viewer looks into the representation of reality that lies beyond' (*figure* 1).[3] This reference to the picture plane as the glass through which we

[3] The term picture plane as defined by the Tate glossary. [Internet] Available online at http://www.tate.org.uk/collections/glossary/definition.jsp?entryId=222 [Accessed] 05.11.11

look, is also important as it generates a reference to the glass of the photographic lens through which we capture an image. The term *window* is one that has remained throughout historical and contemporary fine art discourse, particularly within representational painting, to refer to the illusionistic space beyond the literal surface of the picture plane. Leon Battista Alberti, first used the term when referring to Renaissance painting as an open window, an *aperta finestra*, (1435), describing the rectangle on the surface of the canvas as a *window* into which the observed world space could be painted as a resemblance of vision. Alberti was referring to the perceived visual depth within paintings, constructed through perspective, which takes the eye *into* a painted scene, creating an illusion of depth, rather than remaining *at* the flat surface of the image (the picture plane).

The term *window* has now been appropriated by Anne Friedberg into the debate on digital language through her book *The Window: From Alberti to Microsoft* (2006), where she discusses the historical *window* as an opening into a new world, from that constructed via painting, through the artist's hand, to the opening of digital information within the world of the computer screen. Friedberg suggests the window is an 'opening', within both traditional and digital languages, which opens into new space via a screen, as she explains:

> The window is an opening, an aperture for light and ventilation. It opens, it closes; it separates the spaces of here and there, inside and outside, in front of and behind. The window opens onto a three-dimensional world beyond; it is a membrane where surface meets depth, where transparency meets its barriers. (Friedberg 2006: 1)

Historically we have encountered the photographic image through a seemingly 'invisible' picture plane, or as Edwards and Hart suggest, an invisible materiality (Edwards & Hart 2004: 6), in that we endeavour to look at the subject, or the content first, before we might see its material surface support. As Batchen suggests, this comes from a desire for the optically pure and unhindered photographic representation, to see 'through the photograph as if it simply isn't there, penetrating its limpid, transparent surface with our eyes and seeing

Figure 1, A visual example of Alberti's theory of the Illusionistic *Window (an aperta finestra)* (1435).

only what lies within' (Batchen 2004: 39-40), or, as Willumson puts it, we have become 'so dazzled by the luminescence of the image' that we simply ignore the physicality of the photograph (Willumson 2004: 62). However, even during this 'invisibility', within many of the photographic print processes, there is evidence of the surface of the image, and this reveals the process and evidence of its making and existence as material. Patrick Maynard's critique of photography, *The Engine of Visualisation: Thinking through photography* (1997), is a significant text for the underlining of the importance of the surface as vital for the manifestation of a photographic image. Maynard describes the photographic image as literal marks on surface. As he explains, it has

> … a common stem (which) is simply the physical marking of surfaces through the agency of light and similar radiations … (and) based upon the fact that our acute powers of extracting information from fine visual differences on surfaces – extremely slight and fragile states of surfaces, produced by tiny physical energies – can be very meaningful. (Maynard 1997: 4)

In Maynard's critique of the photographic image, it is the elements of *surface* and the *marking of surface*, which become key in defining the photographic image. As photographic printing technologies have developed, the way in which surface becomes marked, and the existence of the physical surface itself during changes. This alters both the way in which we respond to the work through its making and our aesthetic response to the image.

The extant Heliograph[4] image might qualify as demonstrating Maynard's barely marked surface. Seen from angles of about 30 degrees and in extreme light, 'the scarcely discernable, colourless objects (have) a sort of luminance, the conduction surface of a luminous intensity' (Virilio 1992: 19). The Heliograph image is physically *impressed* into the coating of the plate surface. In his note on the Heliograph in 1829, Niepce wrote that 'light acts chemically on bodies. It is absorbed; it combines with them and communicates new properties to them. It enhances the natural consistency of some bodies, even going as far as solidifying them' (Virilio 1992: 19). Niepce here is clearly highlighting the physical alteration of matter through the chemical reaction of light, occurring at the very surface of the material.

Like the Heliograph, the Daguerreotype[5] image was 'a sheet of silver covered by an amalgam in which there were minute pits where light had not affected the surface' (Ivins

[4] The Heliograph process was used around the 1820s
[5] Daguerreotype process was named after its inventor, Louis Jacques Daguerre in 1839.

1973: 120). Similar to the Heliograph, the Daguerreotype also required a tilting of the plate for the image to be made visible. These early coatings of emulsion onto plate surface were inevitably covered with impurities as a result of accumulations of dust, leaving evidence of its physical existence in space, the presence of the photographer and the technical process of image making. Dust and scratches on the surface of these early images allow us an immediate sense and awareness of the physical process of creation and materiality. Early Daguerreotype images amplify the presence of the image surface through these impurities. We are drawn to the surface, looking closely *at* the surface, its marks and particles inscribed within the photographic surface and therefore within the image itself. This contrasts with the photographic illusionistic space seemingly beneath. We immediately see the image in two parts – *at* the surface and *into* photographic space beneath the surface, creating a constructed image foreground and background. This raises the question, which I will return to later, of whether the perception of the photographic space is altered by the inclusion of dust and scratches on the image surface.

Following the Daguerreotype, a characteristic of the Calotype[6] image was the physical quality of its paper support. As Maynard describes,

> Aesthetically, we can say that as part of the chemical penetrates the surface, it seems, like ink, to be part of it. (Maynard 1997: 45)

Where the Daguerreotype process held the image at the plate surface, the Calotype embedded the image within its paper fibres. This is a clear difference of surface, resulting in an altered aesthetic of the picture plane as we see the physical support simultaneously with the image.

In his recent book *What Photography Is* (2011), James Elkins describes seeing scratches and marks on the surface of the photograph as if looking through black ice:

> So I thought that looking into a photograph is like standing on black lake ice and looking down into water beneath it. Like black ice, the material surface of a

[6] 'William Henry Fox Talbot patented the Calotype process in 1841. It is the direct ancestor of modern photography because it used a negative permitting multiple positive prints to be made from the negative and development of the latent image. The negative was a sheet of high quality writing paper which had been made light-sensitive with chemicals. Because the image was contained in the fabric of the paper rather than on a surface coating, the paper fibres tended to show through in the prints making them mottled and relatively "sketchy"' [Internet] Available online at http://www.vam.ac.uk/vastatic/microsites/photography/processframe.php?processid=pr009 [Accessed] 12.11.11

> photograph is often transparent to vision: my eye moves right through the thin shiny surface of the photographic paper, except where I see scratches or dust, or where the coating reflects my face. (Elkins 2011: 19)

Elkins seems to be describing how the presence of the dust and scratches alters his viewing of the photographic image – from looking *into* the photograph, to looking *at* its paper surface. My argument is that there is a dual reading of the image through the inclusion of dust and scratches on the image surface. This duality in reading emerges as, firstly, looking *at* the surface, the scratches, marks and paper fibres, and secondly, looking *into* photographic space seemingly beneath the surface. The fact that Elkins is describing marks and scratches also suggests that he is looking at a printed photographic image – the photograph as object and surface. The question also emerges how the marks and scratches have emerged – through material contact and presence? Is it the dust on the image, that is key in highlighting this perceived duality in relation to materiality and presence and the absence of human contact and touch? (I will return to these questions in section 2).

What emerges here is a visual interruption by the marked surface of the photograph, which may also be seen in a series of photographs entitled *Farewell Photography* (1972) by Japanese photographer Daido Moriyama. *Farewell Photography* is a Photobook[7] comprising a series of analogue photographs, which are full of dust, scratches, hairs and are in parts completely out of focus (*figure 2*). Moriyama deliberately provokes associations of the unfocused image or dust-filled image with the technical incompetence of the photographer, reminding us of the physical existence of the image and the delicacy of its fictional surface. In particular the dust-imbued photographs expose the physicality of the image as surface, not of illusionistic image space, generating a visual jarring between physical surface and the illusionistic subject. When viewing these images the photograph feels on an entirely separate layer, away from the dust and scratches, it seems intact, behind the dust, even though the particles and scratches have actually prevented the image from appearing.

[7] Photobooks were a prominent form of artistic dissemination of photographers' works in Japan during the 1960s and 1970s.

Figure 2, Daido Moriyama, Photograph from *Farewell Photography (Shashin Yo Sayonara) Photobook* (1972). 29.5 x 23 x 2cm Closed.

Another way in which the *surface* of the photograph becomes visible, may be seen through the orientation and material nature of the photographic print process itself. I would like to examine the photogram process. The Photogram[8] is a photographic image not captured out in the world, but constructed entirely upon a flat surface, mainly within the darkroom.[9] The Photogram image is made directly through the exposure of light onto photosensitive paper (*figure 3*). By laying materials or objects onto the photosensitive surface, which is then exposed to light, the light falls and is modulated by translucent and opaque materials and objects, generating a photogram image. The resulting images have been described as having a very unique visual aesthetic: Floris Neussus discusses the photograms by Lazlo Moholy-Nagy as having

> …an aesthetic that was as media-specific as it was unmistakable and individual, an aesthetic derived from the immateriality of light alone, the very immateriality that served him for the making of the material image. (Neussus 2009: 9)

Lazlo Moholy-Nagy and Man Ray were among the first to explore the experimental capabilities of the photogram process, exposing what they considered a new concept of space. Although the photogram image is made through the immaterial of light, the image is predicated by a very physical and material presence of objects and substances directly informing the 'look' of the resulting printed image. As Molderings explains:

> His photograms confront us with a slow flood of light, created by the wonderful softness of merging shades of gray, or with abrupt flashes of lightning darting out of the darkness, disappearing as quickly as they came, or with combinations of both. The strongest, most intensive effects of light and shade, and hence of space, are often created not by strong black–and-white contrasts but by the most gradual

[8] The process was first used in 1842 by Henry Fox Talbot, who described it as a photogenic drawing (light drawing). In what has been named as a *New Vision* in photographic practice during the 1920s in Europe, it re-emerged as a process in which to experiment with new ways of generating a photographic image. Photographers used light, and a variety of materials and substances to construct non-representational photographic images. Man Ray described the process as Rayograph.
[9] Lazlo Moholoy-Nagy also made a series of photograms in daylight using daylight printing-out paper.


(L) Figure 3, Lazlo Moholy-Nagy, *Untitled, Dessau* (1926). Photogram.
(R) Figure 3a, Lazlo Moholy-Nagy, *Untitled, Dessau* (1926). Photogram.

> transitions from gray to black. Some of his images contain no white at all, but operate in a black and gray continuum. (Molderings 2009: 23)

As a cameraless process there is a one-to-one relationship between the object and its resulting visual impression on the paper surface. Light may be the medium through which the image is made, but it is an index of matter, weight, and gravity of the objects and materials against the flat surface, which is revealed within the image. Where the objects and materials are heavy, sitting in closer proximity to the surface of the paper, the image becomes bright white, suggesting contact. Where the object or material is physically lighter in weight, it pulls away from direct contact, and allows light to affect the surface through increasingly darker tonal graduations. A series of self-portraits by Moholy-Nagy (*figure 3a*), actually reveal the small specks where the ends of his beard have been in direct contact with the surface of the paper through pressure

The photogram process reveals a shift in the perception of the picture plane. This I suggest is a shift in orientation of the image capture: rather than looking *out,* vertically into the world, the image is constructed horizontally on a flat surface, the image no longer a *window into the world*. This shift of the photogram process mirrors the urge of the new photographic vision of the 1920s, as described by Lazlo Moholy-Nagy, where image may be free from pictorial restraints of perspective. As has been described in his images,

> Whether viewed the right way up or upside down, they lose nothing of their equilibrium, harmony, and beauty and evoke freely fluctuating worlds of light in which there seems no centre of gravity. (Molderings 2009: 23)

A further shift in printed surface is seen through the development of photo-mechanical printing, which enabled the photographic image to be printed in ink onto a paper support and be widely distributed. The use of such a mechanical production process was the seed for Walter Benjamin's argument of the loss of aura of an original work of art through mechanical reproduction (Benjamin 1999), (discussed further in section 1.2).

This move from a vertical *window*, to a horizontal *flatness* is what Leo Steinberg, in 1972, discussed in his essay *The Flat Bed Picture Plane* (Steinberg 2007: 82). Steinberg's essay argued that the picture plane within Robert Rauschenberg's work of the 1950's[10] epitomized

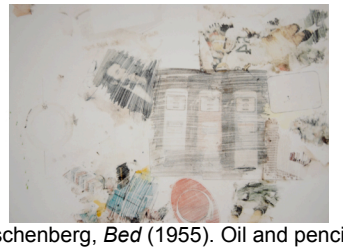
[10] Rauschenberg worked with a variety of mediums in the 1950s, mixed media paintings (known as combines paintings), screen-prints, and solvent transfer processes.

a shift from the looking out into the world of perspective, to the preoccupation with cultural imagery and making. Rauschenberg's work reflected a significant change from the preoccupation with the natural 'vertical' world space to the 'horizontal' cultural world as subject matter. Rauschenberg's work entitled *Bed* (1955) (*figure 4*), epitomizes this, as Steinberg suggests, 'the horizontality of the bed relates to "making" as a vertical of the Renaissance picture plane related to seeing' (Steinberg 2000: 45).

Steinberg's analysis of this shift argues for 'a pictorial surface that let the world in again' (Steinberg 2000: 45). For Rauschenberg, the photographic image became manifest by two main processes: the photographic screen-print and photo-transfer process. Each process results in a unique aesthetic of the image and what I would argue as a shift in the perception of the photographic picture plane. Through the photomechanical process of screen-printing, Rauschenberg could quickly shuffle the image around the pictorial surface as a flat, floating image, without it becoming too illusionistic. The photographic screen-print image enabled 'thin or thick, transparent or opaque, layers of ink' (Newton 1979: 25) which did not break the picture plane, but were held upon its surface. Newton suggests that,

> The picture's flatness was to be no more of a problem than the flatness of a disordered desk or an unswept floor. Against Rauschenberg's picture plane you can pin or project any image because it will not work as the glimpse into the world, but as a scrap of printed material. (Newton 1979: 25)

The use of flat subject matter, such as a playing card and other printed ephemera draws attention to his concern for the flat surface, which is also seen within the work of other American artists such as Jasper Johns. What is interesting is Rauschenberg's use of a photographic image, within which he would further deny the sense of illusionism, of a spatial reading of the photographic image by striking across the printed photographic image with a physically painted mark. This denial of photographic illusionistic space within the picture plane is also seen in Rauschenberg's transfer drawings of the 1960s. The transfer prints are

(L) Figure 4, Robert Rauschenberg, *Bed* (1955). Oil and pencil on pillow, quilt, and sheet on wood supports, 191.1 x 80 x 20.3 cm.
(R) Figure 5, Robert Rauschenberg, *Apprehension* (1963). Solvent transfer on paper, 57 x 57cm.

made by soaking a photocopy image in acetone, placing face down and rubbing through with a pencil to transfer the image onto a support. The image is made through the application of pressure. It is interesting to note that Rauschenberg's transfer prints are titled 'drawings'. They are made through the act of drawing, the drawn line and pressure dictates the image beneath, although here the drawing reveals a photographic image. In *Apprehension* (1963*),* (*figure 5*) the process in these drawings is repeated over a number of photographs seemingly randomly scattered across the picture plane. Perspective is lost amid various combinations of photographs overlapping, juxtaposing and randomly rotated across the surface. The photographic image seems to continually appear and vanish where the pressure is inconsistent, just as a drawing, but wholly uncharacteristic of a photographic image. The delicacy of the transfer is reminiscent of graphite, where pressure dictates tone.

This distinctive characteristic of the transfer process results in a photographic image that floats across the picture surface, not seeming to adhere. The rubbing pressure, transfers ink from image to receptor. The result is a series of images, which are simultaneously drawings and photographs. The lack of consistency of the pencil in viewing the photographs creates what Lewis Kachur refers to as a flickering effect, creating a 'rupture between the 2 media…seen almost to refer to visibility of early images through the television' (Kachur 2007: 12). The pencil mark reveals the image and large voids where the image is sliced apart creating a perceptual interference and a seeming distance where, although devoid of image, the white support appears as blocking, therefore shifting to a positive area. This interference creates a perceptual distance of the image: a perceived physical distance. The images are caught between being and disappearing. The subtlety of contrast also amplifies this distance, seeming faded, and therefore reminiscent of a faded black and white photograph, of time, also of the fragmentary, momentary nature of the reportage image, from which it is probably taken. These transfer drawings emphasise the denial of the vertical illusory space for which the photographic is associated and traditionally understood. Here we perceive the image as if confronted by a flat surface.

I suggest that the shift in perceiving the photographic print horizontally as seen within the photogram print is also seen within prints made through the photocopier. The photocopy print is an electrostatic process, whereby toner ink is attracted and fused to the paper surface through an electrical charge. An object/image is placed face down onto a horizontal glass bed, a lid is closed above it, holding it flat against the glass. As the print is requested

by the operator, a lens passes beneath the glass bed capturing the object/image, generating an electronic signal, which indicates to either add or not to add a charge to a piece of paper. The toner particles are then attracted to the charged areas of the paper, and fused to the surface through heat. Just as the transfer drawings are made blind, face down, dictated by weight and pressure, so too is the photocopier print. As the object/image lies in contact with the glass it is captured by the lens, but where the object moves away from the glass, shadows are cast and light and air are able to circulate, (as also seen within the photogram print), and this may be evident within the print.

Helen Chadwick's *The Oval Court* (1984-86) *Carcass* 1986,[11] and the series *Xerox Books* (1968) made by Australian artist Ian Burn (discussed in detail in chapter 2.4) are key works that demonstrate how the distinct visual characteristics of the photocopy process[12] play an integral role in the conception of the artworks. What is apparent within the works is the visibility of the physical weight of an object/s lying on the glass surface, revealing bodily presence and contact. This can best be seen within Helen Chadwick's work *The Oval Court, Carcass* (1986), (*figure 6*) which consists of a large photocopy montage constructed and displayed on a low horizontal platform. The photocopy process was a deliberate choice by Chadwick due to its aesthetic potentials, as she explains:

> It seemed very incongruous to use Hi-tech equipment to produce a place of desire. But I was interested in sabotaging the conventions of business machinery, computer technology, as a way of producing the irrational, states of feeling, out of

[11] This work is part of a larger work entitled *Of Mutability (1984-6)*

Figure 6, Helen Chadwick, *The Oval Court* (1984-86) Carcass 1986. Photocopies and assorted media.

[12] The process was first named electrophotography and invented in New York in 1937 by Chester Carlson. In 1938 it was renamed Xerography. It served a basic purpose for reproducing documents and facilitating business communications. It was not until 1958 that the office copier was produced. Colour copiers were developed by 3M in 1968 but became more generally available in the '70s. In the 1980s it became a crucial tool in the creative process – copy art – photocopy art – electroworks. As it was based on mechanical reproduction, images were widely distributed and had high democratic potential. Artists were able to create images in large numbers and at low cost.

> it. That seemed to me to be a way of subverting it, and of making it alive, a creative tool. I feel, like a lot of contemporary artists, distrustful of the conceit of the artist's hand. This talented hand, able to toss off these beautiful creations. (Chadwick 1999 cited in Rubberneck s.d)

As Chadwick describes, she placed herself and a series of objects directly onto the glass bed of a photocopier to create the images, '… photocopying directly from vegetation and animal bodies' (Chadwick 1999 cited in Rubberneck), generating what she describes as a 'fathomless…epic still life' (Chadwick 1984-1992: 80/81). Within a series of her archived personal notebooks, Chadwick reveals her thoughts around the use of the photocopier for this work. She describes the process as the 'arrested moment of (the) automatic/mechanical image' (Chadwick 1984-1992: 74/75). The photocopy was 'a crude truth to life of machine-made image to propose illusory nature…' (Chadwick 1984-1992: 80/81). She describes the images made as

> Automatic…pure surface – totally superficial…no depth, surface illusion…(a) world of pure surface of things – imaginary depth, infinite space…(Chadwick 1984-1992: 80/81).

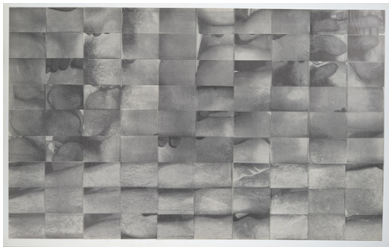
It is Interesting to note that Chadwick also writes of the 'boundaries' of matter becoming invisible through the mechanical photocopy process;, she writes 'at the speed of light, matter/mass no longer exist…at the speed of light, I no longer exist' (Chadwick 1984-1992: 74/75). In her notes she continues to explain:

> Images of capture to fascinate to be absorbed in & to lose oneself to. Abandon ego/identity/prison of self to experience of looking & being … Seen from within, without felt from inside not image of object of gaze…Self looking & feeling at self feeling towards dissolution of self not to capture anothers gaze but dissolve boundaries – not subject the self to be object for anothers consumption but mirror of own natives / desires. (Chadwick 1984-1992: 78/79).

Chadwick's description of 'seeing from within' and not through another's gaze seems to suggest that this process of capture may reveal something which the camera lens cannot. As 'dissolving boundaries' seems to suggest, she sees these images as generating a distinct feel which pulls the subject (herself) closer to the viewer, revealing the 'insides' of things, yet also generating an 'infinite depth'. This push and pull of the photocopy image may be due to the weight of the body and objects pushing against the glass, visibly revealing their surface, like skin. However, at the same time there is a harsh depth to the image beyond the photocopy lens focal depth. This is the darkness Chadwick notes as generating the

‘fathomless’ feel to the image. These characteristics may also be seen within the photogram process, where the objects’ own physical weight is pressed against the paper surface and directly informs the shadow cast onto the surface. This sense of physical weight and gravity against a glass membrane is evident in the images that constitute *The Oval Court, Carcass* (1986). However, in seeing this gravity and weight, we also make visible the glass sheet of the photocopier within the image, and this holds us away from the photographic subject. Where Chadwick notes ‘dissolving boundaries’, there is one boundary which cannot dissolve, the glass boundary between the subject and the lens, which reveals itself through her own contact, weight and pressure, and is paramount in generating a greater perceived distance within the printed image. As explained in the Daguerreotype image, the visual effect within the printed image is in two parts – seeing *at* the surface and seeing *into* photographic space behind the surface.

The revealing of the glass sheet boundary through contact and weight may also be seen within the series of works *Unroll One’s Own Skin/Window (Svolgere la propria pelle/finestra)* (1970), by Giuseppe Penone. *Unroll One’s Own Skin/Window* consists of grids of black-and-white photographic prints of parts of the artist's body pressed up against a glass windowpane (*figures 7 & 8*).



(L) Figure 7, Giuseppe Penone, *To Unroll One’s Own Skin/Window (Svolgere la propria pelle/finestra)* (1970). Gelatin Silver print, whole piece 69.5 x 107cm.

(R) Figure 8, Giuseppe Penone, *To Unroll One’s Own Skin/Window (Svolgere la propria pelle/finestra)* (1970). Gelatin Silver print, whole piece 69.5 x 107cm.

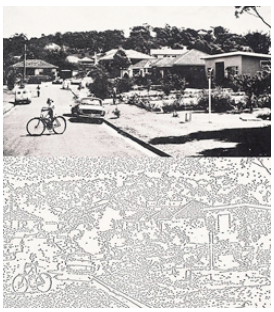


Figure 9, Ian Burn, *Systematically Altered Photographs* (1968). Black and White photographs (Series of 3), each 55.9 x 61.4cm.

Penone used a glass slide to press up against his body, revealing pressure and contact points within the image, the skin pressed tight up against the glass. The weight and pressure of Penone's own body and the surface of his skin become visibly evident through the detailed focal points within the images, which plunges the rest of the image backwards into grey darkness.

The Oval Court, Carcass, and *Unroll One's Own Skin/Window* are works that reveal the actual process and restricting nature of the photocopy printed image. The glass is a physical barrier that is made visible in the resulting image print. As Rauschenberg's *Apprehension* (1963) forces us to look down onto the surface, Chadwick's *The Oval Court, Carcass* is physically laid onto the floor. Perception of orientation is amplified by this positioning of the artwork horizontally. We look down and read the image as if it is behind a glass sheet, almost as if under ice. As she notes

> Look through the veneer…peer inward beyond surface into interior of things. (Chadwick 1984-1992: 20/21).

The nature of optical capture through the photocopier is vital in producing this distancing effect, through its desire for physical weight and contact. Birnbaum asserts that there is a visible sense of physicality and weight in such images from the photocopier. He explains:

> … the photocopier … replicates what is on top rather than what is in front of it. Free of cultural weight and expectations associated with the technical supports of established disciplines and yet capable of creating links to the grandest of traditions and to issues that nobody expected from such a "low" artifact … greyish and illegible, is normally hardly perceived as an auratic object. Regardless of technology, it is the physicality of the picture as a crafted object just as much as its ability to convey a true view on the world that appeals ... (Birnbaum 2008: 8)

The characteristics emerging from the horizontal photocopy process is also seen within a series of work entitled *Xerox Books* (1968) by Australian artist Ian Burn. Burn repeatedly passed an image through the photocopier until it became altered to the point of bearing little or no resemblance to the original, and gained increasing characteristics of the technological making process. Burn was interested in the mass reproductive potential of the photocopier device, whilst inevitably drawing attention to the alteration of images through the materiality of the process. Burn, a conceptual artist, was interested in the photocopy process, as Mel Ramsden, a close friend and collaborator with Burn in *Art & Language*, explained:

> The appearance was secondary, it was about the discipline. It's very important to understand that. It was unexpected, simply the result of a method of production. He had no idea about the appearance. (Ramsden in conversation with Jo Love, 2012)

During a conversation with Mel Ramsden,[13] he described to me how Burn had later tried to replicate the *Xerox Books*, but was unable to get the same visual effects of the degrading and dirtying of the image with toner particles, due to the speed in development of the photocopier machines. The early Xerox machines made relatively crude prints, and left loose toner dust on the paper surface. However, these 'problems' were rectified quickly as machine technology rapidly developed. As photocopier machines became increasingly widespread, they also became more refined, with the print becoming cleaner, with less interference from loose toner particles. It was this technological development that made the *Xerox books* impossible for Burn's himself to recreate. As Ramsden explained with regards to Burn's *Xerox Books*:

> In 1968 photocopy machines were, compared to today, quite primitive things. Above all they were quite dirty and photocopying a blank sheet of paper, then photocopying the copy and so on and so on, tended to make 'noise' in the shape of dots and other strange blemishes. When he (Burn) tried it later – maybe in the 80s – all those old machines had been superseded and the new ones did not cause any 'noise' (if it be that) whatsoever. (Ramsden in conversation with Jo Love, 2012)

In Burn's *Xerox Book*, *Systematically Altered Photograph* (1968) (*figure 9*) he repeatedly places photographs of Australian landmark buildings and cultural sites through the photocopier. Within these books, the copying process degrades the readymade image into what has been described as a state of 'electronic cubism'. Here, the actual process gradually breaks down and fractures the image into different visual planes through the degrading and interruptive process of photocopying. Through the gradual disintegration of the image, a new image emerges. As Ann Stephen explains:

> …after about a dozen copies, the image was altered in an indeterminate manner. Each photocopy image was then abutted with its "original" – the gray half tones of photographic naturalism beside the irradiated copy – as a Systematically Altered Photograph, 1968. Burn found that the repetition distanced, but never entirely dislodged, his ambivalence. (Stephen 2006: 72)

Benjamin's canonical essay *The Work of Art in the Age of Mechanical Reproduction* (1936) is particularly relevant to Burn's decision to use the photocopier in the making of the *Xerox*

[13] Jo Love in conversation with Mel Ramsden, 1st June 2012, at Avenue Gallery, The University of Northampton, and following email correspondance (*see appendix 1*).

Books. However, while Benjamin argues for the loss of aura of an original image through mass reproduction, Burn is thinking more about the transformative qualities of the reproductive process, and its visual capabilities in generating new potentials within an image.

The dusty quality of early Xerox machines was also something that was crucial in the making of many of Peter Kennard's photomontages during the 1970s and 1980s. Kennard began making many works during the 1970s using Xerox machines, which enabled him to combine photographic images with different materials and objects relatively quickly and on a large scale. Just as Burn was interested in the material interference generated by these early machines, this was something that also interested Kennard:

> …at one point I got giant photocopies made where (probably contrary to health & safety) the toner was not fused to the paper so I could then mix charcoal with them and totally merge the charcoal with the toner. It was merging the photographic with the hand-drawn. But as that technology became redundant it became difficult to get large Xerox machines any more and anyway the quality has changed…(Kennard in conversation with Coldwell, 2007)

However, Kennard also encountered the same problem of the rapid development and refinements in photocopiers as Burn. This led Kennard to move from using the photocopier to the digital scanner as another flatbed device through which he could combine photographic images with other materials. The image obtained through the digital flatbed scanner is manifest in the same manner as the photocopier, whereby the image is placed face down onto a horizontal glass bed, and a lid is placed down over the top.

From 2002 Kennard worked in collaboration with Cat Picton Phillipps, using the horizontal glass bed of the scanner as a surface upon which he could combine images and drop materials and liquids. Most notably, in the series entitled *Award. Made during the Invasion and Occupation of Iraq 2003 to Now* (2004) (*figure 10*) Kennard and Phillipps poured blood, oil, dust, and objects directly onto the glass bed to generate images which were printed

Figure 10, Peter Kennard and Cat Picton Phillipps, from the series *Award. Made during the Invasion and Occupation of Iraq 2003 to Now* (2004), digital print on hannemule paper, 41 X 33 cm.

directly as a series of digital inkjet prints. In the accompanying text entitled *Blood on the Scanner* Kennard and Phillips wrote:

> We gritted the scanner, bled on it; threw torn-up rags, flags and ribbons on it; poured oil then stamped on the stuff, burnt it and spat on the lot…(Kennard and Phillips, 2004)

This addition of detritus and bodily fluids within the digital image may be seen to subvert technological developments of image editing software such as Adobe Photoshop, where general intentions are to perfect the image - to eradicate hairs, scratches and dust from the image.

It is the way in which the horizontally orientated technological device of the photocopier and flatbed scanner allows the artist to use material stuff as directly as possible and to make more visceral images, that interested Kennard and Phillipps. This was also crucial in the intentions and execution of the works I have discussed by Chadwick and Burn, where the horizontal flatbed allows weight and gravity of material to become revealed as it presses against the glass during the capture of the image. It is the notion of an increasingly horizontal, visually flattened image generated through the process of flatbed devices, which is of particular relevance to my research, since it may be seen in these images that the upright vertical space implied by Alberti's 'window' – of looking through – is confounded by the implied horizontal surface (Friedberg 2006: 1). It is interesting to compare the glass 'window' to which Alberti refers, as being visibly present in the image through flatbed devices. We actually see both the window and its opening.

The most recent, and also most rapid, developments in the production and printing of the photographic image have occurred through digital technology. Production methods and printing devices have become increasingly immaterial, whereby the opportunities for such exploration of material is harder to achieve.

The 1980s saw the rapid development of inkjet printing technology, but it was not until the 1990s that photographic digital printing began to rival the quality of the analogue photographic print. As Jurgens explains:

> [A] technical revolution in photography and imaging occurred. In the early 90s the printing industry recognized it needed to produce prints that resembled traditional

> photographic prints. The new media had to match traditional paper in look, feel and function. Photographic image quality would then be 'achieved in a digital print when you cant tell the difference or you prefer the digital print' (Smouse 1998 -92) This resulted in a mixture of aesthetic of the photographic inkjet printed image as the quality of the paper support greatly affects the final look and feel of the media for digital printing. (Jurgens 2009: 5)

As Jurgens (2009) suggests, resolution of the image, printer resolution, ink and support type, are all factors that affect the digital printed image picture plane. Printing papers range from those found in darkroom printing to those used in the print workshop, each uniquely altering the way in which ink saturates into the paper surface, consequently altering the perception of the image surface.

> Inkjet prints on a glossy resin-coated paper (RC) base that have the look and feel of photographic prints are, from a material point of view, ink on substrate. In this sense non-photographic digital prints of originally photographic images are analogous to photomechanical prints made from photographic originals. (Jurgens 2009: 5)

However, although the *look* and *feel* of the digital print may be getting closer to that of the analogue print, one distinct difference remains in the way in which the digital print becomes manifest. The digital print emerges through an immaterial process, held as an image *in* the computer, seemingly invulnerable.[14] During photographic capture and image manipulation there is no point at which the image reveals itself externally, and may be affected by the air and light. It is only when the image is printed that there is a surface that may become affected. It is here that the question of the stability of the digital print emerges. In contrast to the analogue print, the digital print becomes more vulnerable to handling and atmospheric conditions. There is a complete contrast, from the unchanging immateriality of the virtual digital image, to the fragility and vulnerability of the image as a digital print. This vulnerability became a major debate throughout early digital printing, where prints made through dye-based inks rather than pigments were severely prone to fading and discolouring. The prevention of such dramatic effects of light was a significant factor in the development and value of the digital print.

To summarise here: there are different moments in the stages of each photographic print process where the image becomes revealed to the material world. It is at these stages of

[14] The digital image, as opposed to the print has a rather different vulnerability. As data, the risks are in deletion or corruption of information, therefore preventing it from being used at all. There is also the risk that as new storage devices and formats are becoming increasingly developed, older formats and devices will be unreadable, again risking the readability of the image.

being revealed that visual evidence of surface becomes visible, and consequently this shifts the perception from seeing *in* to the photographic subject, to seeing *on* the surface of the image. Orientation, weight and material contact are all crucial factors during the making process, in opening up and enabling new visual possibilities within the image for the artist to explore. What emerges at this point is a crucial difference in the points at which revealing the surface, material or weight through the digital process is possible.

1.2 Materiality

In the previous section I argued how various photographic print processes may reveal visual evidence of the physical surface through weight and contact, and in doing so reveal a shift in perceived orientation of the picture plane. In this section I will now examine differences in the experience of materiality and weight of working with the photographic image via digital processes, and the visual consequences within the printed image that this may incur. I will introduce key philosophical thinking and critical debates around technology and matter. In particular, Martin Heidegger's thinking around revealing and removal of matter through technology, in *The Origin of the Work of Art,* 1935/6, and *The Question Concerning Technology*, 1953, will serve to underpin my argument for what I suggest is an experience of weightless immateriality of the photographic image when working via digital printing technologies. This will provide a platform for a further discussion on the removal of the bodily senses of touch.

Questioning the materiality of the photographic image is important here, as it is through the material process and presence of surface and touch that things emerge at the surface of the image, which may shift the resulting perception of space and surface of the print. In order to explore this in more depth I will first examine the transition from the analogue material image to the digital image in order to reveal any differences that may offer a new experience in the making of the image and change such chances of physical encounters.

By 'printed image', I am referring to the photographic image as a physical object, which is material; it has a physical surface, it has a weight, and scale. It is this physical presence, as matter, that generates opportunities for physical intervention within or upon that surface of the image to become evident and 'seen,' along with the captured image. The printed image therefore has what could be described as having what Jean-Luc Nancy calls 'a body', and so it may encounter other bodies in the world. Jean-Luc Nancy (2008) suggests that we

encounter the world through bodies, which have a weight, and therefore a physical presence:

> Even without a synthesis, everything ends up communicating with weighing…it is a weight…it presses against other bodies, right up against other bodies. (Nancy 2008: 93)

I suggest that Nancy's reference to weight, contact and pressure is relevant here, as it pertains to the physicality of the external world through which we constantly perceive and experience. It is Nancy's bodily encounter of the weight and matter of the image during the making process, which I will use to question how the digital photographic process may generate a different encounter and experience than previous processes.

Whether manifested through analogue, mechanical or digital processes, the printed image remains a physical object. As Edwards and Hart (2004) suggest, they are 'physical objects in a world that is physically apprehendable not only through vision but through embodied relations of smell, taste, touch and hearing' (Edwards & Hart 2004: 3). As Edwards and Hart (2004) describe in their comprehensive analysis of the photograph as material object:

> Throughout the history of photography, of course, the visual properties of the surface of the image have depended on the material – for instance, the daguerreotype could be viewed only through physical manipulation in the hand to establish the correct viewing angle. These material forms have exceeded a direct indexical visual use, and created, literally and metaphorically, another dimension to the image. The arrival of a succession of new photographic techniques, formats and material forms demanded … different spatial arrangements … of viewing the material object. (Edwards & Hart 2004: 5)

Edwards and Hart seem to be discussing the different physical manifestations of the photographic print; this is important as it distinguishes both the analogue print and the photomechanical print, as physical surfaces. However, what is also important here is that as technology has developed new printing methods, they suggest that this demands new ways of 'viewing'. Patrick Maynard (1997) also describes the material body of the photograph as:

> (a) physical state of a surface and of purposive surface marks, which people make mental (that is, cognitive) use. They take energy and expense to produce, often space and care to preserve. They are subject to destruction by fire, they deteriorate physically through oxidation or magnetic influence. (Maynard 1997: 24)

Batchen also describes this sense of embodiment of the photograph, as having 'volume, opacity, tactility and a physical presence in the world' (Batchen cited by Sassoon 2004: 190).

This is similarly described by Rotzer, who suggests the analogue print process is made 'through physical and chemical forces, … produced, as is claimed, on the basis of the causality existing between the light and its impression on the coated film' (Rotzer 1996: 14). Clearly, what is being discussed here is the photographic printed image as an object that exists in the world, which occupies space, with physical weight and volume, and so we may physically encounter them through our own bodies.

Prior to the mechanical means of printing the photographic image, the Daguerreotype was probably the best example of the inherent, unique sense of materiality of all photographic prints (Schwartz 2004: 29), as the plate support must be physically handled by the viewer and turned in order to 'see' the image within its pitted surface. Photo-mechanical means of printing did eliminate this uniqueness, providing opportunity for infinite reproduction of an image, as became the seed for Benjamin's essay *The Work of Art in the Age of Mechanical Reproduction* (1936). I would argue that, whether in the photographic darkroom, through wet processes, or photo-mechanically within a print workshop, there remains a sense of the material presence and physical matter of the image throughout the process of production. This seems evident as we handle a piece of photographic film, and the photographic paper on which the image will be exposed, or as we load the printing plate and the paper upon which the photomechanical print will be impressed in a layer of ink. It is this material process of manifesting the print, via film, paper and printing plate, which is evident within the resulting printed surface.

However, rather than post production, it is the various stages prior to printing the image which may reveal differences, and which I shall explore further. As a digital image, there is a different experience of the making process of the printed image, which is no longer material. The image does not have a weight, scale or surface until it is finally printed, so this opportunity of encountering other bodies radically changes. Over the last few decades as imaging technology has rapidly advanced, there has been a radical shift in how the photographic print may become evidenced, to the point where we have now the opportunity to dematerialise the entire print process, from the conception and output via a screen or not actually printed at all. It is here that we are not only encountering a change in production, but also of the very material presence of the photographic image as print. At the extreme of this, where once the image required a physical surface support, it now may exist completely independently from physical matter via screen devices or through projection. Sassoon

(2004) cites Bruce (1994) to suggest that 'digital images never pass through a material phase' (Bruce cited in Sassoon 2004: 186). This physical surface has been completely replaced by electronic data, and so has severed all ties to the material world (Marks 2002: 116). Sassoon seems to sum this up when discussing the digital archiving of photographs:

> What is produced in the process of translating a photograph from the material to digital is not an 'echo of the original' (Benjamin 1985a: 76), but a mere shadow of its former being … The digitising process translates what was once a complex multilayered meaning … into an ephemeral ghost whose materiality is at best intangible. (Sassoon 2004: 199)

Although it could be argued that all translation bears multilayered meaning, what interests me is the description of the 'intangible' through the digitising process. This I would suggest is multilayered; as the material process of image manifestation through the digital process remains hidden, we have no fixed point of origin, to where and how the photograph was obtained, and through what manipulation processes it may have undergone. Where the image has a physical surface, for example, within analogue film, any alterations or manipulations may be visually evident as slight alteration within image surface. Within the digital print, alterations happen within the computer, they are changes in data, and are not physical.

Henning suggests that 'new digital imaging technologies will precipitate radical changes in perception, in consciousness, and ultimately in society' (Henning 1995: 219), as 'the electronic image, (process, or) the electronic ray, the light beam, the pixel the dot, the square the circle, the constructed the organic, the processor inside replaces the world outside' (Henning 1995: 108), we are making work through pure simulation of the real world. This is what Jean Baudrillard (1994) describes as *Simulacra*. Baudrillard (1994) argues that our reality and way in which we encounter the world has been replaced by a world of simulation. Within the digital print, the physical properties of the image-making process have completely dissolved into data. The real world of material body and weight is simulated through electronic readings or code, rather than through surfaces. This means that there is no possibility that we can encounter the physical weight or scale of the materiality of the image. Hubert Dreyfus saw the machine as a 'metaphysical opponent' (Dreyfus cited in Heim 1992: 307), suggesting:

> We must delineate carefully what computers can and cannot do, lest we become unrealistic about computers and fall into a misunderstanding of the kind of beings we ourselves are. (Dreyfus cited in Heim 1992: 306)

Heim seems to be suggesting that if we ultimately surrender to the computer processes, we might completely lose sight of what we are as material human beings. As Laura Marks argues, 'materiality is mortality' (Marks 2002: xi) in her book *Touch: Sensuous theory and multisensory media* (2002), where she uses the *haptic criticism*, and *haptic visuality*,[15] to critique how, as bodily beings, we perceive and encounter the materiality of film and cinema, particularly in relation to the immateriality of digital media, through the optic and haptic. Marks explores a variety of moving image media, both analogue and digital, to question how we bodily engage through an optic and haptic encounter, or rather, how we may evoke the haptic, where it is absent and we are dis-embodied from the material. (I will return to the haptic and optic in more detail within the next section)

Anne Friedberg (2006) suggests that as we shift the image from the physical tabletop into the computer screen, that our bodily engagement is still present but is altered via scale and proximity of the screen. Within her discussion around the shift of seeing through material space to virtual space, on digital screens, in *The Virtual Window: From Alberti to Microsoft* (2006), she suggests that as screen devices become smaller, such as in laptops, we place ourselves in greater proximity, and so remain bodily engaged.

> Our physical embodied and subjectively disembodied relation to the screen changes as we engage with the distant, large cinema screen with projected images; the closer and light-emanating television screen; and the even closer computer screen, one that we put our faces very close to, often touch, one that sits on our laps or in our beds. Camera phones, blackberries, and other "mobile screenic devices" add mobility to the screens face. (Friedberg 2006: 7)

However, I would argue that this engagement lies more with an experience with the technological apparatus, the digital screen, rather than the image. I suggest that an important difference exists here, between the embodied experiences generated via the optical image within the screen, as opposed to that through the physical printed surface. Our encounter and engagement with the image *in* the computer screen, is distinct from the photograph being encountered *on* the surface of the paper. This distinction between *in* the screen, rather than *on* the surface of the paper is important as it generates a distinction

[15] Marks refers to *haptic* as the sense of touch, in all its forms. Through *haptic criticism* she critiques the haptic sense through media where touch is absent. *Haptic visuality* refers to the evoking of the haptic sense through the optical sense.

between the revealing and concealing of surface and weight of the image at different stages. The image in the screen may show something being present, but it is not at all visible. The image within the computer screen remains concealed, *in* the screen, up to the moment it is printed, whereas within other photographic processes there is a continual revealing of surface and weight throughout the image-making process. There is also a distinction here in referring to the *image* and the *photograph*. We generally refer to seeing an *image* on screen, but call it a *photograph* when it becomes a printed surface.

We may discuss the photograph as having weight, however at the same time it is free from weight. As a photographic representation of objects, it releases the objects themselves as representations. Barthes describes the photograph as a 'weightless transparent envelope,' (Barthes 2000: 5) which consequently frees the viewer to see the actual surface of the image. However, the type of imagery captured and orientation of process, play a significant role in this translation of weight in the image. Within Helen Chadwick's photocopy prints *The Oval Court* (discussed in Chapter 1:1) she uses actual material stuff, having a weight, put onto a surface, so we are made to feel its [i.e. the stuff] weight, as it presses against the glass surface. We are made to feel both weight and surface. However, through other photographic representation we do not understand the weight of the objects we are looking at. Chadwick wants to reveal the materiality and weightiness of actual things, translated onto paper.

The photographic image has a long tradition of having an indexical relationship to objects in the world. It may be said that, generally, within an analogue photograph something existed in the configuration of the image we are looking at. Yet the nature of the digital process does not adhere to any such rules, it has freed all associations and rids gravity. There may not have been anything actually present within the digital image; the digital image may be completely built within the computer software. Working with the digital image *in* the screen conceals weight and surface of things; these are not translated to us, as we are free to shift, cut, rotate, and completely reconfigure any image through its data language.

Martin Heidegger is one of the first thinkers to question the notion of matter through technology. Within two of Heidegger's essays, *The Origin of the Work of Art* (1935/6), and *The Question Concerning Technology* (1953), he questions how things appear, or reveal themselves through their matter. What is important within his analysis is how things become

visible through technology. In order to ask how technology might alter the appearance of things he first questions how things in themselves appear.

In *The Origin of the Work of Art* (1935/6), Heidegger famously analyses a *things* essence, and then proceeds to ask what the *thingliness* of both the artwork and of technology is. Initially he generates a distinction between things, as pure *mere* things, that are nothing but what they are, e.g., a clod of earth, and things, e.g., equipment. To ask what the *thingly* character of the thing is, he then considers 3 concepts. Firstly, the thing as the bearer of traits (however, he argues that this keeps the thing too much at arm's length). Secondly, the thing as a unity of sensations, however, Heidegger argues that this brings the thing into too close proximity to be seen. Thirdly, he identifies the combination of the two previous concepts as allowing for the *thingliness*. This is the thing as matter, standing together with form (Heidegger cited in Krell 1977: 152).

> That which gives things their constancy and pith but is also at the same time the source of their particular mode of sensuous pressure – colored, resonant, hard, massive – is the matter of things. (Heidegger cited in Krell 1977: 152)

According to Heidegger, the thing is formed of matter, that the 'thingly element is manifestly the matter of which it consists' (Heidegger cited in Krell 1977: 152). However, he is also generating an important distinction here, between equipment, and a work of art. Heidegger argues that it is within equipment that matter and form have their proper place, as opposed to the artwork. To clarify, equipment is only half thing, as it is also half artwork. To use his example of a jug, it is made by the artisan, like the artwork, but it also has a function, or as Heidegger terms this, an *instrumentality*, as to handle or master. When we see the jug, we do not see the matter of which it is made, as this is concealed behind the 'jug' that we see as having a function. The artwork, however, is an idea, formed as matter. And in doing so it is unconcealed, he describes this as *earthly*, bringing 'a world into view' (Heidegger cited in Cazeaux 2000: 69). Heidegger's example of the Greek temple reinforces this idea. The temple, standing in the landscape, actually brings the landscape around it into focus, into view; it generates a broader context for itself, it becomes visible. And central to Heidegger's argument is that visibility, or as Heidegger describes this, 'unconcealment is truth' (Heidegger 1977: 11) and therefore, the artwork is said to have *truth*.

In his later essay, *The Question Concerning Technology* (1953), Heidegger questions how things come to appear, to become truth, through technology, and most importantly, through modern technology. He initially analyses technology as *techne,* from the artisan's tools, arguing that technology itself is a mode of revealing, or *truth*. However, he takes this analysis further to distinguish how modern machine-powered technology is very different from technology, it has become abstract from the world, generating a *challenging* revealing, that which requires energy and force beyond nature:

> The revealing of modern technology does not unfold into a bringing forth in the sense of poesis. The revealing that rules in modern technology is a challenging (Herausforden), which puts to nature the unreasonable demand that it supply energy that can be extracted and stored as such. (Heidegger 1977: 14)

Heidegger seemed aware of what he saw as a looming threat about to take place with the emergence of the electronic typewriter. Computers had yet to be developed beyond those that were the size of an entire room, but it was the way in which rapid advances in technology would alter human thinking, which impelled Heidegger to question the very essence of technology.

> What Heidegger called 'the essence of technology' infiltrates human existence more intimately than anything humans could create. The danger of technology lies in the transformation of the human being by which human actions and aspirations are fundamentally distorted. (Heim 1992: 309)

Michael Heim's translation of a series of Heidegger's lectures given between 1942-43, reveals the philosopher's belief in the disembodiment of the human hand through the use of the typewriter. As Heim explains:

> The word no longer passes through the hand as it writes and acts authentically but through the mechanized pressure of the hand. The typewriter snatches script from the essential realm of the hand – and this means the hand is removed from the essential realm of the world…mechanized writing deprives the hand of dignity in the realm of the written word and degrades the word to a mere means for the traffic of communication. (Heim 1992: 311)

In Heim's analysis of Heidegger and McLuhan, he builds upon Heidegger's early critique of the typewriter but advances it into the world of the word processor to argue that the mechanized has now become a non-mechanised process, which 'removes the writing activity from script to mechanical imprints' (Heim 1992: 311). He suggests that the hand comes back into play through bodily gestures with the use of a mouse device. Heim's critique of the computer seems to end in a simple but gloomy paradox of loss, in the sense

that whilst bringing something 'alluring' to the process, through the abstract nature of the machine, there is also something missing. This is the openness of possibilities through direct hand making. He explains:

> No matter how alluring, every grain in fixed intelligibility brings with it a corresponding loss of vivacity. Because we are finite, every grain we make also implies a lost possibility. The loss is especially devastating to those living in the technological world, for here they enjoy everything conveniently at their disposal – everything, that is, except the playful process of discovery itself. (Heim 1992: 315)

Heidegger's analysis of technology and matter, and Heim's critique of computer technology, provide a philosophical context to suggest that through digital photographic print processes, the essence of the image's materiality is concealed, *in* the screen. In making a photographic print via digital technology there is a *hiddenness*, or rather a sense of separateness. This is of the very *matter* of the image and of the various decision-making processes of the artist, which may be visible within the image as physical alterations.

I suggest here that what we encounter through the digital photographic print process is a sense of loss, which is not evident within other photographic print processes. The photographic image has long been associated with notions of loss and death, especially through the writings of Roland Barthes.[16] The digital photograph is no different in these associations of loss. However, what I am referring to within my discussion is a loss of matter, or loss of a material engagement with the image. There is a *separateness* of matter, of material weight, scale and the physical surface of the image *in* the computer. This *separateness* only reveals itself at the stage where the image is subsequently printed.

I will develop this argument further to suggest that this material loss leads to a loss of touch, of tactile contact with the image; and that the removal of the touch of the hand during the entire making process has implications on perception and experience of the image.

1:3 Touch

In the previous section I have explored the sense of materiality of the photographic printed image made through the digital process. What I have suggested is that a lack of materiality of the image may be visually evidenced within the printed picture plane as a separateness of

[16] Roland Barthes book *Camera Lucida* (2000), originally published in French as *La Chambre Claire* (1980), by Editions du Seuil, is particularly relevant to these associations of loss and death. Barthes reflects on the photograph, particularly a photograph of his mother, to suggest that 'Death is the eidos of that photograph' (Barthes 2000: 15).

the surface, weight, and scale of the image. I will now develop this further to suggest this leads to a loss of tactile touch, which may have implications in the experience of the image during making. I have identified a number of key philosophical analyses and historical discourses where the notion of tactile touch is the most profound and philosophical of all the senses in our experiencing and understanding of the world (Diderot 1794, cited in Paterson 2007: 1). In the following section I will investigate the digital imaging process, questioning the meanings of tactile touch and contact and its absence during making of the image. My analysis originates in Aristotle's philosophical thoughts on the human senses in *De Anima*, when he asserts that the notion of touch is crucial to existence, and Alois Riegl's art historical discourse on the perception of two distinct distances, the one tactile and the other optical. I will employ a Phenomenological approach to my argument, using key text from Maurice Merleau-Ponty (1945) who asserts that the human body is central to our perception and understanding of the world, and develop this into an exploration of touch, from cutaneous and tactile touch to more metaphorical touching through the thinking of Jean-Luc Nancy (2008).

Whilst there remains a physical aspect to new technologies, as we encounter the computer and screen as physical object and surface, my question here is how, through the computer prior to printing, the physical surface and material weight of the image may be gauged. This leads me to ask at what moment do we actually contact and touch the image through the digital photographic print process? At what stages in production may the surface of the image actually be present in the world and become touchable by the human hand, or affected by air and light?

Probably the most immediate and most literal reference to the sense of touch can be made through the reference of the fingertips, as we make contact with the world and the physical objects around us. When referring to the photographic image, Michelle Henning introduced the term *fingerprint* to describe the photograph's chemical trace of an interaction with the world (Henning 1995: 219). Henning's introduction of the term *fingerprint* is interesting as it suggests the somatic sense of touch or contact through the analogue photographic process, where the surface of film is chemically and physically altered by light, air and touch. However, as Classen suggests, in her exploration of different notions of touch, 'We live in a society of the image, a markedly visual culture, in which, while there may be many representations of touch, there is often nothing actually there to feel' (Classen 2005: 2).

What Classen describes here may be more applicable to the digital photographic process, where there is no longer a necessity for a material support. As Classen suggests, touch in this respect may be more metaphorical, perhaps through the optical, rather than physical tactile sense.

In attempting to suggest a shift in the somatic experience of touch and contact of the print through digital photographic print processes, I will firstly define a distinction between the optic and the haptic encounter with the image. The optic pertains to the eye, to visual sensation; the haptic pertains to the bodily 'felt', or somatic touch sensation. Haptic is derivative from the Greek *haptesthai,* pertaining to touch in its broadest sense (Paterson 2007: ix), and first seen within Aristotle's writing *De Anima* (c.350 BC) and *De Sensu et Sensibilibus,* as inwardly-oriented sensations necessary for feelings of embodiment (Aristotle 1986). Since Aristotle's time we commonly refer to five human senses, these senses being exteroceptive (outward-oriented). In Aristotle's famous hierarchy of the five senses (*De Anima c.*350 BC), sight is the superior sense while touch is relegated to the lowest, basest position. The western assumed superiority of vision, or *occularcentrism*, recognises the primacy and privileging of vision as a path to certainty and knowledge whereby touch is routinely ignored, or 'forgotten' (Paterson 2007: 1). Aristotle identified touch as simultaneously the most basic yet most primary sense (Paterson 2007: 7). Aristotle's philosophical thinking underpins a historical tradition of the primacy of touch, wherein touch is the first sense prior to the differentiation into other sensory modalities. Whilst he distinguished five separate, outwardly orientated, human senses, recent psychologists have proposed as much as twenty-one senses, for example, individual sense receptors of cutaneous touch through the skin can distinguish different pressures, warmth and pain (Paterson 2007: 20). It may be seen that Aristotle actually considered how a number of senses worked together to determine size, shape, number and movement of an object, and this new *unity* of the senses, he referred to as 'common sense', which sat outside of the five senses.[17] What is important is that Aristotle determined that touch was 'indispensable and fundamental to animal existence' and we would be 'unable to survive without it' (Paterson 2007: 17). He suggests that:

> …[It] must have touch… All body being tangible, that is, perceptible by touch, the preservation of the animal requires its body being capable of touch. While the other

[17] Although as Paterson explains, this 'new sense' gained through a unity of senses has been disputed within many psychological debates (Paterson 2007: 19).

> senses, smell, sight and hearing, perceive through things, but anything that makes contact will, if it have no perception, be unable to avoid some things and acquire others. (Aristotle 1986: 218)

This distinctive importance of the experience of touch as separate from the optical may also be seen in the early writing of Alois Riegl. It is within Riegl's art historical discourse *Historical Grammar of the Visual Arts,* a manuscript written between 1897-8, that the relationship between the optic and tactile somatic senses in terms of objective and subjective surfaces, and proximity and distance is identified and defined. Riegl divided the human senses into *subjective* optical and the *objective* tactile surfaces, maintaining that the sense of sight, the optical sense, played 'the leading role' in our impressions of the external world, but that the optical is not enough to gather the complete truth of the form of things, 'how they extend themselves in the three dimensions of height, width, and depth' (Riegl 2004: 395), as he suggests:

> The optical sense alone does not suffice to provide us with a true sense of form. The sense of sight is unable to penetrate objects; it apprehends in a given thing merely the one surface that happens to be turned toward the viewer. (Riegl 2004: 395)

Riegl argues that the optical sense is always planar, it only sees a two-dimensional surface, an illusion, and rather it is the sense of touch, or the tactile sense, that enables us to perceive depth, which reveals the integrity of things. As Paterson similarly suggests, within his comprehensive analysis in *The Senses of Touch: Haptics, Affects and Technologies* (2007), 'It is through haptic experience that we feel engaged in the world' (Paterson 2007: 101).

Riegl asserts that the tactile objective surface of the work of art implies proximity between body and surface. Riegl distinguishes this sense of proximity and distance in experience as crucial to asserting either tactile 'objectivity' of things, or optical 'subjectivity'. This is an important point as the experience of the digital photographic print process, through Riegl's analysis, must therefore be a purely subjective and optical experience, at a distance from the body.

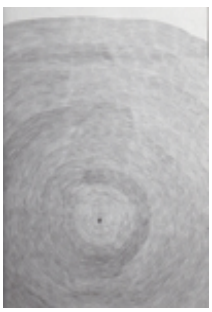
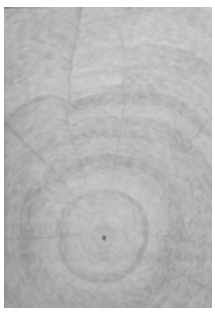
However, Donald Kuspit would disagree with this distinctive split, suggesting in his essay *The Matrix of Sensations* (2005) that the optic and haptic are never purely separate, 'but impurely both, (being) co-determinate in actual perceptual experience'. Kuspit argues that

the digital process compensates for the haptic loss through its very unique visual nature. He finds an intimacy still inherent through the digital process, as he explains:

> The standard complaint against digital representation is that it loses the haptic quality of painted representation, thus making it less organic and intimate. But this is not necessarily so. The intensification of optical quality that digitalization brings with it more than compensates for the loss of the haptic dimension…because the digitalization is in constant optical motion. Generating an intimacy and vividness all its own. (Kuspit 2005)

I would like to introduce here, a body of artworks entitled *The Imprint of Drawing* (2002-3) by Italian artist Giuseppe Penone (*figures 11 & 12*). This series demonstrates the fundamental notion of tactile touch and contact as central concern for the artist's work. Each of the ten drawings in the series centre, quite literally, around a print of each of Penone's own fingertips on the paper surface. Each drawing begins with Penone daubing one of his fingers in black ink and making a print in the centre of a large piece of white paper. From each fingerprint, Penone then traces around each of the lines and marks, gradually drawing out from the centre to the edges of the paper, until virtually all the paper has been filled. Each fingerprint mark is obtained through the pressure of contact between the artist and surface, the inked skin surface touching and transferring against the paper surface. The pressure of each finger against the paper dictates the tonal weight of the printed mark. This is what Paterson (2007) suggests as cutaneous or tactile contact, pertaining to the skin or through pressure, and a process that Henri Focillon (1989) describes, where there is a handling and consideration of the material, as he explains:

> The artist touches, he feels, he reckons weight, he measures space, he moulds the fluidity of atmosphere to prefigure form in it, he caresses the skin of all things. With the language of Touch he composes the language of Sight – a 'warm' tone, a 'cool' tone, a 'heavy' tone, a 'hollow' tone, a 'hard' line, a 'soft' line. (Focillon cited in Paterson 2007: 88)

(L) Figure 11, Giuseppe Penone, Left Little Finger, *The Imprint of Drawing* (2002-3).
(R) Figure 12, Giuseppe Penone, Left Ring Finger *The Imprint of Drawing* (2002-3).

Within *The Imprint of Drawing* (2002-3) there is a continuous, shifting dialogue between the physical weight, and pressure of the body and the resulting imprint, from the weight of pushing the finger to the paper surface, to the weight of the whole body, pushing the pencil against the paper as the drawings become ever bigger, surrounding the print mark, as Penone describes:

> … In order to make a clear image you need the pressure of a certain weight… instead of realising the imprint through the merest touching with the fingertip, which involved only a movement of the hand, one now has to mobilise the entire body in order to create large scale drawing of this imprint. Meanwhile something else happens: if you use a lot of pressure, the imprint is darker; if you use less pressure, the imprint is lighter. This entails that when you redraw the imprint on a large scale, you have to use more energy and more weight to convey where the original image received more pressure and had more weight…(De Zegher 2004: 29)

For Penone 'It is only through touch. Through the direct relation of the body with reality that one can be more precise in one's understanding of what surrounds us' (De Zegher 2004: 31). Penone describes a fusion between the paper surface and his body, which is fundamental in creating the works, explaining that the paper surface is key in determining this relationship, as the rough paper surface demands focus and attention whilst drawing, affecting contact, pressure and weight (De Zegher 2004: 42). This preoccupation is with the weightiness of matter, of the paper surface, its physicality and the body's contact with this surface through pressure and weight of its own surface. *The Imprint of Drawing* amplifies the fingerprint as a mark of human existence, as a trace of the hand that makes the object. Penone describes the marks of touch found on the surface of objects as imprints of the past, as visual evidence of making. He explains:

> …on this vase…you could see the fingerprints left by the potter as a result of his touching and shaping the pot. The imprints were on the handles at the point on the surface where one touches the vase. So the odd thing was that when you picked up the jar with your hand, you were touching the imprint of the potter. (De Zegher 2004: 30)

To return to the photographic image, in contrast to the proximity of tactile touch explored within Penone's works, it is discussed within most discourses as a *technical* image, made by *apparatus*, *instrument*, and as such, it is situated within inherent notions of physical and perceived distance. It has been suggested that this sense of distance emerges through the loss of the artist's hand, which denotes a loss of the human and a loss of uniqueness (Flusser 2000; Gilbert-Rolfe 1999; Barthes 2000; Benjamin 1999). Along with analogue

processes, the digital process remains via apparatus, but it also requires subsequent technology, use of a computer, printer or projector device, to actually *bring forth* the image into material presence. Where analogue process captures the image as a chemical and material reaction on a surface, the digital remains removed from any physical material until printed. As I have discussed in chapter 1:2, the significance here lies with the image being *in* the screen as opposed to the photograph *on* the surface, and also that the digital has freed the photographic image from any indexical relationship to the world. The digital image may be built through data, having no external link, and also may remain in the computer, and not printed at all. It is argued that digital process is, therefore, a further removal of the hand from the photographic process (Mitchell 1992: 6), leading to what Virilio has described as a 'de-personalisation' of the image (Virilio 1994: 30). It has also been argued that new technologies are relocating vision to a 'plane severed from the human observer' (Crary cited in Robins 1995: 38). Within Robins' essay *Will Image Still Move Us* (1995) Crary argues that there is a perfection of vision through the use of computer imaging technologies, which 'purge(s) the medium of its 'impurities'' (Crary cited in Robins 1995: 38), as opposed to the more realistic 'imperfections' emerging from other photographic imaging processes. However, I would suggest that this *severance,* as Crary describes it, has even bigger implications in the removal of the image from contact, in particular, the removal of tactile contact.

To return to Henning's reference to the *fingerprint*, I would like to unravel each step involved in the manifestation of the fine art photographic printed image through both analogue and digital photographic processes, to compare at what point the artist may be able to make a fingerprint mark on the surface of the image, signifying bodily presence and contact. Firstly, through the analogue process, we must select and load a light sensitive material to expose within the camera to make the image, for example, a strip of negative film. Immediately, through the analogue process we are handling the physical material of the potential image, we may affect this surface through a finger mark, or if we allow light onto the film at this stage. The digital process, however, does not require material support to capture a potential image, as it obtains this through optical data readings. At this point there is a distinct difference through the material potentials of the image about to be produced. Once the shot is taken, the analogue process requires the material to be taken out of the camera and chemically processed. Again, we are handling the surface of the material of the potential image, and we may mark or affect this surface. Only at this point, after chemical processing

is the image now visible within the film material. The image is concealed, 'blind,' or rather 'latent' within the chemical surface until it is chemically revealed to the eye. The notion of *occularcentrism* (discussed in chapter 1:3) is relevant here, as we strive to make the image visible in order to justify it as being present. In contrast to this, the digital camera has generated a 'data' image, which can be seen immediately within the camera screen display. Here the shot taken is immediately seen as a brightly lit individual image, held within the technological screen. As Kuspit suggests, '…the digitalization is in constant optical motion. Generating an intimacy and vividness all its own' (Kuspit 2005). In order to generate the digital print, the camera must be connected to a printer output device, which may be via a computer, or now may even be directly connected to the printer via Bluetooth.[18] The data is then converted by the printer device into coloured ink dots and transferred onto a paper surface. Patrick Maynard's analogy of the weight of the analogue photographic print, its state of surface and physical object-ness (Maynard 1997), highlights this contrast to the digital image, before it is printed. Although even during printing, Jurgens' definition of the digital print implies no direct touch from the material master (Jurgens 2009: 4). At this final stage the image now has a material surface and may be physically and visually affected by finger marks. In contrast, the processed film must undergo another series of steps, within a darkroom environment, of exposure onto paper surface and chemical development, all of which require constant handling of the image within both film and paper surface.

What I have revealed here is that there are repeated moments within the analogue print process, where the surface of the image may be affected by physical marks, light and air. Throughout the analogue process, material is constantly handled, touched and its weight and scale is physically gauged. However, it is only if the digital image is printed that its surface may be physically affected. Interestingly, as I have discussed in chapter 1:1, once the digital print has been made, its surface actually becomes much more prone to finger marks and affected light and atmospheric conditions than the analogue print image.

[18] 'Created by telecoms vendor Ericsson in 1994, Bluetooth is a proprietary open wireless technology standard for exchanging data over short distances using short-wavelength radio transmissions...' [Internet] Available online at http://en.wikipedia.org/wiki/Bluetooth [Accessed] 18.5.12]

A Phenomenological approach seems the most appropriate method through which I can explore the qualities experienced through the digital photographic print process, as it is rooted in our active engagement and experience of the world. Two major Phenomenological thinkers, Maurice Merleau-Ponty and Jean-Luc Nancy, offer key insights into the crucial role the body plays in our experience of living within and experiencing the world. Merleau-Ponty (2002) argues that sense experience is such a vital process, akin to breathing and procreation, a 'vital communication with the world which makes it present as a familiar setting of our life. It is to it that the perceived object and the perceiving subject owe their thickness '(Merleau-Ponty 2002: 61). I will identify here, how our sense experience of the image may be altered through the digital process, as removing this sense experience of tactile touch, which has been identified as vital.

Maurice Merleau-Ponty's thinking bases itself around a central notion of embodiment. He argues that 'a new understanding can arise from rearranging and pressing against the ideas which surround us' (Carman 1999: 76). His philosophical critique, *The Primacy of Perception* (1942), introduces his key thinking on the 'subject' as an embodied entity within the world, rather than as detached, as in Descartes' *cogito*. Merleau-Ponty's argument, rooted within the earlier Phenomenological enquiry of Edmund Husserl, is focused more on the human body rather than within cognition. Where Husserl centres cognition within the gap between mind and the world, for Merleau-Ponty it is the body that orients us in a world in which we are able to individuate subjects and objects to begin with.

At the forefront of Merleau-Ponty's Phenomenological critique is the rejection of Descartes' prioritizing of the mental above the physical. Where phenomenology grounds the subject (Rosen 2000), the traditional Cartesian subject cannot be grounded, but is disengaged, intervening from above, remaining distanced from himself as the knowing *of* the object. This Cartesian subject–object separation is strongly rejected by Merleau-Ponty, instead the subject–object are intertwined. As Gendlin suggests in his analysis of Merleau-Ponty's perception of the body:

> … the body can relate to its environment only through the five little holes in the screen – the five senses... (Gendlin cited in Rosen 2000)

In *The Phenomenology of Perception* (1945),[19] Merleau-Ponty claimed that it is through the body that we access/perceive the world, that there is no separation of the use of the mind from the body, but rather, we perceive through an incarnated mind. Essentially it is through the body that we all have a grip on the world (Merleau-Ponty 2002: 353). Therefore, the body is permanent and constantly perceived. As Merleau-Ponty suggests,

> I am conscious of my body via the world...I am conscious of the world through the medium of my body. (Merleau-Ponty 2002: 94/95)

Merleau-Ponty concretizes the body in experience, as fundamental to our 'feel' of 'being physically immersed in the world', of 'bumping up against the world' (Cazeaux 2000: 74). He argues that the body is rooted in the world, always present, permanent, understood as reaching out, *thrusting* (extereoceptive) towards the world, in order to explore things.

In Penone's *The Imprint of Drawing* works, the marks on the paper surface are made though the direct contact and touch of his own skin surfaces. As Penone describes, the work is not an image of his body, but made from his body's contact with surfaces. This seems to be what Merleau-Ponty is describing, as the body becomes responsive to the material surface that it touches and through which it makes marks. As Merleau-Ponty suggests:

> The person who touches and who recognises the rough and the smooth does not posit either elements or the relations between those elements, nor does he think of them in any thoroughgoing way. It is not consciousness which he touches or feels, but the hand, and the hand is, as Kant says, 'an outer brain of man'….In visual experience, which pushes objectification further than does tactile experience, we can, at least at first sight, flatter ourselves that we constitute the world, because it presents us with a spectacle spread out before us at a distance, and gives us the illusion of being immediately present everywhere and being situated nowhere. Tactile experience, on the other hand, adheres to the surface of our body; we cannot unfold it before us, and it never quite becomes an object. Correspondingly, as the subject of touch, I cannot flatter myself that I am everywhere and nowhere; I cannot forget in this case that it is through my body that I go to the world, and tactile experience occurs 'ahead' of me, and not centred in me. (Merleau-Ponty 2002: 369)

Merleau Ponty's assertion, that our thoughts and perceptions are profoundly affected by being embodied, is important to my discussion. Aristotle and Merleau-Ponty's identification of the profoundness of the body and touch in our experience and perception, suggests implications in how we think about and perceive the photographic image during making in the immaterial and body-less digital process.

[19] Originally published as *Phenomenology de la perception* (1945).

Merleau-Ponty's recognition of the experience of the world through our own sensible body, may also be seen in the critical thinking of Jean-Luc Nancy. Nancy's key thinking around the body and embodiment is similarly phenomenological in its methodological critique, although it is much later than Merleau-Ponty. Nancy's major essay, *Corpus* (1992), considers the notion of the body as experience itself, as the experience of bodily materiality as sense itself (Mijatović 2010). In *Corpus* Nancy interrogates the body's 'presence *in flesh and blood',* to ask of the body 'what's this *this*, who is the body? ... (with) sensory certitude, as soon as it is touched, (that) turns into chaos, a storm where all the senses run wild' (Nancy 2008: 5). Nancy's interrogates the existence of the physical presence of the body where,

> The body is the ultimate weight, the extremity of the weight sinking from this fall. The body *is* weight. Laws of gravity involve *bodies* in space. But first and foremost, the body itself weighs: it is sunk into itself, according to a specific law of gravity that has pulled the body so far down that it can't be distinguished from its own weight. (Nancy 2008: 7)

From this very internal analysis of weight of the body as flesh and bone, Nancy also brings us to the very outer limits of the body, which he explores both physically as a skin which is 'variously folded, refolded, unfolded, multiplied, invaginated, exogastrulated, orificed, evasive, invaded, stretched, relaxed, excited, distressed, tied, untied' (Nancy 2008: 15), to the skin as 'separating the sense of the one from the skin and nerves to the other. Nothing gets through, which is why it touches' (Nancy 2008: 11). It is at this point where Nancy begins to open the notion of touch as integral to thought, 'where thinking *touches* on the hard strangeness of this *body*, on its un-thinking, unthinkable, exteriority. But such touching, or such a touch, is the sole condition for true thought' (Nancy 2008: 17). Nancy is describing here that true thought lies in bodily touch. Touch is also where thought occurs for Giuseppe Penone. Penone's artworks *The Imprint of Drawing* are manifest directly as a result of the tactile touch of Penone's own skin on paper. The works are made at the point of contact and fusion between the material of the skin and paper or tape surface. This contact of his body is the very essence of Penone's thought.

In contrast to the directness and contact of Penone's working method, working with the immaterial digital screen means that thought must exist without tactile touch. This is when Jean-Francois Lyotard senses a 'disaster' (Lyotard 1991: 12) arguing that the material condition of thought has remained unchanged, even though the materiality of the world has

shifted into what he describes as simulation, where the material may not exist at all, but is represented as data. He explains:

> The job of simulating conditions of life and thought to make thinking remain materially possible after the change in the condition of matter, that's the disaster. (Lyotard 1991: 12)

In Lyotard's essay *Can Thought go on without a Body?* (1991), he questions the transformation of what he describes as *matter*, as the 'corporeal, sensory, emotional and cognitive experience of a quite sophisticated but definitely earthly existence' (Lyotard 1991: 13), to that of the technological mind of the robot, as a mind devoid of any earthly, or human elements. Lyotard is questioning the possibility of the technological mind, which may exist independently after all human, bodily beings have vanished. (Lyotard 1991: 13) In Lyotard's notion of *The Inhuman* (1991), he describes the transformation of the entire nature of the human system via technology as a profound, disembodied intelligence. (Lyotard 1991: 22)

As I have discussed earlier, touch is generally considered as cutaneous contact with the skin surface, however, there is a much deeper, more metaphorical notion of touch being questioned as 'an entirely new channel of communication', away from cutaneous touch (Paterson 2007: 3). In his comprehensive analysis *The Senses of Touch* (2007) Paterson examines those senses that do not involve cutaneous contact, but still involve a sense of touch as *proprioception*, the body's awareness of the space around it; *kinaesthesia*, the sensation of movement of body and limbs, and *vestibular*, pertaining to balance, head position, acceleration and deceleration obtained from the inner ear. He continues to suggest that there is a different 'felt' bodily sensation of making the image through digital processes. This felt bodily sensation is obtained from our experience as a body, having a weight, mass and surface in space, as he suggests that this implies the motion and position of our limbs, the position and posture of our body relative to the earth, the pressure of parts of our body on one another (Paterson 2007: 28). What is possibly 'felt' through the digital process therefore may be the bodily experience of the technological devices as our fingertips touch their surfaces; screens, keyboards, laptops, ipods, etc.

The notion of touching the image through the optical may also be introduced here. Jean-Luc Nancy's essay *Le Toucher* (2000) questions where the point of contact and fusion may lie within both a tangible and an intangible sense of touch. Jacques Derrida's essay *On*

Touching – Jean-Luc Nancy (2005),[20] roots itself to Nancy's essay and interrogates this notion of touching, from contact and fusion between two surfaces to the less literal. Derrida begins with Nancy's own questioning of how two eyes may touch, as he asks:

> Can our eyes manage to touch, to press together like lips? To which surface of the eye do lips compare? If two gazes look into each other's eyes, can one then say that they are touching? Are they coming into contact – the one with the other? What is contact if it always *intervenes between x* and *x*? (Derrida 2005: 2)

Derrida is questioning Nancy's notion of touching with the eyes, asking at what point contact is made if there is no material. This takes us again to the notion of *occularcentrism* (discussed earlier in this section), where the optical sense is our prominent sense in our encounter with the image *inside* the digital screen. We may *see* the image; however, it is also *concealed* within the digital screen.

What I have discussed within this section is how tactile touch is considered by many key philosophical and critical thinkers as vital to our experience of the world, as a profound, embodied sense, impacting on our thought and experience of the world. Its absence must, therefore, have implications for the making of an image. The image *in* the computer is concealed, it cannot be affected by tactile touch; it is immaterial, having no weight, no physical body and so we must perceive and experience it differently.

1:4 Time

Another aspect of this discussion is how an image encountered through the digital photographic print process might visually suggest a different sense of time to an image emerging through other photographic processes. I am interested in examining whether this sense of time is affected by the point at which the photographic image is revealed to the material world, and therefore may be affected by elements such as air, light and touch. I would suggest a crucial difference is whether the photographic print emerges through a material or immaterial process, determining when and how the image interacts with the natural flow of time.[21] I wish to explore the effects of the technological shifts between historical developments and what its affects on the perception of temporality may be.

[20] Originally published as *Le Toucher, Jean-Luc Nancy* (2000).
[21] When I refer to the natural flow of time, or experience of time I am defining this as 'the indefinite continued progress of existence and events in the past, present, and future regarded as a whole' [Internet] Available online at http://oxforddictionaries.com/definition/english/time [Accessed] 02.07.12

The photographic image carries with it an inherent notion of time, seen as an 'arrested moment' captured from the pace of life. Roland Barthes (1981) and Susan Sontag (1979) amongst others, have written extensively on how the photographic image refers to the immobilisation of time. Both Barthes and Sontag have suggested a halted moment, 'a strange stasis, the stasis of an *arrest*' (Barthes 2000: 91) and also a 'neat slice of time, not a flow' (Sontag 2002: 17). Paul Virilio's extensive critique of the photographic image, *The Vision Machine* (1994) also defines the photographic image as static, generating an immediate change in perception of both time and distance. It is this stasis of the image that generates an internal sense of time within the image, a *then* and *now* of the reading of the image. It is this reading of *then* and *now,* of the photographic image that allows us to think of it as a captured past, that can never be revisited. In this sense, every photograph holds within it an image of death. As Barthes explains:

> The photograph mechanically repeats what could never be repeated existentially… And the person or thing photographed…the spectrum of the photograph, because this word retains, through its root, a relation to 'spectacle' and adds to it that rather terrible thing which is there in every photograph: the return of the dead. (Barthes 2000: 4/9)

There is also another way of understanding time in relation to the photographic image - the external reading of time of the photographic image as material surface. The photographic printed surface carries with it inevitable effects of the material world. As I have discussed, within the reading of the Daguerreotype and the photogram print (Chapter 1.1), there is visual evidence that suggests duration of time, which is created through material contact and presence upon the image's surface, seen within the coating process of the plate, or where the photogram image becomes affected by settling dust and debris on its horizontal bed. This is also explored in my discussion of the work of Ian Burn (Chapter 2.4). In *Xerox Books,* Burn deliberately embraces the materiality of the photocopy process, moving what could be seen as a nuisance or mistake – the dust and debris on the surface of the machine – to the very conceptual heart of his thinking.

This sense of inevitable death/decay of all material things deeply concerned artist Robert Smithson, during the 1960s. Smithson's ideas centred on the concept of entropy and, increasingly, on the theme of time. These two ideas are inextricably linked, through notions of geological homogenisation and decay, and also as mathematical uncertainty, which means this decay is irreversible:

> …it's a condition that's irreversible, it's condition that's moving towards a gradual equilibrium and it's suggested in many ways.…if we consider the earth in terms of geologic time we end up with what we call fluvial entropy. Geology has its entropy too, where everything is gradually wearing down. Now there may be a point where the earth's surface will collapse and break apart, so that the irreversible process will be in a sense metamorphosized, it is evolutionary, but it's not evolutionary in terms of any idealism. (Smithson 1973, Interview with Alison Sky)

It is these effects of entropy, of 'wearing down,' which Smithson discusses and explores within his own practice, which become visible within material image making processes, such as analogue photography. If the making of the analogue print is halted at any point, it will still show signs of entropy, no matter how subtle, evidenced upon its material surface, and it will continue to be affected; as Smithson explains, entropy cannot be reversed or halted.

However, such readings and material associations of time become more problematic as we encounter the photograph through increasingly technological processes. Walter Benjamin addressed the effects of the work of art being affected by time within his canonical essay on the work of art, *The Work of Art in the Age of Mechanical Reproduction* (1936). Benjamin argued that an effect of mechanical reproduction was to eliminate the original 'aura' of the work of art (Benjamin 2008), and as Gere suggests, this liberated the image, if not the object, from the constraints of time (Gere 2006: 3).

What Benjamin has identified is a split in relation to the perception of time in an image through technology. The mechanical reproduction of the work of art according to Benjamin frees the image from restraints of the temporality of the object itself. The technological image carries with it its own sense of time. The photograph is seen to be slowing down the natural flow of the external world, holding it apart from the object that it represents. In this respect, it is this difference in temporality of the technological photographic image that becomes increasingly complex as technology develops.

Virilio argues there is an 'annihilation, an obliteration, through the acceleration of both distance and time within technological photographic processes' (Virilio 1994: 4). He argues that

> The telescope, that epitome of the visual prosthesis, projected an image of a world beyond our reach and thus, another way of moving about in a world, the logistics of perception inaugurating an unknown conveyance of sight that produced a

> telescoping of near and far, a 'phenomenon of acceleration' obliterating our experience of distances and dimensions. (Virilio 1986 cited in Virilio 1994: 4)

Virilio's argument develops into a critique of the photographic image, arguing that there is an elimination of time-distance: 'a matter of speed, of acceleration or deceleration' (Virilio 1994: 21), through the seeing of photography, suggesting there is a 'synthetic vision offered by electron optics' (Virilio 1994: 60). Andreas Huyssen also suggests:

> Both personal and social memory today are affected by an emerging new structure of temporality generated by the quickening pace of material life on the one hand and by acceleration of media images and information on the other. Speed destroys space, and it erases temporal distance. In both cases the mechanism of physiological perception is altered ... the past is sucked into the orbit of the present...(the) sense of historical continuity or, for that matter, discontinuity, both of which depend on a before and an after, gives way to the simultaneity of all times and spaces readily available in the present. (Huyssen cited in Gere 2006: 5)

A 'liberation' of the image suggests that what takes place through technology, -- what Gere refers to as 'Breaking the Time Barrier' (Gere 2006: 13) -- is a speedy reproduction and dispersal of the single, unique image print. Gere quotes Stiegler frequently in his proposition that a profound distortion of both time and space is taking place through recent technical developments. He argues that in 'real time' and 'live' media computing (Gere 2006: 21) there is a risk of the sweeping away of the human (Gere 2006: 23). Richard Beardsworth (1996) also proposes that these developments generate a significant threat to human experience of time, 'as machine memory replaces the human' (Beardsworth cited in Gere 2006: 24). In suggesting 'the human' both Gere and Beardsworth seem to be following the thoughts of Lyotard, in his notion of *The Inhuman* (discussed in chapter 1:3). Lyotard argues that the concept of the original no longer stands, as we live in a world of complete simulation. Gere's notion of the 'time barrier' follows on from Stiegler's discussion on technological developments in 1998, where he suggests:

> Industrial civilisation rests on an ever more intense development of the process of *permanent innovation*, which results in a 'divorce', if not between culture and technics, at least between the rhythms of cultural evolution and the rhythms of technical evolution. Technics evolves *more quickly* than culture. More accurately put, the temporal relation between the two is a tension in which there is both advance and delay, a tension characteristic of the extending (*etirement*) that makes up any process of temporalisation; it is as if time had leapt outside itself: not only because the process of decision-making and anticipation (in the domain of what Heidegger refers to as 'concern') has irresistibly moved over to the side of the 'machine' or technical complex, but because, in a certain sense, and as Blanchot wrote recalling a title of Ernst Junger, our age is in the process of breaking the 'time barrier'. Following an analogy with the breaking of the sound barrier, to break the time barrier would be to go faster than time… (Gere 2006: 21)

What seems to be emerging is the perceived disruption of the natural sense of time, a continual speeding up and slowing down of an image through technology. It would suggest therefore that the image remains outside of natural time and entropy.

What is important to note here is that Stiegler suggests that to involve speed must be to involve *difference* of speed, and therefore time. There must be perceptual difference in the rates of movement in order to apprehend time and space (Stiegler cited in Gere 2006: 22). As Derrida's (1992) analysis of time and experience suggests:

> Acceleration is made up of differences of rhythm, heterogeneous accelerations which are closely related to … technological developments …There isn't a single acceleration…there are two laws of acceleration: one derives from the technosciences, it concerns speed, the prodigious increase in speed, the unprecedented rhythms which speed is assuming and of which we are daily feeling the effect…The second is of a quite different order and belongs to the structure of decision. (Derrida cited in Gere 2006: 27)

Heidegger's essay *The Question Concerning Technology* (1982) (discussed in Chapter 1:2) reflects his concerns with the future prospect of technological advances on human experience. Heidegger suggests that man will be imposed upon by technology. Heidegger's conception of time (1972) is that of being (*Dasein*) and temporality, where as human beings we are not confined to the present, but always in a state of projection, towards the future, towards our demise. This Heidegger describes as *being-towards-death* (Critchley 2009). However, as Critchley discusses,

> What *Dasein* takes over in the future is its ontological indebtedness, its guilt … There is a tricky but compelling thought at work here: in anticipation, I project towards the future, but what comes out of the future is my past, my personal and cultural baggage, what Heidegger calls my 'having-been-ness' (*Gewesenheit*). But this does not mean that I am somehow condemned to my past. On the contrary, I can make a decision to take over the fact of who I am in a free action. (Critchley 2009)

Heidegger's notion of time simultaneously involves 3 aspects; present, future and past. It is a combination of all three, which generates our experience of *Dasein*.

However, the digital print emerges from a process which has no natural rhythm of time. The digital image *in* the computer is held, timeless. Virilio suggests that if the image exists as pure data it does not have a 'concrete presence' in time. He explains:

> … what teletechnologies of real time are doing: they are killing 'present' time by isolating it from its here and now, in favour of a communative elsewhere that no longer has anything to do with our 'concrete presence' in the world, but is the elsewhere of a 'discrete telepresence' that remains a complete mystery. (Virilio, 1997 cited in Gere 2006: 4)

As I have discussed, through digital technology, the image is held *in* the computer, concealed from its own weight and material. Having no materiality, the image may therefore be free from the external flow of time. In this sense it appears to become timeless. Gere describes the digital image in the screen as '… a kind of static, unchanging object…' (Gere 2006: 2). This suspension of the digital image in the computer means that it appears to challenge the natural flow of time - entropy appears to be challenged. The visual evidence of time of the image seems to be deferred, through the aging of the screen itself, as the screen may bear scratches and marks on its surface.

A further implication of this halted state of the digital image is when the image is subsequently printed, emerging as a surface for the first time. As I have discussed in Chapter 1:1, once the image is printed, the digital surface is actually one of the most fragile printed surfaces, being extremely susceptible to external effects of time, through light, touch, and atmospheric conditions. Unlike the analogue print, within early digital printing methods, the printed image was highly unstable - quickly fading, and yellowing. The prevention of such physical effects of time and air was paramount to the development of the digital print, and led to the development of lightfast inks and substrates that stabilised the print.

Within my own practice the different temporalities evident within different medium emerge through the combination of the two surfaces, the digital and the hand drawn. My act of drawing offers a contrasting sense of time from the digital photographic print. As I have discussed, the photographic image may be considered as having been in a state of stasis, internally as a frozen moment captured from the external world, and also in terms of being concealed within the screen, concealed from the external world as a surface. However, as I shall discuss later in my research (Chapters 5 and 6), I attempt to bring together the two different temporalities of the image and the drawing. The digital photograph is selected to sit more homogenously with graphite drawing, in terms of the selection of a softer paper surface, grey colour and a de-saturated tonal weight. The drawing is then executed more like the photographic representation, where the subject of the drawing actually emerges from a series of photographic scans (discussed in chapter 4).

Where my employment of the photographic print has been to generate an almost empty, barely discernable image by removing information, the drawing slowly adds visual information back into the image. The physical act of drawing, the gradual accumulation evidences the natural passage of time, as John Berger explains, 'each mark you make on the paper is a stepping-stone from which you proceed to the next, until you have crossed your subject as though it were a river' (Berger 2008: 3). The drawing asserts the speed of my own hand, physically making a mark, accumulating and shifting. As each mark, or line, is made from the physical matter of graphite, it is instantly affected by other material surfaces, light, air, weight and pressure during its making. This is in direct contrast to the digital print, which remains as an image, separate, and concealed from the material world, held timeless in the screen until it emerges as a material surface.

What is generated is a temporal difference, a split seen within one pictorial surface where drawing and digital photographic surface sit together. This duration of time of making a hand drawing visually sits amplified against the digital print surface. It is the combination of the two processes, existing together, which generates new temporal dialogues within the reading of a single image; between the perception of the two temporalities; between the photographic image captured at once, and the drawing unfolding over time; the digital image having been concealed - entropy appearing halted, and the drawing in a constant state of effects of age and decay. It also challenges Benjamin's notion of the mechanical reproduction by asserting authorship back into the image.

References

1:1

Batchen, G. (2004) Ere the Substance Fade: Photography and Hair Jewellery. In Edwards, E & Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

Benjamin, W. (2008) *The Work of Art in the Age of Its Technological Reproducibility and other Writings on Media*. Cambridge, Mass and London: The Belknap Press of Harvard University Press.

Birnbaum, D. (2008) At that point… In Ault, J., Brinbaum, D., & Jager, J. *Wolfgang Tillmans: Lighter*. Ostfildern, Germany: Hatje Cantz.

Chadwick, H. (1984-1992) *Helen Chadwick Notebooks.* [Internet] Available online at http://www.henry-moore.org/hmi/archive/turning-the-pages--helen-chadwick-notebooks. [Accessed] 04.12.11

Chadwick, H. (1999) Interview with Chris Blackford. In Rubberneck [Internet] Available online at http://www.users.globalnet.co.uk/~rneckmag/chadwick.html [Accessed]

Edwards, E. & Hart, J. (2004) Introduction: Photographs as objects. In Edwards, E. & Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

Elkins, J. (2011) *What Photography Is*. New York & Oxon: Routledge.

Friedberg, A. (2006) *The Virtual Window: From Alberti to Microsoft*. Cambridge, Mass and London: MIT Press.

Ivins, W. M. (1973) *Prints and Visual Communication.* Cambridge, Mass and London: MIT Press.

Jurgens, M. C. (2009) *The Digital Print: A complete guide to processes, identification and preservation*. London: Thames & Hudson.

Kachur, L. (2007) Paraphrase: On Robert Rauschenberg's Transfer Drawings of the 1960s. In Jonathan O'Hara Gallery (2007) *Robert Rauschenberg, Transfer Drawings of the 1960s*.

Kennard, P. & Phillipps, C. P. (2004) [Internet] Available online at http://collections.vam.ac.uk/item/O119081/award-made-during-the-invasion-document-kennard-peter/ [Accessed] 02.07.2012

Kennard, P. (2007) *Interview with Paul Coldwell*. [Internet] Available online at http://www.faderesearch.com/digitalsurface/case-studies/interviews/interview-links/peter-kennard-interview/ [Accessed] 02.07.2012

Maynard, P. (1997) *The Engine of Visualization: Thinking through Photography*. Ithaca, New York: Cornell University Press.

Molderings, H. (2009) Light years of a life: The photogram in the aesthetic of Lazlo Moholoy-Nagy. In Heyne, R., Neususs, F. M. (2009) *Lazlo Moholoy-Nagy: The Photograms, Catalogue Raisonné*. Germany: Hatje Cantz.

Neususs, F. M. (2009) Introduction. In Heyne, R., Neususs, F. M. (2009) *Lazlo Moholoy-Nagy: The Photograms, Catalogue Raisonné*. Germany: Hatje Cantz.

Newton, C. (1979) Photography and Printmaking. London: V&A, Compton & Pitman.

Ramsden, M. In correspondence with Johanna Love, 5th July 2012 (*appendix 1*).

Steinberg, L. (2000) *Encounters with Rauschenberg*. New Pref. London: The University of Chicago Press.

Steinberg, L. (2007) The Flat Bed Picture Plane. In Steinberg, L. *Other Criteria: Confrontations with Twentieth-Century Art*. New York: Oxford University Press.

Stephen, A. (2006) *On Looking at Looking: The art and politics of Ian Burn*. Melbourne, Australia: University Press

Virilio, P. (1994) *The Vision Machine*. London: British Film Institute.

Willumson, G. (2004) Making Meaning: Displaced materiality in the library and art Museum. In Edwards, E & Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

1:2

Barthes, R. (2000) *Camera Lucida: Reflections on Photography*. London: Vintage.

Baudrillard, J. (1994) *Simulacra and Simulations*. Ann Arbor, Michigan: University of Michigan Press.

Cazeaux, C. (2000) *The Continental Aesthetics Reader*. London & New York: Routledge.

Edwards, E. and Hart, J. (2004) Introduction: photographs as objects. In Edwards, E. and Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

Friedberg, A. (2006) *The Virtual Window: From Alberti to Microsoft*. Cambridge, Mass & London: MIT Press.

Heidgegger, M. (1977) *The Question Concerning Technology and other essays,* trans. M. Lovitt. New York: Harper Perennial.

Heim, M, *The Computer As Component: Heidegger and McLuhan, Philosophy and Literature*, 16:2 (1992:Oct.) p.304. [Internet] Available online at http://aphelis.net/heidegger-mcluhan-technology/ [Accessed] 05.2011

Henning, M. (1995) Digital Encounters: Mythical pasts and electronic presence. In Lister, M. (ed.) *The Photographic Image in Digital Culture*. London: Routledge.

Krell, D, F. (ed.) (1977) *Basic Writings: Martin Heidegger*. New York: HarperCollins Publishers.

Lyotard, J.F. (1991) *The Inhuman*, trans. G. Bennington & R. Bowlby. Cambridge: Polity Press.

Marks, L. (2002) *Touch: Sensuous theory and multisensory media*. Minneapolis/London: University of Minnesota Press.

Maynard, P. (1997) *The Engine of Visualization: Thinking through Photography*. Ithaca, New York: Cornell University Press.

Nancy, J. L. (2008) *Corpus*, trans. R. A. Rand. New York: Fordham University Press.

Rotzer, F. (1996) Re: Photography. In Amelunxen, H. V., Iglhaut, S. & Rotzer, F. *Photography after Photography: Memory and Representation in the Digital Age*. Munich, Germany: G+B Arts.

Sassoon, J. (2004) Photographic materiality in the age of digital reproduction. In Edwards, E. & Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

Schwartz, J. M. (2004) Un beau souvenir du Canada: object, image, symbolic space. In Edwards, E. & Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

1:3

Aristotle. (1986) *De Anima (on the soul)*, trans. H. Lawson-Tancreed. London: Penguin.

Barthes, R. (2000) *Camera Lucida: Reflections on Photography*. London: Vintage.

Benjamin, W. (1999) *Illuminations*. London: Pimlico.

Carman, T. (1999) *The Body in Husserl and Merleau-Ponty*. Philosophical Topics, Vol. 27, No. 2, Fall 1999.

Cazeaux, C. (2000) *The Continental Aesthetics Reader*. London & New York: Routledge.

Classen, C. (ed.) (2005) *The Book of Touch.* Oxford & New York: Berg.

Derrida, F. (2005) *On Touching Jean-Luc Nancy*, trans. C. Irizarry.
Stanford, California: University of Stanford Press.

De Zegher, C. (Ed) (2004) *Guiseppe Penone: The Imprint of Drawing*. New York: The Drawing Center.

Flusser, V. (2000) *Towards a Philosophy of Photography*. London: Reaktion.

Gilbert-Rolfe, J. (1999) *Beauty and the Contemporary Sublime*. New York: Allworth Press.

Henning, M. (1995) Digital Encounters: Mythical pasts and electronic presence. In Lister, M. (ed.) *The Photographic Image in Digital Culture*. London: Routledge.

Jurgens, M. C. (2009) *The Digital Print: A complete guide to processes, identification and preservation*. London: Thames & Hudson.

Kuspit, D. (2005) *The Matrix of Sensations*. [Internet] Available online at http://www.artnet.com/magazineus/features/kuspit/kuspit8-5-05.asp [Accessed] 01.02.2010

Lyotard, J.F. (1991) *The Inhuman*, trans. G. Bennington & R. Bowlby. Cambridge: Polity Press.

Maynard, P. (1997) *The Engine of Visualization: Thinking through Photography*. Ithaca, New York: Cornell University Press.

Merleau-Ponty, M. (2002) *The Phenomenology of Perception*. London & New York: Routledge.

Mijatovic, A. (2010) *Division of Touch in Jean-Luc Nancy and Derrida*. [Internet] Available online at http://www.inst.at/trans/17Nr/5-3/5-3_mijatovic17.htm [Accessed] 06.2011

Mitchell, W. (1992) *The Reconfigured Eye; Visual Truth in the Post-Photographic Era*. London: MIT Press.

Nancy, J. L. (2008) *Corpus*, trans. Richard A. Rand. New York: Fordham University Press.

Paterson, M. (2007) *The Senses of Touch: Haptics, Affects and Technologies*. Oxford & New York: Berg.

Riegl, A. (2004) *Historical Grammar of the Visual Arts*, trans. Jacqueline. E. Jung. New York: Zone Books.

Robins, K. (1995) Will Image Still Move Us. In Lister, M. (ed.) *The Photographic Image in Digital Culture*. London: Routledge.

Rosen, S. (2000) *Focusing on the Flesh: Merleau-Ponty, Gendlin and Lived Subjectivity*. [Internet] Available online at http://www.lifwynnfoundation.org/focusing.htm [Accessed] 06.2011

Virilio, P. (1994) *The Vision Machine*. London: British Film Institute.

1:4

Barthes, R. (2000) *Camera Lucida: Reflections on Photography*. London: Vintage.

Benjamin, W. (2008) *The Work of Art in the Age of Its Technological Reproducibility and other Writings on Media*. Cambridge, Mass and London, The Belknap Press of Harvard University Press.

Berger, J. (2008) Life Drawing. In Savage, J. (ed.) *Berger On Drawing*. Cork, Ireland: Occasional Press.

Critchley, (2009) *Heidegger's Being and Time*. [Internet] Available online at: http://www.guardian.co.uk/commentisfree/belief/2009/jun/05/heidegger-being-time-philosophy [Accessed] 06.2011

Gere, C. (2006) *Art, Time and Technology*. Oxford & New York: Berg.

Smithson, R. (1973) Entropy Made Visible: Interview with Alison Sky. [Internet] Available online at http://www.robertsmithson.com/essays/entropy.htm [Accessed] 14.06.2012

Sontag, S. (2000) *On Photography*. London: Penguin Classics.

Virilio, P. (1994) *The Vision Machine*. London: British Film Institute.

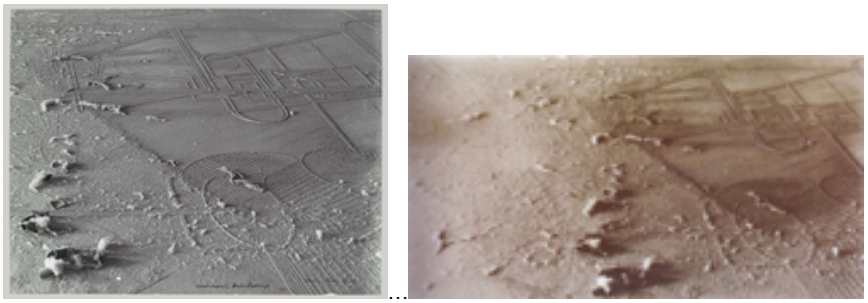
CHAPTER 2. DUST AS MATERIAL AND METAPHOR

In Chapter One I raised a number of prominent issues and theories around the perception of the picture plane through orientation, surface, weight and material of the photographically printed image process. I have analysed how the photographic process can become visible within the image, which may shift perception and consequently the reading of the image. I have argued that through the digital photographic print process we encounter and experience the material, weight and surface of the image differently from analogue printing. This difference may be seen as a loss, which I argue has significant implications for our experience and perception of both the photographic image during its making, and the resulting printed image that emerges through an immaterial process. A further exploration of how we might engage with the digital photographic image through the somatic senses of touch and in particular tactile touch has generated thinking around the visibility of human presence and material.

What has also emerged through the examination of the surface is how horizontality of print processes may provide an opportunity for new visual elements to be visible within the image through the effects of weight and gravity. This opens up a question of how surface reveals an inevitable intervention by the material world and generates a question of how dust may become a significant visual element within an artwork.

2:1 Dust Breeding

Elevage de poussière (Dust Breeding) is a photograph taken by Man Ray in collaboration with Marcel Duchamp in 1920 (figures 13 & 13a). The photograph is an iconic work of art that exposes how dust gathers on all material surfaces and thus generates deeper



(L) Figure 13, Man Ray, *Dust Breeding (Elevage de poussiêre)* (1920). Gelatin Silver Print, 23.9 x 30.4cm.
(R) Figure 13a, Man Ray *Dust Breeding*, Original version Gelatin Silver Print (1920), 7.2 x 11cm.

metaphorical readings. The English translation of the work *Elevage de poussière* into *Dust Breeding* describes how dust gradually settles onto surfaces: it *breeds*, accumulating over time, accumulating and smothering the surface upon which it settles. I will use the title *Dust Breeding* to refer to the artwork throughout my analysis. This work is typical of Man Ray's avant-garde photographic endeavours where he experimented with spatial ambiguities of light and shadow to create surreal images of ambiguous origin, but it also realised a project by Marcel Duchamp in allowing dust, 'a dust of 3-4 months' (Duchamp cited in Schwarz 1969: 483) to settle on an artwork.

In 1920 Man Ray visited Marcel Duchamp's studio in New York, and took an angled photograph of the surface of Duchamp's artwork entitled *The Bride Stripped Bare by Her Bachelors, Even (La Mariée mise à nu par ses célibataires, même)* (1915-23), also known as *The Large Glass (La Grande Verre)*. The glass surface of *The Large Glass* had gradually collected a thick layer of dust whilst being left out by Duchamp in his studio, 'so that New York dust would pour in constantly and provide an urban coating to the work' (Baldwin 1989: 71). The dust came from Duchamp's studio, from the circulating air and materials within the room, and it was also brought in from the air outside, from the air circulating around the streets of New York. As Man Ray describes:

> In the far corner near the window stood a pair of trestles on which lay a piece of heavy glass covered with intricate patterns laid out in fine lead wires. It was Duchamp's major opus: *The Bride Stripped Bare by Her Bachelors, Even*. A single unshaded bulb hung from the ceiling to furnish the only light…looking down on the work … I focused the camera… (Man Ray cited in Janus 1980: 180)

Duchamp's move away from painting and growing interest in the themes of chance, visual puns, along with mechanical and scientific experimentations were significant factors in the development and execution of *The Large Glass* and *Dust Breeding*. His use of dust emerged as part of a number of ideas explored in the execution of the artwork *The Large Glass*. The artwork, completed over a span of 8 years, employed a variety of materials, substances, forms, and images; all suspended onto glass, which generated a number of spatial and playful metaphorical readings centred around concerns of material, science, weight, gravity, and wind, amongst others. In his notes, Duchamp lists the wealth of materials he considers for the glass alongside their respective colouration, 'Glass: transparent colorless juice; Mica: Yellow transparent juice; Copper: Yellow, Red, Black, White, Raw Sienna.' (Duchamp, Note 8 cited in Schwarz 1969: 52) Duchamp described this amalgam of materials and colours as

the ‘Breeding of Colors.’ (Duchamp, Note 17 cited in Schwarz 1969: 56) for he intended colour to be pure, from the material itself and not introduced as a separate intention. It is in Duchamp’s notes for *The Large Glass* that he talks of his intended use of dust, and its purpose as a coloured substance. He writes in notes 105 – 107:

> To raise dust on Dust - Glasses for 4 months. 6 months, which you close up afterwards hermetic.ly. = Transparency – Differences. To be worked out…For the sieves in the glass – allow dust to fall on this part a dust of 3 or 4 months and wipe well around it in such a way that this dust will be a kind of transparent color (transparent pastel)… To be mentioned the quality of the other side of dust either as the name of the metal or otherwise. (Duchamp Notes 105-7 cited in Schwarz 1969: 162)

Duchamp describes *The Large Glass* not as a picture, or painting, but as a ‘delay in glass’. This delay is seen in terms of the mechanical processes, physical and visual suspensions of material and use of light and shadow, all of which formed a crucial role in the perception of the final work. In *Dust Breeding*, this delay may also be seen in the slow duration (3 - 4 months) of the settling of the dust, and the long exposure of the photograph. Duchamp was interested in Leonardo da Vinci’s concerns with the measurement of the passage of time through the reading of dust. Even though the photographic image becomes a frozen image of the exterior world, the timing of the photographic rendezvous with *The Large Glass* was a long one, of over an hour. Such a long exposure mirrors the time Duchamp allowed for dust to fall, also allowing even more dust the chance to settle. However, another aspect of this is that having the lens open to the world for over an hour is fundamental in allowing the image of dust to impress itself onto the surface of the photographic film.

What can be drawn from this artwork is that material objects and surfaces, which exist within the world, are ultimately covered in dust. Dust is everywhere. Duchamp saw dust as the ultimate readymade from the world. To ask what dust is and what it contains, is to begin a long list of all the things it could be, or could contain. In her book *The Secret Life of Dust: From the cosmos to the kitchen counter, the big consequences of little things* (2001), Hannah Holmes describes dust as minute particles of dry matter which circulate around the world, carried by air currents, never disappearing, never being destroyed, but continually suspended in the air we breathe and collecting onto surfaces. Another comprehensive account of the material properties and characteristics of dust is the book *Dust: A history of the small and invisible* (2000) by Joseph A. Amato, which also reveals that dust is a result of

the divisibility of matter, that even the hardest of materials will 'erode and become dust' (Amato 2000: 3). As Holmes suggests, dust motes could be anything from,

> … salt flecks from the ocean, desert dust, volcanic ash, rock dust and the dusts of life, fungi, algae, bacteria, fibres of rotting leaves, hair fragments from polar bears, eyes of flies, legs of spiders, scales from the wings of butterflies, skin flakes from elephants… (Holmes 2001: 6)

As the material world inevitably disintegrates, dust contains what could be described as the very 'essence of existence' (Denes 1989: 5). As Steedman (2001) suggests, 'dust is the immutable, obdurate set of beliefs about the material world, past and present …' (Steedman 2001: ix). It is how we uncover our own material history, according to Holmes:

> It is the secret of our past – the secret of our futures…Just as Dinosaurs now roam the air, so too will the dust of the decayed you. (Holmes 2001: 13)

Where surfaces are exposed to the air, they will gradually accumulate dust. According to Peter Brimblecombe, Professor of Atmospheric Chemistry at the University of East Anglia, this dust on surfaces is a 'coarse dust' (Brimblecombe 2005), a slightly heavier dust particle. Duchamp's studio, therefore, could possibly contain the dust of his entire material existence; an archive of his material environment. In allowing dust to settle on the surface of his artwork he was allowing the material world to become visibly present in the most direct way. The dust is an index, a fingerprint of the material world, held upon the surface of *The Large Glass*. It is quite probable that the dust collected contained Duchamp's skin, amongst billions of other matter, thereby inadvertently placing him as bodily present within his own work, through skin contact with surface, even though he saw the act as a complete removal of his own hand.

2.2 Gathering dust

Gathering bags of dust is the main intention of Wolfgang Stoeker's ongoing project *My Empire of Dust*. The German artist works in collaboration with environmental scientists, collecting samples of dust that has gathered within various important buildings around the world to create a vast archive of the material world. He sees dust as a mirror of the world, an archive that reveals histories of place, people and activity, reflecting on life, history and interactions. Stoeker regards dust as a puzzle that can never be solved by man, but reveals stories of its own making. He refers to the gathered dust that is found in corners of rooms, as *wollmaus* (woolly mice), as relics of humanity, a 'legacy given to the wind, carried around

from place to place' (Stoeker 2011). As Amato explains:

> …dust is found within all things…it flies over the highest mountains…it fills the air of home and the busy air of streets…It comes to rest everywhere in nature and on the human body…(Amato 2000: 3)

Artist Toba Khedoori intentionally allows dust and debris to settle upon the paper surface of her own artworks, informing and shifting the reading of her images. However, where Duchamp's dust settled as a layer, onto a hard material surface, Khedoori's surfaces are initially wet, which allows dust and debris to become gradually embedded within the artworks. The wax-laden physical surfaces of Khedoori's large-scale hybrid artworks reveal trapped dust, hair, footprints and other debris. Highly rendered drawings and paintings of objects, architectural structures and minimal spaces sit, relatively small scale, within monumentally proportioned paper sheets (often 6 x 12 feet)(*figure 14*). Synthetic wax is layered across large sheets of paper before drawings are applied. The wax surface is laid out on the studio floor, wet, attracting all kinds of dust and debris from the space as described by Saltz:

> Warts of wax, footprints (human and dog), loose staples, dust a flurry of hairs cover her surfaces in a witch's brew of reality. (Saltz s.d.)

It is Khedoori's laborious making process, the time spent layering and scraping the paper on the studio floor, which enables the element of dust, hair and debris to become part of the image. Time itself has become embedded within the image. The physical and time-consuming layering of the wax grounds for the paintings and drawings gradually alters the conception of the blank paper, transferring the empty ground into time-filled visual planes. Although still devoid of any figurative element 'the resulting sense of quiet is what most commentators have remarked on, but it's a quiet that shouldn't be confused with peacefulness' (Relyea 2001: 64-5). The dust and mark-ridden wax layer emerges within

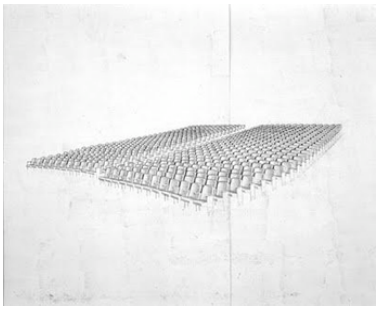


Figure 14, Toba Khedoori, *Untitled (Seats)* (1996). Oil and wax on paper, 350 x 762cm.

these works as a vital visual and physical element in which to view the small scale constructed drawings, weaving between the drawn image, leaving it in a rootless, shifting space within the paper. The dust generates a new reading of the emptiness of the surface of the paper. As the dust constitutes the material world, it suggests material presence. Just as the dust settled upon the surface of *Dust Breeding* over time, the dust gradually settles upon and submerges within the wax surface of Khedoori's work, trapping the material world into a timeless surface. The accumulation of dust is made directly by Khedoori, but through the nature of the material itself, as dust is everywhere. It is inevitable that the surface laid out in the studio will attract dust, as material falls on top of material, just as Duchamp had intended for his artwork. Although Khedoori has not been present, there is a sense of her presence through the dust. The dust embodies the presence of the material world, including the presence of Khedoori herself. As the drawing explores a 3-Dimensional illusionistic space, the layer of trapped dust and debris embedded within the surface pulls us back toward the physical flatness of the paper support, reminding us of its materiality, of its flatness as physical surface. This generates a to and fro between the modernist sensibilities of materialistic flatness and pictorial illusionism; between the pictorial image and its literal matter; between the verticality of the wall and the horizontality of the floor; between the translucent and the opaque. With no horizon lines, no signs of a ground or sky to accompany the pictorial space the drawing occupies, it emphasizes the feeling of an airless surface which seems to trap both the drawing and dust within it. Relyea describes it as 'embalmed, gummy, waxen oblivion' (Relyea 2001: 64-5) Reust quotes Lyotard's reference to the sense of absence within Khedoori's artworks:

> ..that nothing is happening, that nothing carries on, that the words, the colours, the forms or the sounds are missing, that this sentence will be the last…(Lyotard cited in Reust 2001: 56)

Lyotard is clearly interested in the blankness of the paper support, but I suggest that this emptiness actually becomes fullness, transformed through the accumulation of dust that contains matter, the stuff of life. Another aspect to these works by Khedoori is how she is actually embalming the physical effects of time within her work, by the trapping and sealing of the dust within the wax surface. Entropy appears halted, just as I have discussed how the digital image within the monitor is held, embalmed in the screen (discussed in chapter 1.4).

2.3 Aquatint dust

What is visible within these artworks of Duchamp and Khedoori are the physical affects of elapsed time. The surfaces of the artworks have been transformed through the gradual settling of dust. Duchamp's *Dust* emerged through the time it was left out in the studio and also the elapsed time during the lengthy exposure of the photograph. Within the work of Khedoori, time elapses while the dust becomes embedded into the wet surfaces. For both artists there must be a delay in the making process, to allow this to happen.

An interesting similarity may be drawn here to the aquatint process of printmaking. Aquatint is a traditional print process used within etching, which enables tonality to be achieved within an intaglio image. Similar to the chemical process of photography, the aquatint process is complex, exposing the surface to resin powder and, after fusing onto the metal plate, developing the image through immersing it in acid. The process of Aquatint uses resin powder, which can be applied either within a wooden box, as is most often used, or by hand. The aim of either method is to cover the entire surface with the resin dust, which may then be etched to generate a pitted surface. Powdered resin is activated within a closed box, creating a dust cloud, into which a metal plate is inserted face up. Over time, the resin dust falls onto the plate surface within the box. At this point, however, the timing of inserting the plate into the dust box will determine larger or smaller particles falling onto the surface. If the plate is placed in immediately after paddling the box, larger particles thrown up into the air of the box will fall first, generating larger grains marks. If the time of inserting the plate into the box is delayed, then much finer particles will fall onto the surface. This process mimics the natural process of dust particles collecting as a result of air circulation, gravity and each particle's own particular weight. Once the aquatint has settled on to the plate, the plate is heated, fusing the fine resin dust particles to the metal surface. The plate is then placed into acid. The resin acts as a resist against the bite of the acid. The acid bites around the resin, generating a tracing of each powder particle. The resulting pitted surface reveals each particle as a raised surface, which may then be inked and printed. Each print taken from the metal plate bears visual evidence of each dust particle having being present on the metal surface.

Francisco Goya's series of prints *The Disasters of War* (1863) evidences the nature of aquatint and how it may be employed to generate what could be described as a visual noise

within the image through the graininess of the resin dust powder (*figure 15*). *The Disasters of War* series shows how through the fall of the aquatint dust onto the surface of the plate, from fine particles to larger, coarser grains, the image literally provides evidence of the dust's presence on the plate surface. The acid has bitten around each physical grain generating a visual trace. Many of the images contain visibly large resin particles providing a heavy and dark, gritty tonal landscape against which groups of figures are drawn. The aquatint surface applied to the plates is fairly crude, (*figure 15a*) as Sayre explains:

> …Goya was obliged to use defective plates and in some cases seems to have reused old plates after scraping and burnishing them. He suggests that this may account for the manner of handling aquatints. (Sayre 1974: 1)

Goya's *The Disasters of War* is comprised of a series of eighty-five prints of depictions of dark and shadowy scenes of the disastrous effects of war upon civilisation. Aldous Huxley has listed some of the recurrent themes within the series:

> …shadowy archways… where women are violated, captives squat in hopeless stupor, corpses lie rotting, emaciating children starve to death…crests of those naked hillocks on which lie the dead…the hideous butchery of Spanish men and women… upon branches are impaled, like the beetles and caterpillars in a butcher bird's larder, whole naked torsos, sometimes decapitated, sometimes without arms; or else a pair of amputated legs, or a severed head…(Huxley 1943: 12)

The use of the aquatint dust within *The Disasters of War* could also be seen in terms of having a metaphorical link to Goya's subject matter, of the rawness of human existence. Sayre describes '…(the) crude wiping and hasty printing underscores the brutality of the action' (Sayre 1974: 153), and continues to draw links between the visual effects of the process within the works, proposing that the crude use of the aquatint dust within many of the images suggests 'the roughness with which this was done underscores the starkness of the content' (Sayre 1974: 193). The dust used to generate the images may itself be seen

(L) Figure 15, Francisca Goya, *Disasters of War* (1863), Etching and Aquatint.
(R) Figure 15a, Detail of Aquatint surface

metaphorically as life and death. As the resin dust generates the visual element of the air within many of the scenes, there is a feel of the dirty impurities within this air, of a suffocation and ultimate death of the figures within it.

Goya's complete series of *The Disasters of War* were printed posthumously, by the Academia. As there was such a delay from the moment of Goya's making the plates and the Academia printing them, some of the plates reveal physical evidence of this passage of time on the delicate material surface. The original surface of one of the plates (Plate 99 in the collection), was pitted with marks 'caused by the passage of time and lack of care' (Sayre 1974: 135) generating an increased dirtiness to the background of the image. However, this was considered aesthetically unacceptable and an aquatint was applied to mask this surface, physically altering the state of the original. This dirtiness may also be related to Duchamp's intention, where the glass surface becomes covered with detritus, no longer a clean, transparent surface, but a document of the impurity in the air around him.

In the essay *A Dry Black Veil,* Brian Dillon describes the impurities within the air of European cities of the late 19th century as more of a 'thick impure mist' (Dillon 2009: 1). He exposes dust as the major factor, which Modernity strove to escape:

> It signifies the depredations of industrial innovation or rising population on buildings and bodies, while in the private realm it continues to denote one's very lack of modernity, to the point to an archaic or shameful inheritance, to signify lassitude or decay. . .the emptiness of modernist dwelling is designed to discourage the accumulation of dust. (Dillon 2009: 2)

However, as Western society attempts to eradicate dust, to wipe surfaces clean, Junichiro Tanizaki's essay *In Praise of Shadows* (1933) reveals how Japanese taste idealises marks of touch and grime on surfaces of objects. Tanizaki explains that it is this dusty, grimy surface, that the Japanese culture finds elegant:

> Westerners attempt to expose every speck of grime and eradicate it, while we Orientals carefully preserve and even idealise it. Yet for better or worse we do love things that bear the marks of grime, soot, and weather, and we love the colours and the sheen that call to mind the past that made them. Living in these old houses among these old objects is in some mysterious way a source of peace and repose. (Tanizaki 2001: 20)

2.4 Photo static dust

The generation of a 'visual noise' interrupting an otherwise empty image space, may also be seen within a series of artworks *Xerox Books* (1968) by Australian conceptual artist Ian Burn (discussed in chapter 1.1). Burn was fascinated with process and discipline, by how the process of photocopying informed visual language and perception of images. Burn was working on a work entitled *Nine sheets of glass and a diagram for nine sheets of glass* (1957) shortly before he started on the *Xerox Books*. In this work, Burn stacked nine sheets of transparent glass onto the photocopier bed. It was the strange transformation of blankness by and through the transparent glass emerging, which captured his interest and led him to the work on the *Xerox Books*, as Ramsden explains:

> The point is that glass is 'blank' – obviously – but when several sheets are stacked on top of each other there is a strange blurry atmosphere effect generated despite of or because the glass is blank. That's the sort of one-thing-after-or-on-top-of-each-other discipline he was using when he first tried photocopying a blank sheet of paper (Ramsden in conversation with Jo Love 2012)

In a letter to Terry Atkinson and Michael Baldwin, Burn wrote of the *Xerox Books*' reliance on their particular process,

> … my own work is involved with books, not in a general sense of conventional dispensers of information about ideas, rather in the specific sense of using a book as an idea for form, the work is produced using a Xerox machine to make an "art" process. (Burn cited in Stephen 2006:130)

The series of book works entitled *Xerox Books* are made 'beyond the personalism of the hand to the more direct revelation of matter itself' (Stephen 2006: 71). Ian Burn's surface is the photocopiers' glass bed, laid open, attracting and capturing anything that falls onto it during the process of photocopying, referring to this as 'the noise of the machine' (Selenitsch 2008: 15) made directly by impurities landing onto the surface of the copier bed. *Xerox Book #1* (1968), (*figure 16*) is a seemingly simply constructed, 'stapled and taped', landscape-

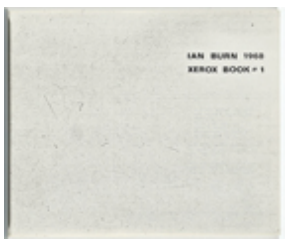


Figure 16, Ian Burn, *Xerox Book #1* (1968). Photocopies on paper, 21.2 x 27.6cm, (#2 from a series of 12 books, each book 100 leaves).

format book of 100 pages, bound by black card covers. The title page is in Letraset, followed by a blank sheet of tracing paper, then a page with the colophon typed on, which reads: '1) A blank sheet of paper was copied on a Xerox machine; 2) This copy was used to make a second copy; 3) The second to make a third, and so on… After the first blank sheet is copied, each successive copy is then copied'. According to Selenitsch:

> The first two pages are somewhat grey and photo-like, but at page four the grey becomes grimy and separated, at page five more granulated, at page six a shadow appears at the bottom of the paper and flare at the top of the page. By page nine the grime becomes dot-like and after this the dots get finer and finer. In the middle of the book, more and more horizontal lines appear, and slowly the dots become short lines and dashes (Selenitsch 2008: 17)

The final page of the book *Xerox Book #1* (1968) reveals the hundredth photocopy, and has become an image that Ann Stephen likens to 'snow' (Stephen 2006: 125). This all- over 'snow' is the mechanical version of the dust that inflects itself within the waxy, layered surfaces of Toba Khedoori's drawing and also within Goya's aquatinted surfaces. The material dust is transported into a mechanical image of dust through the technological process. It reveals both time and of materiality, how physical matter visually imbues itself through time onto surface. Static here plays an important role within how the photocopier generates an image with carbon toner, and is mimicked by the static nature of dust itself. Dust is attracted to surfaces through static, just as the toner fixes itself to the paper via static. However, as opposed to standard copying practices, in *Xerox Book #1* the first image is blank, there is no image, which seems to reinforce Jean Baudrillard's notion of the *simulacrum*,[22] as there is no 'real', just a copy (Baudrillard 1994). In *Xerox Book #1*, the empty blank sheet of paper is the 'original', the 'image' appearing is determined through the material of the toner, the static process and all the irregularities which are stirred up within it: the opening and closing of the copier lid, the handling of the paper, the dirt, dust and grime settling on the glass bed or the toner cylinders. As Stephen describes: 'Looking through their pages, nothing could be seen but a gradual build up of electronic "snow"' (Stephen 2006: 125). Stephen refers to the dust embedded within the photocopy image as 'electronic snow', and Selenitsch (2008) describes this as more of a 'machine noise'. Both of these terms however suggest something that interferes in communication transmission. Both

---

[22] In Baudrillard's notion of the Simulacrum, first published in 1981, he argues that the copy, or simulation, actually comes before the real.

visual noise and snow may engulf and smother. What is interesting is that the noise is embedded in the image through the technological process. As Stephen explains, 'His act turned the machine upon itself, exploiting its imperfections to build up a mechanical all over image' (Stephen 2006: 71).

The images in *Xerox Book #1* seem to embody the inevitable affects of entropy that concerned Robert Smithson (chapter 1.4). The inevitable interference and decay of the material of the paper and the toner dust, over time gradually homogenise into one dust-covered piece of paper.

2.5 Death and entropy

The original negative of *Dust Breeding* was much larger than the final image, containing the edge of *The Large Glass* surface and also revealing part of Duchamp's studio in the background (*figure 13a*). Man Ray's decision to crop the image down was a choice to remove visual clues to its reading, separating it from anything recognizable and therefore opening up interpretation of its origin. However, the angle and composition, along with the close-up of the fine, dust-covered ridges and crevices within the surface of the artwork, generate a reading of being visually more akin to an aerial shot of a scarred landscape rather than a close-up of the surface of an artwork. This interpretation seems to have been intentional, as Man Ray titled the photograph for a short time *Vue prise en aeroplane par Man Ray 1921*, with the following inscription containing his own thoughts:

> Voici le domaine de Rrose Sélavy
> Comme il est aride. Comme il est fertile
> Comme il est joyeux. Comme il est triste!
>
> (This is the domain of Rrose Sélavy
> How arid it is. How fertile it is
> How happy it is. How sad it is!) (Hermann & Martin 1982)

There have been many comparisons of *Dust Breeding* to what could be described as scarred landscapes or resemblances to a desolate lunar landscape[23]. Dr David Hopkins suggested an interesting visual parallel of the photograph *Dust Breeding* to aerial

[23] Sophie Ristelhueber, In 'After the Fact', *Modern Painters* 21 no3 April 2009.

photography from WWII during a Duchamp symposium in 2009[24]. David Campany describes *Dust Breeding* as *A Terrain Vague* (Campany 2005: 45). Man Ray explains how he pointed the camera at the work and saw the layer of dust revealing a strange surface:

> Looking down on the work as I focused the camera, it appeared like some strange landscape from a birds-eye view. There was dust on the work and bits of tissue and cotton wading that had been used to clean up the finished parts, adding to the mystery. This, I thought was indeed the domain of Duchamp. Later he [Man Ray refers to Duchamp] titled the photograph; *Elevage de poussière – Bringing up the dust* or *Dust Raising.* (Man Ray 1963: 91)

As Man Ray indicates, he was 'looking down' at the surface of the artwork, not looking out into the exterior world. In the resulting image the perception of the work amplifies this shift, gaining a new spatial orientation, as we look seemingly downwards at a horizontal ground surface – the dust. This links to Steinberg's notion of the flat-bed picture plane (discussed earlier in chapter 1:1), where orientation has shifted from vertical to horizontal plane.

I suggest two parallels which may be drawn here, which link the photograph *Dust Breeding* with effects of war seen through aerial landscape photography; firstly, of an erasure of landmark characteristics, a physical and visual effect of loss, and secondly, the notion of death, the dust as decayed physical matter, and the devastating loss of life through human warfare. As Nick Warner suggests:

> *Dust Breeding* seems to connote all of the uncertainty, lacking in definition and timeworn decay (…) a substance that threatens to overwhelm. (Warner 2009)

Interestingly, Warner's suggestion of a threat may be also drawn to the photographic image. For the photograph, dust is regarded as the enemy of visual perfection. It is a threat to definition and perceived quality of the image. To return to Robins' (1995) argument of the purging of the impurities of the image generated through digital processes, the dust within these photographic works seem to pull the image back to a visual reality, of the impurities of air and surface.

[24] 'On March 27, 2009, the National Portrait Gallery, Smithsonian Institution, held the Fourth Edgar P. Richardson Symposium… presented in conjunction with the exhibition "Inventing Marcel Duchamp: The Dynamics of Portraiture '' [Internet] Available online at http://www.npg.si.edu/exhibit/duchamp [Accessed]

The impurities of the air, the images' encounter with the material world and the effects of entropy are crucial in the making of the photographic print for Miroslaw Tichy, as Keith Carter describes:

> It is astonishing how many mistakes and shortcomings Tichy's works can bear: everything is underexposed or overexposed, out of focus, made from scratched negatives, developed on paper that is either cut by hand or even torn, with dust and dirt on everything, filth in the camera and in the darkroom, fingerprints, bromide stains, places gnawed by rats and silverfish. The road the photographs take once they leave the darkroom is a dismal one. Their maturation begins by being thrown into a pile of dust for several years. (Carter in conversation with Tichy 2010)

Tichy constructed his own cameras from a wealth of found materials, which meant that the camera body was never truly airtight. Most of his photographs visually betray the effects of light, material touch, dust, and debris, which have been a significant part of the exposure process (*figure 17*). Hair and debris settled within the camera and were exposed alongside the subject through the lens. Tichy was interested in this material encounter, which he caught within each image. This can also be seen in Daido Moriyama's series *Farewell Photography* (1972), (discussed in chapter 1:1) (*figure 19*) where he deliberately interrupts the photographed subject with dust and surface scratches.

These works by Tichy and Moriyama privilege the materiality of physically making artworks. Both Tichy and Moriyama are photographers who have chosen to use material processes to exploit and accept elements that occur as a result within the production of the photographic


(L) Figure 17, Miroslav Tichy, Untitled, Unique silver gelatin print, 20 x 12cm.
(R) Figure 18, Daido Moriyama, Photograph from *Farewell photography (Shashin Yo Sayonara) Photobook* (1972). 29.5 x 23 x 2cm Closed.

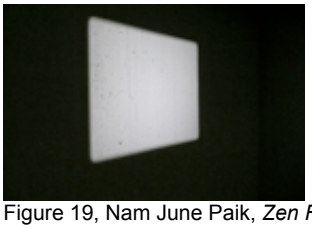


Figure 19, Nam June Paik, *Zen For Film* (1964). 8 minute film. Photograph.

image.[25] These intentions of Tichy and Moriyama further explore what Robert Smithson has discussed, as the inescapable effects of entropy and the eventual breakdown and collapse of the entire material world (discussed in chapter 1:4). However, such effects of entropy within the photographic representational image also generate an interesting paradox of the inevitable fiction of the photographic image.

Steven Connor's outline of the subtle properties of dust as both dissolving and disclosing are relevant here. Connor describes dust as amongst a variety of matter of 'pseudo-substances (which) hover, drift and ooze between consistency and dissolution, holding together even as they come apart from themselves' (Connor 2009). Steven Connor is a critic and author of many recent essays on the intriguing properties of minute particles of matter – of dust and sand[26]. He describes dust as

> ... in one sense evacuated of air, the gaps between the particles reduced to their minimum—hence its muffling, choking effects. At the same time, dust is characterized by a maximum of what might be called internal exposure, in which the ratio of the surface area of particles to their internal mass is extremely high. The availability of such a large surface area for chemical reactions accounts for the effectiveness of powders in forming solutions and suspensions. And, because they have no inside, because they are all a kind of internal exposure, dust-like substances can give contours or clarifying outlines to other things. Thus, dust, itself formless and edgeless, can both dissolve form and disclose it, like the snow that, in the right amount, can give to things a magical new clarity of outline, but passing beyond that point erases every landmark beneath its featureless drifts and dunes. (Connor 2009).

Artists Nigel Rolfe and Markus Hansen use dust with exactly this intention, to dissolve and also to define. Their use of fine dust powder evokes contradictions; between appearance and disappearance; between bringing the work to life through dust and the ultimate

[25] This is also evident in *Zen for Film* (1964) by Nam June Paik, where unexposed 'blank' film is left to roll through the projector, gradually attracting dust onto its surface (*Figure 19*). Within these works, the dust has become the sole image, or subject, whilst also referring to its own gradual material decay. This was one of the main concerns of many of the LFMC (London Filmmakers Council) films during the 1960s. Their avant-garde approach saw the raw physicality of the film, the actual celluloid material as a significant visual presence within the films' aesthetic. The LFMC experimented with physical processes of film production: scuffing, scratching, over-exposing, and splicing the celluloid surface of the filmstrip.

[26] Steven Connor is a literary and cultural historian, most recently, the author of *Paraphernalia: The Curious Lives of Magical Things*, 2011.

reference to death. In Nigel Rolfe's video work *Dust Breeding* (2008) (*figure 20*) the smothering effects of fine powder actually threaten to overwhelm the artist's own existence. *Dust Breeding* (2008) is a looped video in which the artist's face, viewed side on with medium close-up, becomes gradually covered in white powder, which falls from above. The powder gradually accumulates within the eye sockets, nostrils and the mouth, smothering Rolfe's ability to breathe. As Clancy points out, the powder smothering the skin generates an image akin to a war-torn landscape.

> Finally he must breathe, it seems (the petty irritations of corporeality!), and as he does, turns his face towards us. The skull is revealed as planetary, a landscape of crumbling craters and mountainous shadows. As the head turns towards the camera, powder around the eyes first bulges obscenely, then begins to crumble away…(Clancy 2008)

Where the dust in Rolfe's work overwhelms the skin's surface to the point of suffocation, German artist Markus Hansen uses the force of his own breath and dust to bring life to his work. Within the bodies of work entitled *Dust drawings*, which include the series *Dust/Dirt Curtains* (1994-2005) (*figure 21*) and *Morphed dust portraits* (2001-3) subtle photographic images emerge through the gradual settling of dust blown onto a pre-prepared surface. Where Khedoori uses wax to embalm dust, Hansen gathers dust and blows it across the surface of the paper to allow it to become embedded within a wet, silk-screened surface. As he explains, his process is a revealing through the settling of dust.

> The photographic image is worked and reworked on the computer so as to find the point of equilibrium between visible and invisible for when the dirt is finally applied. The reworked image is then transferred to a silkscreen. The image is printed with transparent ultra-violet proof ink onto glass. At this point I am working blind, I know more by touching the test prints with my fingers than by looking at them. Once I have what appears to be a faultless print, I take dust I have gathered and create a cloud of the finest particles and let them slowly settle onto the image. I then blow across the image so as to reveal it…(Hansen 2007)

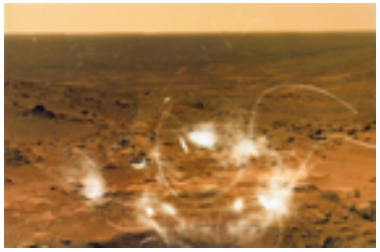
((L) Figure 20,Nigel Rolfe, *Dust in Face* (2008) Colour photograph 36 x 36 ".
(R) Figure 21, Markus Hansen, *Curtain* (2004). Dust and varnish on glass, 111.1 x 141cm.

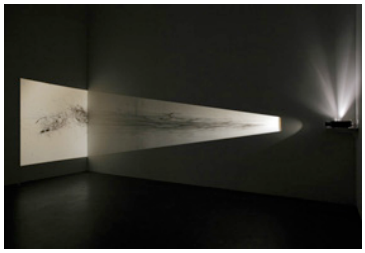
2.6 Material and digital dust

In the artworks *Per Pulverem Ad Astra* (2007), Eva Stenram placed a series of photographs beneath her own bed, with the intention to gather dust (*figure 22*). Stenram obtained digital photographic lunar images from the NASA website, 'she downloaded them… re-cropping them and transforming them into analogue negatives. After this process, she left them to gather dust' (Lewis 2008). The dust physically accumulated on the surface of each image, which she then rescanned to create entirely new images where landscape pictorial spaces and dust combine. Where *Dust Breeding* reminds us of a foreign landscape, here the landscape, already foreign, is immediately present and has subsequently gained a layer of the human - household dust. Where the image is alien, the dust is most likely made up of Stenram's own skin, having been left under her bed to allow falling, decaying matter to settle. The presence of dust here may suggest human presence on the surface of the artwork. This is further explored in Cornelia Parker's *Exhaled Blanket* (1996), which is comprised of a transparent slide containing dust and fibers taken from Sigmund Freud's couch (*figure 23*). As domestic dust is substantially made up with human skin, it is a possibility that the dust contains Freud's own skin, amongst other matter. This dust circulating around us as we breathe everyday is termed 'the personal cloud' according to research undertaken by Lance Wallace, an environmental scientist. As Wallace explains:

> …you breathe about 700,000 of your own skin flakes each day. And the rest sink slowly to the floor – or entangle themselves in the fibers of your sheets, or work their way into the couch cushions… (Wallace 2001: 166)

Another aspect to Stenram's work *Per Pulverem Ad Astra* (2007) is the significant role of digital technology in facilitating her intentions for the work. The images draw attention to the actual impossibility of seeing such material stuff and such a place to the naked eye, without the help of technology. In order to use the lunar images, Stenram has worked digitally, obtaining the images from another source. Subsequently the printer, scanner and computer





(L) Figure 22, Eva Stenram, *Per Pulverem Ad Astra* (2007). C-Type print, 23 x 24cm.
(R) Figure 23, Cornelia Parker, *Exhaled Blanket* (1996). Dust and slide. Enlarged projection.

have been necessary in allowing her to place the material and image together, the furthest optical distances are thus placed together within one image.

It is Stenram's combination of digital and analogue photographic languages along with dust, which generates an image that pulls the two processes together, whilst allowing them also to remain discreet. The initial digital image must have been printed out, to materialize, in order for their surfaces to become affected by entropy. Stenram must convert the virtual images to material in order to gather dust upon their surface. She must then rescan the dust and the photograph together, converting it back into a digital language. The final image becomes a digital printed image, visually documenting evidence of the dust, which had settled upon the analogue surface. In doing so it becomes fixed within the computer, as a visual archive of the dust on the surface. However, the final stage also returns to the image to a material print, where the effects of entropy will begin to be seen again.

Emerging through the works by Duchamp, Khedoori, Stenram and in Cornelia Parker's dust from Freud's couch, is the notion that although we may not actually touch things – through tactile touch we may inadvertently be leaving our trace, through skin debris. This is particularly seen in the field of forensic science, where people are identified through traces of minute particles of bodily matter and fluids. Where these artists have deliberately collected dust from their own working spaces, they are collecting from their 'personal cloud'. In complete contrast to this, dust could even contain elements from the lunar landscape, as Holmes (2001) suggests, some of the dust swirling around us may be from distant planets:

> The dust…that skulk beneath the couch and behind the refrigerator contain everything from space diamonds to Saharan dust to the bones of dinosaurs and bits of modern tire rubber. (Holmes 2001: 21)

In many of the artists' works I have discussed (Duchamp, Burn, Khedoori, Goya, Tichy and Moriyama) they have all fixed the dust within the image itself, stopping its further decay – they appear to have halted entropy. The dust is held, timeless and frozen, as the image will not be further affected by entropy. In the work of Burn, Tichy and Moriyama, the matter of dust becomes embedded within the technological process of the camera, enlarger or photocopier and so becomes a technological image, an image generated through technological apparatus. In *Per Pulverem Ad Astra* (2007) Stenram has transferred both the image and the dust back and forth, many times, from digital into material, from material into

dematerialized data language, and finally back into material as printed images. As printed images, all these artworks will continue to be affected by entropy.

Dust has been seen to visibly expose surface, to highlight material, to reveal horizontality, touch and notions of time. What has become significant to my developing argument is the inescapable action of dust to settle upon all surfaces, revealing them as present in the world. However, a distinction has become clear in that the digital print is concealed, and cannot reveal its surface, or therefore bear any visual evidence of its presence.

References

2.1

Amato, J. A. (2000) *A History of the Small and the Invisible*. Berkeley, Los Angeles & London: University of California Press.

Baldwin, N. (1989) *Man Ray*. London: Hamish Hamilton.

Brimblecombe P. (2005) Elementary Particles: An Interview with Peter Brimblecombe. In Dillon, B. & Najafi, S. Elementary Particles: An Interview with Peter Brimblecombe, Cabinet Magazine Issue 20 Ruins Winter 2005/06. [Internet] Available online at: www.cabinetmagazone.org/ [Accessed] 09.10.2010

Denes, A. (1989) *Book of Dust: The beginning and the end of time and thereafter.* Rochester, New York: Visual Studies Workshop Press.

Holmes, H. (2001) The Secret Life of Dust: From the cosmos to the kitchen counter, the big consequences of little things. New York: John Wiley & Sons.

Janus (ed.) (1980) *Man Ray: The Photographic Image*, Trans. by M. Baca. London: Gordon Fraser Gallery.

Schwarz, A. (1969) *The Complete Works of Marcel Duchamp*. London: Thames & Hudson.

Steedman, C. (2001) *Dust*. Manchester: Manchester University Press.

2.2

Amato, J. A. (2000) *A History of the Small and the Invisible*. Berkeley, Los Angeles & London: University of California Press.

Relyea, L. (2001) Toba Khedoori. In *Public Offerings*. Los Angeles: Museum of Contemporary Art.

Reust, H. R. (2001) *In the space that drawing creates – five approaches to the work of Toba Khedoori*. In Toba Khedoori: Gezeichnete Bilder. Museum fur Gegenwartskunst Basel.

Saltz, J. (s.d.) *Toba Khedoori: Immense miniatures*. [Internet] Available online at http://www.lacan.com/khedoori.htm [Accessed] 05.10.2009

Stoecker, W (20011) *My Empire of Dust*. Last broadcast on Thu, 28 Jul 2011, 11:30 on BBC Radio 4. [Internet] Available online at http://www.bbc.co.uk/programmes/b012r7jx [Accessed] 15.08.2011

2.3

Dillon, B. (2009) *A Dry Black Veil*. Cabinet Magazine Issue 35 Dust Fall. [Internet] Available online at www.cabinetmagazone.org/issues/35/dillon.php [Accessed] 09.10.2010

Huxley, A. (1943) *The Complete Etchings of Goya*. London: Allan Wingate

Sayre, E. A. (1974) *The Changing Image: Prints by Francisco Goya.* Boston: Museum of Fine Arts.

Tanizaki, J. (2001) *In Praise of Shadows.* Vintage: London.

2.4

Baudrillard, J. (1994) *Simulacra and Simulations*. Ann Arbor, Michigan: University of Michigan Press.

Ramsden, M. In conversation with Jo Love, 5th July 2012 (*appendix 1*)

Selenitsch, A. (2008) *Australian Artists Books*. Australia: National Gallery of Australia Publishing.

Stephen, A. (2006) Soft tape/hard talk. In Stephen, A. *On Looking at Looking: The art and politics of Ian Burn*. Melbourne, Australia: The Miegunyah Press.

2.5

Campany, D. (2005) Man Ray and Marcel Duchamp Dust Breeding 1920. In Howarth, S. (ed) *Singular Images: Essays on remarkable photographs*. London: Tate Publishing.

Carter, K. (2010) *Miroslav Tichý: Tarzan Retired*. [Internet] Available online at http://www.americansuburbx.com/2010/04/theory-miroslav-tichy-tarzan-retired.html [Accessed] 01.07.2012

Clancy, L. (2008) *Nigel Rolfe: Dust Breeding*, Art Review no28 D. [Internet] Available online at http://artreview.com/forum/topic/show? [Accessed] 02.05.2011

Connor, S. (2009) *Pulverulence*, Cabinet Magazine Issue 35 Dust Fall 2009. [Internet] Available online at http://cabinetmagazine.org/issues/35/connor.php [Accessed] 09.10.2010

Hansen, M. [Internet] Available online at http://www.markushansen.com/introno.html [Accessed] 02.12.2010

Hermann, B. & Martin, J. H. (1982) Notes On the Plates. In Ray, M., & Martin, J. H. *Man Ray: Photographs*. Thames & Hudson: London.

Ray, M. (1963) *Self Portrait.* London: Andre Deutsch.

Robins, K. (1995) Will Image Still Move Us. In Lister, M. *The Photographic Image in Digital Culture*. London: Routledge.

Warner, N. (2009) *Detritus: A sleeping Beauty*. [Internet] Available online at www.nickwarnerphoto.com/text_docs/01_detritus.pdf [Accessed] 09.10.2010

2.6

Holmes, H. (2001) The Secret Life of Dust: From the cosmos to the kitchen counter, the big consequences of little things. New York: John Wiley & Sons.

Lewis, C. (2008) Martian Landscapes Plus Dust - Eva Stenram at Leeds Pavilion. [Internet] Available online at http://www.culture24.org.uk/science+%26+nature/space/art57526 [Accessed] 03.01.2011

Wallace, L. (2001) In Holmes, H. The Secret Life of Dust: From the cosmos to the kitchen counter, the big consequences of little things. New York: John Wiley & Sons.

CHAPTER 3. EXPERIMENTS: GENERATING DISTANCE

Chapter 3. Generating distance

In the previous two chapters I have examined a number of artworks that highlight the extent to which physical presence of the photographic process becomes visible within the resulting printed image. What I have revealed is that where the printed image emerges through material process and has a horizontal orientation it opens up new perceptions and readings of the image, as a direct consequence of being opened up to the effects of touch, contact and air. These have been discussed further, within chapter two, where a number of artists deliberately provoke the settling effects of dust as a fundamental to the intention of the work and evidenced in their completed images.

One key question within my research has been to what extent the materiality of the photographic print process is evident in the resulting aesthetic of the image. I have investigated how the physical and material processes visibly reveal themselves within the image derived from flatbed processes. Leo Steinberg's (1972) writing around the notion of the flatbed picture plane, and on questions of orientation and gravitation, may offer insights into the way in which the flat glass bed of the photocopier or digital scanner may visually inform the image captured through it. Steinberg's writing on this issue highlighted the shift in the visual reading of the orientation of an artwork, form a vertical to a horizontal position. Steinberg's critique helps to bring into question the significance of orientation of actual photographic devices and methods in which artworks are manifested. In particular, the nature of orientation inherent in photocopying and the digital flatbed scanner, as these processes signal a shift from looking *out* into and through space, to looking downwards, or upwards, *at* an object.

The physical presence of the horizontal flat bed in Ian Burns' *Xerox Books* (discussed in chapters 1.1 and 2.4) is a key example here, where the accumulation of dust on the horizontal photocopier glass bed actually becomes the intended subject of the work, along with the visual effects of the process of reproduction. The sequential reading of the dust throughout the book reveals visual evidence of the inevitability of the material world and the actual time it took Burn to execute the work. The electrostatic process, through which these prints emerge, generates another, even stronger, physical pull to the surface of the paper

through an electrical charge. As a charge is placed onto the paper, the dusty toner particles are forcibly drawn and fused to its surface.

I would like to return to Helen Chadwick's *The Oval Court* (1984-86) (discussed in chapter 1:1). The work visually reveals evidence of the weight of the objects placed onto the scanner, their actual material weight pressing up against the glass, as Jean-Luc Nancy (2008) might describe, as they are captured as an image. The different objects Chadwick used to construct the image press up against the glass in different ways according to their own weight. Where the lighter objects such as feathers lay almost weightlessly against the glass they generate a lighter, softer image; heavier objects, such as Chadwick's own body, generate darker, denser images, having more contrast and detail. Here, the horizontality, weight and gravity inherent in the process directly inform the resulting image, and as a result shift the way in which we orientate ourselves to view the work.

What is integral to the execution and making of these works is the use of the horizontal bed, or a flat open surface, which appears to succumb most easily to the gravitational pull of dust and debris from the air, as it lies face up and open. Images placed on top of the glass bed must therefore be susceptible to dust during the scanning process, which generates a flatter reading of the image.

Another aspect to the horizontal execution of the image arises when the image is then viewed as a vertical picture. In Steinberg's 1973 analysis, the perception shifts from vertical to horizontal orientation. However, Rauschenberg's artworks were still predominantly viewed vertically. A difference can be seen within Helen Chadwick and Ian Burn's artworks, where both artists have executed the work horizontally, and then continued to present the work in a horizontal position – on the floor or on tabletops.

In particular, notions of *orientation*, *gravity*, *time*, and *dust* within the making process has arisen through this investigation. In this chapter I will discuss a series of practical experiments, which have been made throughout the research, which serve to test and experiment a number of key issues and theories around picture plane orientation, material weight and gravity, and physical touch.

3:1 Practical experiments (2007 – 2011)

To explore this use of the digital flatbed in more depth, I have made a body of work using the flatbed photographic scanner, as an image capture device (see figure). Obtaining images using the flatbed scanner has been an important aspect of my creative practice, as it has enabled my reusing and reworking of existing printed images, which have particular indexical references to landscape vistas. The photographic image of landscape has an important function within my creative practice as it serves to generate an illusory image, which I can then manipulate to sit at the edge of visibility and recognition (these aspects of the artworks are discussed in detail in chapter 4). I have continued to use these black and white photographic prints throughout the series of experiments, as they will provide me with illusionistic images, of looking *into*, through which I can gauge any possible shifts in reading of surface more clearly. The aim of the experiments is to open the scanner as much as possible to the air around it whilst capturing a photographic image in order to allow for the infiltration of dust/debris into the image. The scanner captures through an optical lens, as with the camera and the enlarger apparatus, yet it scans upwards from beneath the subject, as opposed to out, across space. The scanner seems to bridge the gap between the capturing through the camera and the darkroom enlarger. The experiments were carried out in my own art studio (Underhill Road, London). I have maintained a photographic record throughout all the experiments, along with notes made at each stage of the process (*appendix 4*). *Appendix 5* comprises a DVD of the entire series of image scans obtained.

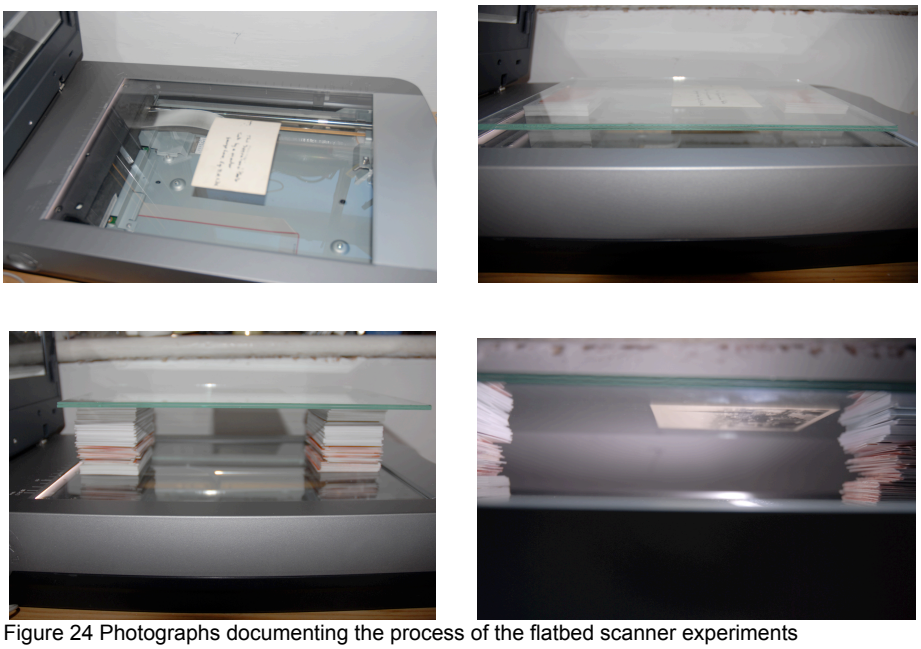


Figure 24 Photographs documenting the process of the flatbed scanner experiments

Experiment 1: Elevating the image

3.2 Experiment 1: Elevating the image

Aim:

To test the visual effect of increasing the distance between the photographic image and the scanner bed during the scanning process. Elevating and increasing distance between the glass bed and the image will allow air into the scanning process, replicating how the camera and the darkroom enlarger capture and generate an image through air and space.

Objectives:

To question how far the images can be positioned horizontally away from the original glass bed and still be in focus? At what distance does the image cease to be readable? What is the maximum focal depth that can be scanned? How far can we move the image away from the standard scanning depth and the image still remain recognisable? Are there any other aesthetic implications through the increasing addition of physical space as opposed to flat contact?

Apparatus:

Epson Perfection 4990 photo flatbed scanner; 1 black and white photographic print; 2mm clear glass sheets (x2); 5mm card blocks; Apple G5 Computer; Adobe CS3 Photoshop.

Methodology:

A black and white photographic print was placed face down on the scanner glass bed, the scanner lid closed and the photograph scanned in greyscale at 300Dpi creating an original; an image captured through the conventional scanning procedure. The photograph was then placed within two clear glass sheets 2mm in thickness, placed face down and rescanned. At this point the photograph was suspended 2mm above the glass bed. 5mm card blocks were then systematically added beneath the glass sheets to elevate the image above the scanner bed. As each 5mm block was added the image was rescanned as per the original settings. The process was repeated until a distance of 292mm was reached.

Image scans

0mm

17mm

22mm

67mm

292mm

Figure 25, Selection of image scans from experiment 1 (0mm – 292mm).

Experiment 2: Elevating the image 2

3.3 Experiment 2: Elevating the image 2

Aim:

To test the visual effect of increasing the distance between the photographic image and the scanner bed during the scanning process in more detail by focusing on a smaller section of the image.

Objectives:

To question how far the images can be positioned horizontally away from the original glass bed and still be in focus? At what distance does the image cease to be visible through the scanners' lens? What is the maximum focal depth that can be scanned? How far can we move the image away from the standard scanning depth and the image still remain recognisable? Are there any other aesthetic implications through the increasing addition of physical space as opposed to flat contact?

Apparatus:

Epson Perfection 4990 photo flatbed scanner; 1 black and white photographic print; 2mm clear glass sheets (x2); 5mm card blocks; Apple G5 Computer; Adobe CS3 Photoshop.

Methodology:

A black and white photographic print was placed face down on the scanner glass bed, the scanner lid closed and the photograph scanned in greyscale at 300Dpi creating an original; an image captured through the conventional scanning procedure. The photograph was then placed within two clear glass sheets 2mm in thickness, placed face down and rescanned. At this point the photograph was suspended 2mm above the glass bed. 5mm card blocks were then systematically added beneath the glass sheets to elevate the image above the scanner bed. As each 5mm block was added the image was rescanned as per the original settings. The process was repeated until a distance of 292mm was reached.

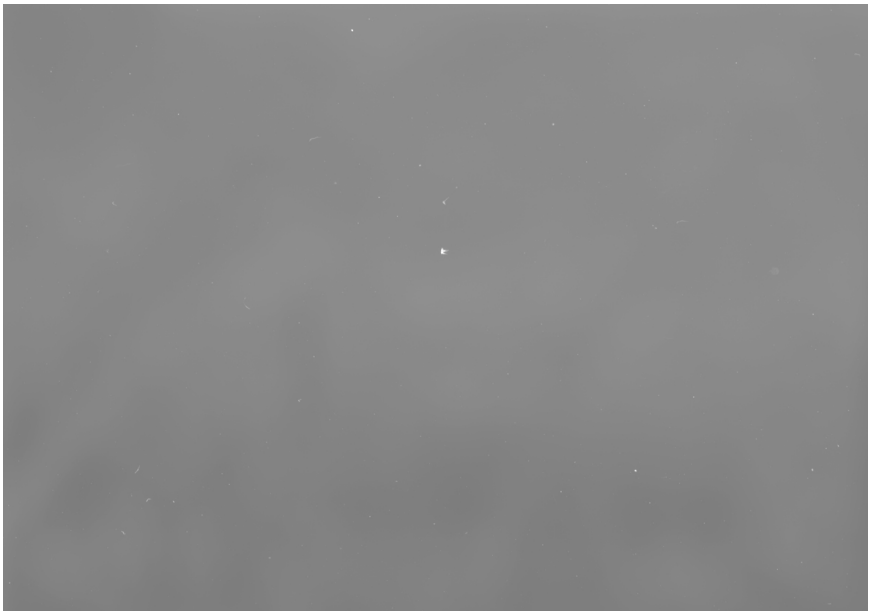
Image scans

2mm

12mm

22mm

72mm



292mm

Figure 26, Selection of image scans from experiment 2 (0mm – 292mm).

Experiment 3: Seeing the dust

3.4 Experiment 3: Seeing the dust

Aim:

To expose the effects of the dust that gathers on the flat surface of the scanner bed.[27]

Objectives:

To question how much dust is in the air and falling onto flat surfaces. To see how and when the dust begins to cover the surface of the scanner bed.

Apparatus:

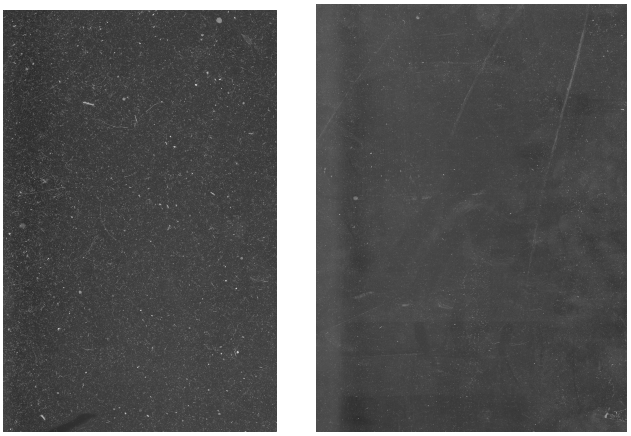
Epson Perfection 4990 photo flatbed scanner; 2mm clear glass sheets (x4); Apple G5 Computer; Adobe CS3 Photoshop.

Methodology:

Initially the glass scanner bed itself was used to capture whatever fell onto its surface. However, this meant that only one image could be gathered over a specific period, so extra glass sheets were used to mimic the glass bed and allow more images to be obtained. Each 2mm clear glass sheet was left out in the studio for 1 week and then placed onto the scanner bed and scanned. Each sheet was scanned in at 300Dpi, in greyscale, in order for an image of whatever was on top of the glass sheet to be captured. The images were all inverted once scanned, to lighten and enable more detail to be seen.

[27] Since the settling of dust has emerged as a crucial element within the artworks made, I wanted to focus on this further, to visibly expose the dust settling on the scanner bed surface.

Image scans



Original scans without inverting

Inverted scan 1 Inverted scan 2

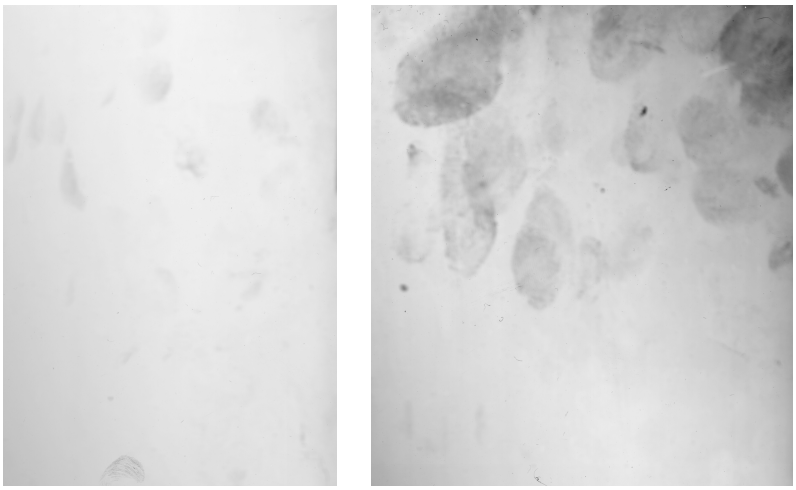


Figure 27, Selection of image scans from experiment 3 showing dust and details of finger marks.

Experiment 4: Dust and the photograph

3.5 Experiment 4: Dust and the photograph

Aim:

To test if a layer of dust and a photographic image may be scanned together to generate new readings of image space.

Objectives:

To see if the dust continues to sit visually apart from the photographic image even when scanned close together. Does the contact of dust and image during scanning alter the visual effects of the dust?

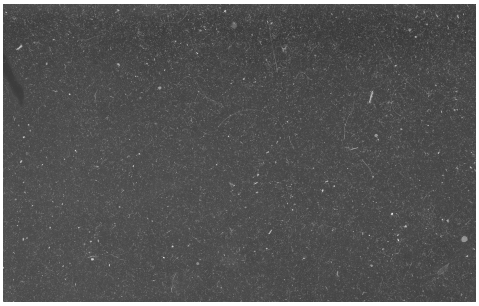
Apparatus:

Epson Perfection 4990 photo flatbed scanner; 1 black and white photographic print; 2mm clear glass A4 sheets (x4); 5mm card blocks; Apple G5 Computer; Adobe CS3 Photoshop.

Methodology:

A 2mm clear glass sheet that has been left out to gather dust (as used in experiment 3) was placed onto the scanner bed. Another glass sheet was placed above it, trapping the dust. A black and white photographic print was then placed between two more clear glass sheets and placed on top of the first two sheets on the scanner bed. The image was lying face down. A scan was then taken, in greyscale, at 300Dpi. This generates an *original;* an image scanned in a conventional procedure. 6mm card blocks were then systematically added beneath the two glass sheets holding the photograph to elevate the image above the sheet of dust lying on the scanner bed. As each 5mm block was added the image was rescanned as per original settings. The process was repeated until a distance of 136mm was reached. A second stage to this was the capturing of smaller segments of the image, to enable increased resolution during magnification. The images were also inverted, to lighten and increase the visibility of the effects of the image space.

Image scans



2mm Glass sheet with gathered dust

2mm Photograph

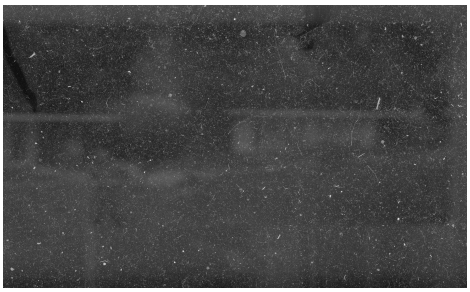
6mm glass and dust

24mm

56mm

96mm

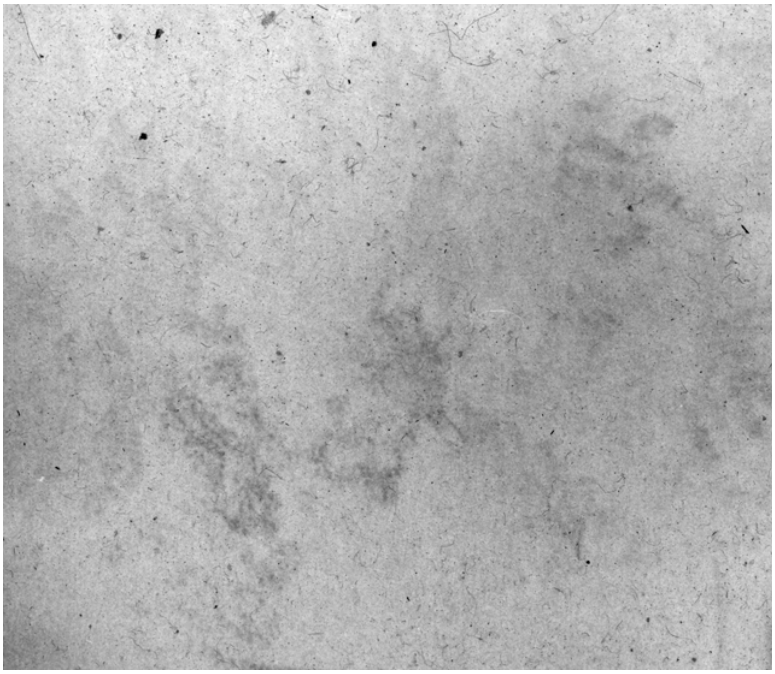
104mm



136mm

Figure 28, Selection of image scans from experiment 4 (2mm – 136mm).

Experiment 5: Dust and photographic film



3.6 Experiment 5: Dust and photographic film

Aim:

To test in greater detail if a layer of dust and a photographic image may be scanned together to generate new readings of image space.

Objectives:

To see if the dust continues to sit visually apart from the photographic image even when scanned close together. Does the contact of dust and image during scanning alter the visual effects of the dust?

Apparatus:

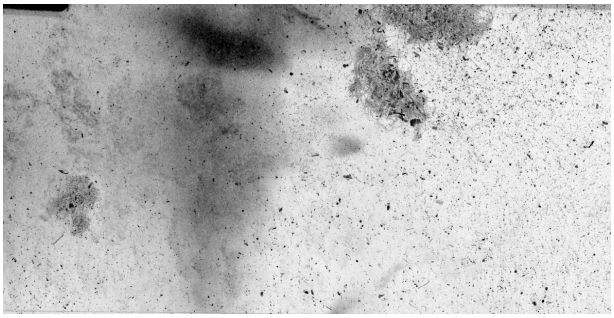
Epson F-3220 film scanner; unexposed blank medium format negatives; Apple G5 Computer; Adobe CS3 Photoshop.

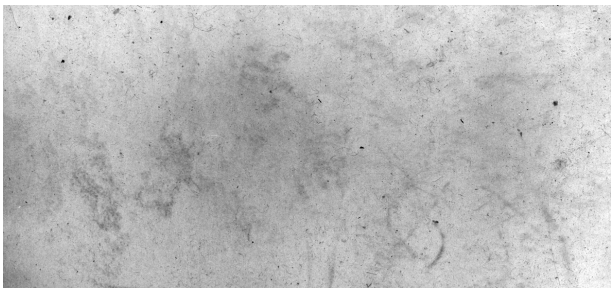
Methodology:

A medium format photographic negative strip was left out in the studio for a period of two weeks.[28] The film negative was then placed into the film scanner and scanned in greyscale, at 4800Dpi. Various sections of the scan were captured images obtained in this way.

[28] The negative film seemed an appropriate material that also refers back to materiality of analogue film, as well as mimicking the glass sheet. This is also similar to Nam Jun Paik's use of blank filmstrips to gather dust and scratches in *Zen For Film* (discussed in chapter 2).

Image scans





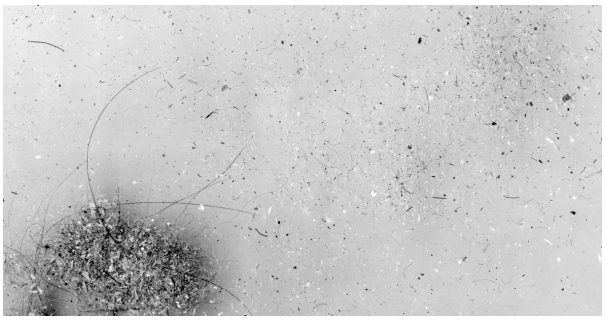
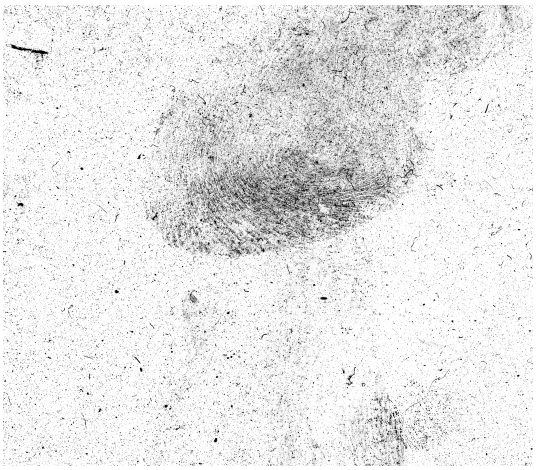


Figure 29, Selection of image scans from experiment 5.

Experiment 6: Gathering dust



3.7 Experiment 6: Gathering dust

Aim:

To expose the effects of falling dust and debris onto surfaces in greater detail.

Objectives:

To generate higher resolution scans, in order to reveal the visual characteristic of the dust particles through greater magnification.

Apparatus:

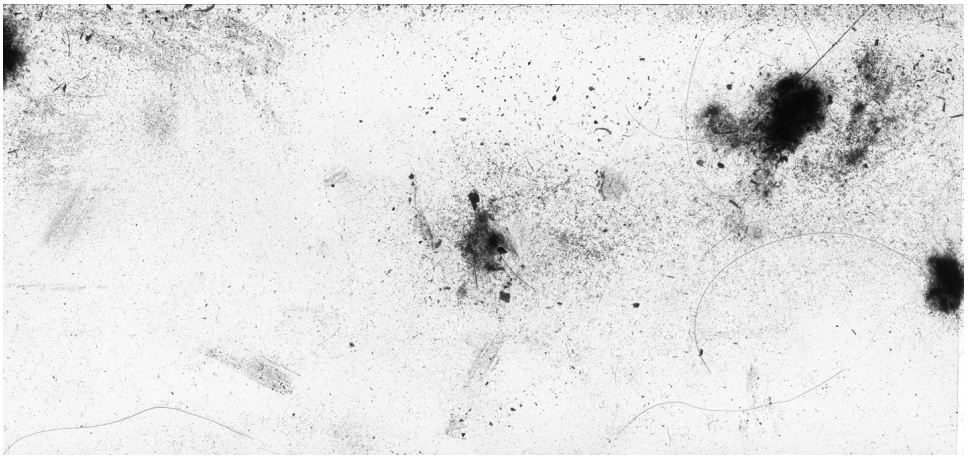
Epson F-3220 film scanner; unexposed blank medium format negatives; Apple G5 Computer; Adobe CS3 Photoshop.

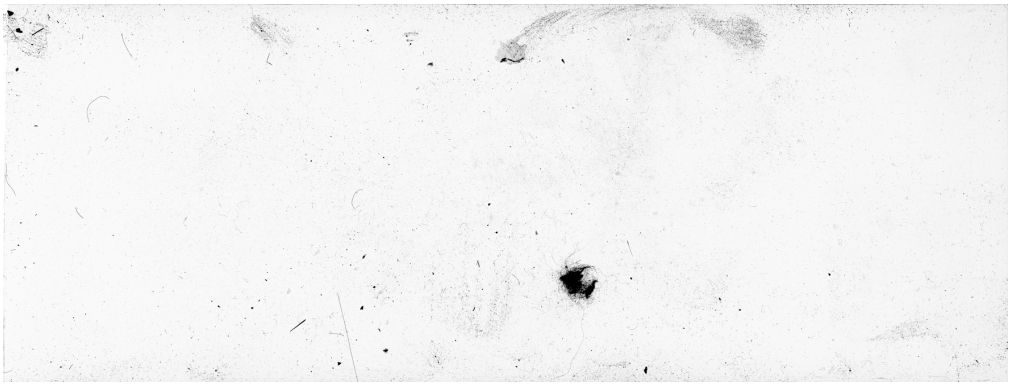
Methodology:

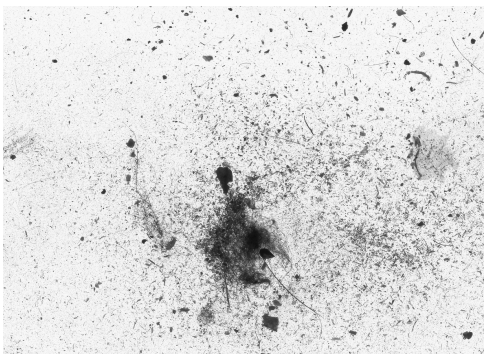
A series of unexposed 'blank' or empty negative strips were left out in the studio for a period of two weeks.[29] Each film negative was then placed into the film scanner and scanned. Each section was scanned in greyscale, at 4800Dpi, and an image obtained.

[29] The negative film seemed an appropriate material that also refers back to materiality of analogue film, as well as mimicking the glass sheet. This is also similar to how Nam Jun Paik used blank filmstrips to gather dust and scratches in *Zen For Film* (discussed in chapter 2.5).

Image scans







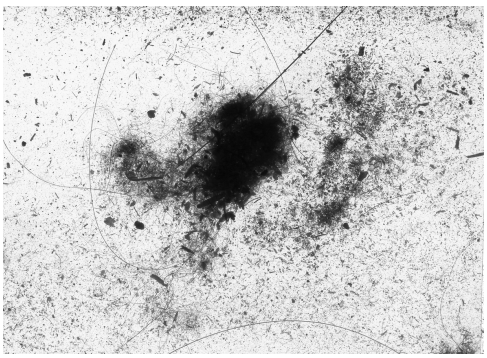


Figure 30, Selection of image scans from experiment 6.

3.8 Conclusion of experiments

In experiments 1 and 2, a number of significant visual shifts occurred in the photographic image as it was gradually elevated (*see figures 25 & 26*). At 17mm above the glass bed the photograph lost the sharp contrast of the original, softening slightly, strong whites were lost and the image began to grey. The consequence of such a small space between the bed and the image is an immediate visual shift in the image. As the photographic image in experiments 1 and 2 was increasingly elevated, they became increasingly out of focus, which could be expected considering the scanner device has a fixed focal point, at the level of the scanner bed. The image became a soft grey image space, engulfed by a visual grey fog - not too dissimilar to the fogging effect of a roll of film exposed to light. However there was a softening of the image, unlike digital software manipulation, which is a pre-programmed manipulation. This softness was created through physical distance, and seems more akin to the inadequacies of human vision, the degrading and shifting of vision through long or short sightedness.

At 22mm, specks of white marks appeared within the image. On closer inspection these were fragments of dust and debris that had settled on the scanner bed as space was created. The small space allowed air to circulate around the glass bed and it had affected the scanned image. All the images from this point of 22mm onwards included these specks of white dust and the image gradually became completely grey with no strong contrast or sharpness.

At 67mm there was a significant shift in the image through a loss of detail of form; the image had begun to appear un-recognisable from the original. There was also a moiré effect visible within the image at this height, which highlighted the presence of the glass for the first time. The only clarity seen in the image was through white specks of dust, which stood out against the grey image. It seems that at this distance there is an optical split between the white specks and the grey image. The dust specks sit as another physical layer, completely apart form the image. The dust seems to pull us to the surface of the image, a foreground image, lying against the photographic space now seemingly ‘beneath or behind’. The sense of space within the image has shifted.

At 292mm, without prior knowledge of the original source, the final images are unfathomable, remaining an undulating grey lightly tonal surface, punctuated by clear, sharp

particles of dust and debris. At this distance a seemingly new distance has emerged within the image, which exists between the scanned image and dust, and which is almost completely grey with a soft patterning effect within it. White marks strongly stand apart from this grey image, splitting the picture plane, creating a newly perceived foreground and background.

This simultaneous capturing of the distance of the photograph and closeness of the dust is amplified in these last images of experiments 1 and 2, which generates two optical distances. Firstly, the distance of the dust, which seems to be a close distance, touchable, the presence of here and now of the dust in front of the eyes, and secondly, the distance of the photographic image perceptually held away, a distant scene, by the presence of dust. Each element appears visually separate, suggesting two pictorial planes, one vertical and one horizontal. This seems to suggest the two opposing orientations of the picture plane to which Steinberg refers (Steinberg 2007). The vertical image space, seen as the photographic 'window', even when completely out of focus, is challenged by the horizontal sheet effect, of the presence of dust. It may be suggested therefore that the dust draws attention to what is normally hidden in a photograph – its surface, and the lens through which it is captured. This seems to mimic how we see into the monitor screen, through the glass surface of the screen. As Friedberg (2006) suggested, (discussed in chapter 1.1) this is the digital window, which we now look through. This is also the window we see through; however, when direct light hits the screen surface it highlights the presence of any dust and smears on the surface, and draws attention to both the screen surface and the image sitting within it. This is a shift in our looking not in the screen but at its very outer surface, as Gilbert-Rolfe describes it, a 'hard plastic surface' (Gilbert-Rolfe 1999: 26).

The images of experiment 3 reveal dust, hair and bits of debris, which have settled onto glass sheets left horizontally open to the air for the period of one week (*see figure 27*). The scanned images reveal that dust has settled evenly in most parts, covering the glass entirely, which was fairly expected. An initial surprise of these experiments was that the image generated revealed dust as white marks in front of a darker space, rather than as darker particles against an empty white background. They reminded me of a fragility seen in chalk drawings on blackboards, where the black expanse of the background is punctuated by stark white delicate surface markings. Along with the dust, these images in experiment 3 also captured the space of the room, beyond the dust glass layer. There was only air and

light, but the scanner lens has also captured an odd reflection of itself as it scans, leaving tonal banding in parts of the image. There is a strange *nothingness* to this space, as an image of something seems to have been caught yet nothing is strongly present. There is a sense of a dark space, a void, behind the specks of white. As photographs, there is an expectation of the photographic image to reveal something of the external world. However, this process seems to be thwarting that expectation, almost as if the camera is suddenly turned in on itself. It is interesting to note the way in which the viewer looks for the smallest clues to construct a literal reading of these images.

By inverting the images, the dust became positive, clearer, and more recognisable as matter. However, there is also another unexpected visual element to these images: that of my own fingerprints as I had touched and moved around the plates and placed them onto the scanner bed. This was a surprise and is direct evidence my own human contact, which had not previously happened in the other scanning processes. There are also slight scuff markings in places, where something has moved across the dust surface and disturbed the dust.

Within experiment 4, the dust and the photograph were scanned in contact, together; the two layers may be seen almost as belonging to one space – the photographic, as this is more constant than the small specks of dust (*see figure 28*). However, very quickly the dust takes on a stronger visual presence than the photographic image. As height was increased the same visual shift happens as previously found in experiments 1 and 2; the image greyed out and the dust dominated by its harsher white contrast. In doing so there is again, a split within the picture plane, between the photographs' vertical illusory *window* and the horizontal sheet of the dust. At the final stage of experiment 4, as the photograph was held above the glass bed, the dusty glass sheet was removed and the bed was cleaned. Even after this cleaning, another scan of the photograph reveals a new layer of dust, lying on the cleaner glass bed.

A further stage to experiment 4 is experiment 5. This experiment examined the visual effects in more detail (*see figure 29*). In order to do this a smaller section of the scan was captured each time with much greater resolution. Within these images, although sandwiched close together, there still exists a split between the two layers, between dust and a background space. The black and white photograph was again, as seen in experiments 1 and 2, thrown into a background position, into a grey tonal plane. However, the closer magnification of the

photograph revealed a more smoky tonality to the photographic space; similar to the effects of a smoke licked etching plate ground, where the flame literally touches the ground and blackens the surface with a carbon trail. This smoky grey is more of a shadowy, undulating shift in tone, which reminds me of Susan Derges' photograms of sea and riverbeds (*figure 30*). A similarity emerges here, in the capturing of the image through space, whether through the volume of water as seen in Derges' photographs, or in my experiments, through air created above the scanner bed. The space has actually diffused the tonality of the image.

The dust was seen to sit seemingly above the image as sharp marks, in contrast to the softer background. Where the larger magnification revealed bigger clumps of dust, there was an increased ambiguous illusory effect of a shadowy surface. The dust clumps are increasingly material, suspended above the surface, seemingly generating shadows of their own onto the background. There is a very ambiguous sense of scale to the images, where the image might suggest a microscopic detail or a lunar surface. The dust clumps are so physical they seem heavy and dense. The dust within these image scans is lighter, scattered all over darker tonalities of a photograph. In black and white the dust is light, reminiscent of light resin dust of the aquatint process, sprinkled over the darker steel etching plate; where hand shaken, it lies in thicker clumps on the surface.

In experiment 6, the greater magnification of scanned dust revealed that there is no space within the scan, which was without dust of some kind (*see figure 30*). There were many different ranges in the dust matter revealed, both in scale and type, from long hair strands, to small tiny hair fibres; from miniscule specks of matter to larger rocks and twig-like shapes; from single dense areas to large clumps of matter. These larger clumps are very visible,

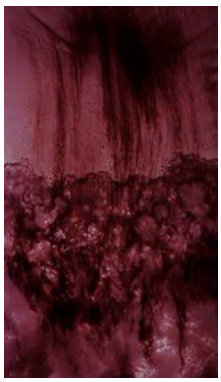


Figure 30, Susan Derges, River Taw Series (1977). Gelatin Silver Print.

what Stoeker (2011) describes as *Wollmaus* (woolly mice), which collect in corners of undisturbed rooms.

What may be drawn from these practical experiments is how the nature of the flat bed digital scanning process may be opened up to reveal new visual elements that consequently shift the reading of the resulting image. This shift occurs as a shift in the reading of both image space, and also in the reading of metaphorical associations of seeing dust (discussed in chapter 8).

The images I have captured from the experiments have visually demonstrated that the horizontal orientation of the scanner bed, directly affects the way in which the image, and other visual elements are captured. The horizontal orientation of the process informs the way in which physical objects/images are captured, through weightiness and gravity, which holds them in contact with the scanner bed. The act of lifting the lid on the scanner has allowed dust and debris to fall and settle on the surface of the scanner bed through gravity, and also through static. As a result, every image where the scanner lid has been lifted becomes imbued with dust specks. As the dust and debris settled onto the glass sheet, it not only made itself visible as particles of matter, but also highlighted the flat horizontal surface of the glass bed. I highlight this as the reassertion of the surface of the *window*.

What I have seen within the experiments, as a consequence of the dust entering the scanned photographs, is a shift in visual reading of the resulting image. The visibility of dust literally blocks the view of the photographic image. This blocking prevents the reading of the photograph as a whole image, as we continually encounter the dust specks. According to Mitchell this could be described as a lack of visual closure. In his book *The Reconfigured Eye* (1992), Mitchell discusses how the viewer searches all the visual elements of an image to strive for a whole, complete reading (Mitchell 1992: 32). Within the experiments however this is problematic as the dust is blocking the photographic image. Perceptually, the photographic image seems intact behind the dust particles, even though the particles are actually preventing the capturing of the photographic image. The result is a visual jarring between the surface dust and the illusionistic space of the photographic image.

Wendy Koenig's recent research into the notion of visual interruption[30], also offers insights into these perceptual effects of dust blocking the view of the photographic image. In her recent research, Koenig analyses three artists' works, the paintings of Gerhard Richter, the architecture of Daniel Libeskind, and Illya Kabakov's installations, using a methodological model from the aesthetics of reception[31] within the visual arts to suggest that it is principally through a strategy of visual interruption that we may gather new meaning to visual works. In her book, *The Phenomenon of Interruption in the Visual Arts* (2009) Koenig explores how these interruptions may be pauses, gaps, or blockages, among other things, which create a jarring in perceptual readings. In visual forms, as Patin explains, this could be a 'Defamiliarization and disorientation…a shudder, a tension…' (Patin 2009: ii).

It is this notion of visual blockage as a perceptual interruption, that I draw on to form the basis of my visual analysis of the experiments, arguing that dust, falling on surface generates a visual blockage of the photographic image creating a new perceptual reading of orientation and distance within the image picture plane. I suggest that the dust generates this shift by drawing attention to the flat bed, as opposed to the vertical illusory space of the photographic image. A physically perceived shift in orientation occurs, oscillating between the sheet effect of the dust and the illusory photographic image, between horizontal and vertical picture plane orientations. As physical space increases during the experiments, more air circulates around the scanner, and so more dust falls onto the glass bed. As more dust is captured within the image, perception of the flat glass bed increases and so the photographic space becomes increasingly distanced. If the dust creates and then amplifies this shift in perception of space and orientation, this shift cannot occur without it. The shift is therefore a direct consequence of the horizontal orientation of image capture which allows dust to fall through gravity, thereby affecting the perception of the image.

Dust's presence within the scanned images also generates new metaphorical readings of a sense of loss. Dust implies loss both a visual loss of the view through the window by the visual *interruption* a well as a loss of the matter through which the world is constructed. I have argued that as dust becomes visible within the images, it shifts the perceptual reading

[30] Wendy Koenig's original research was submitted in 2004 as part of her PHD thesis submission, entitled *Visual interruption within the visual arts.*

[31] The original title used is *Rezeptionasthetik.,* the study of literary reception, originated by German academic, Hans Robert Jauss (1960s).

of image orientation and space. However, it also reasserts a sense of materiality of physical things. The dust asserts both its presence as matter, but also highlights the inevitable material decay. Where the scanner lid is opened during the process, dust seems to be an almost inescapable visual element to the images. This may therefore generate a reading of the inevitable loss of all things material, which seems to generate an interesting visual contradiction, as it has become revealed through what I have described as an immaterial digital process, where touch and human presence is absent, yet signifies all that is material and present. I suggest this is an interesting paradox for an artwork, to reveal both the stuff of life and death, to imply absence by its very presence.

In the following chapter I will analyse a body of artworks I have made throughout the research, which have increasingly employed these perceptual effects of dust, developing the metaphorical readings of dust within the image.

References

Gilbert-Rolfe, J. (1999) *Beauty and the Contemporary Sublime*. New York: Allworth Press.

Koenig, W. (2009) *The Phenomenon of Interruption in the Visual Arts*. New York: Edwin Mellin Press.

Mitchell, W. (1992) *The Reconfigured Eye; Visual Truth in the Post-Photographic Era*. London: MIT Press.

Nancy, J. L. (2008) *Corpus*, trans. R. A. Rand. New York: Fordham University Press.

Patin, T. (2009) Preface. In Koenig, W. *The Phenomenon of Interruption in the Visual Arts*. New York: Edwin Mellin Press.

Steinberg, L. (1972) The Flatbed Picture Plane. In Steinberg, L. *Other Criteria: Confrontations with Twentieth-Century Art*. New York: Oxford University Press.

Stoecker, W (2011) *My Empire of Dust*. BBC Radio 4. [Internet] Available online at http://www.bbc.co.uk/programmes/b012r7jx [Accessed] 15.08.2011

CHAPTER 4. ANALYSIS OF ARTWORKS

In previous chapters I set out central issues of the visibility of the photographic picture plane through orientation, weight, material presence, and tactile touch during image making. From these discussions an argument emerges for the shift in the perception and reading of the photographic printed image, through the visual effects of dust.

In this chapter I will discuss a number of artworks that I have made during the research period to test out and develop these issues in the studio. The artworks themselves propose new questions, which have resulted in further research and experiments, in particular the notion of dust has emerged as a significant visual element, and this has been given increasing analysis within the practical work. I have grouped the artworks according to the particular ideas that have driven the works. I have produced many different bodies of artworks and although the images differ they all share similar methods and themes.

I will begin with a description of each series of artworks, followed by a short outline of the main intentions and strategies employed. In the following chapters I will discuss particular aspects of methods and decision-making processes in detail, with reference to particular bodies of works and in relation to the key theories and issues that have arisen throughout the research. These have been identified in the following sections as being: the dissolution of the landscape image; grey; emptiness; drawing on the surface; drawing as touch; perceptual interruption, and my drawings of dust.

Artworks 1

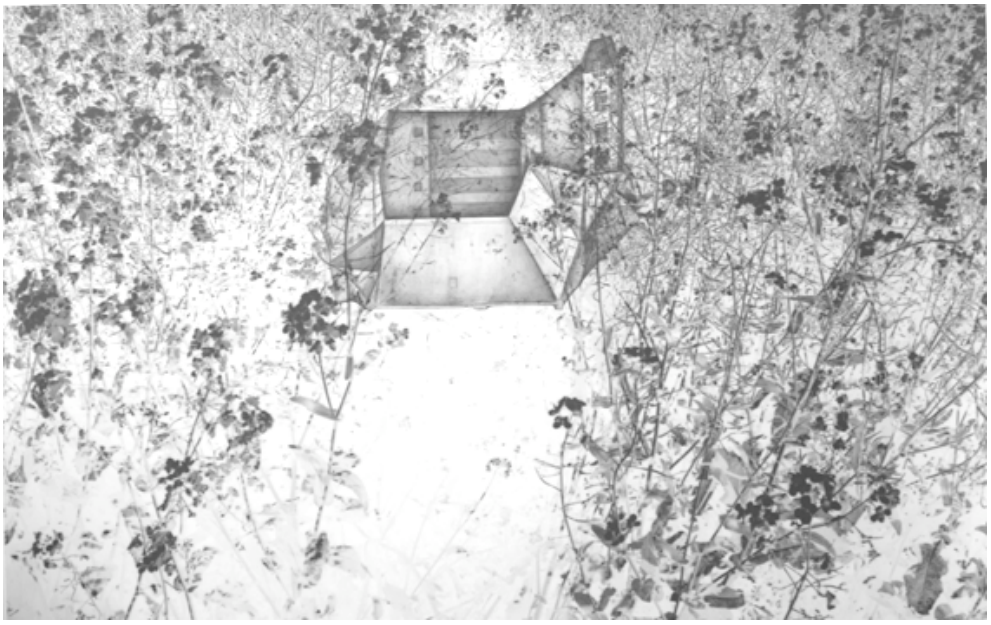
Wir Liegen auf dem Dach (we are lying on the roof) series (2007-8)

Digital inkjet photographic print and graphite pencil, 100cm x 200cm

Wir Liegen auf dem Dach 1

Wir Liegen auf dem Dach 3

Wir Liegen auf dem Dach 4



Wir Liegen auf dem Dach 6

This series of works consists of digital photographic inkjet prints with added drawing using graphite pencil. The prints are 100cm x 200cm and printed on a heavyweight Somerset satin enhanced paper via an Epson 9600pro inkjet printer. The photographic images used are of rapeseed fields, which have been de-saturated and manipulated using Adobe Photoshop software to crop the images to the required scale and to generate a mid-grey tone in order for the printed image to have a closer dialogue with the intended graphite drawing on its surface. The hand drawings are of small paper buildings, which have been made and then drawn from, onto the printed photograph. These works represent the beginning of my formal research. These artworks were exhibited and discussed at multiple venues including *6th Graphic Biennial*, Novosibirsk State Museum, Russia; *Hotplate International Print Exhibition*, Pheonix Gallery, Brighton. (*See Appendix 3*)

This was the first body of work to be produced. The aim of these works was to question how the pictorial plane was perceived through the coming together of a drawing and a photographic image. It sought to question the resulting visual dialogue when the digital photographic print and drawn mark exist on the same pictorial plane. It was my intention to employ the combined methods of digital photographic print and drawing in an attempt to make an image that may disorientate the eye both through its worked surface and in contrast to the perspectival space of the photograph.

The first strategy was to remove the photographic image from immediate recognition, and secondly, to then draw onto the surface using pencil of a similar tone as the printed photographic surface. The overlaid drawing creates a perceived disorientation where one image competes against the other as they converge on the picture plane. This dislocation is further amplified as the drawn image and the mechanical inkjet surface create an uncanny fusion, a spatial ambiguity where the picture surface hovers somewhere between each image layer, echoing a state of perpetual transition and impermanence.

Through the dialogue between photographic image and drawing, the work also questions our known associations of perspective, scale and sense of material weight within images in which photographic inkjet prints are physically overlaid with hand drawn graphite images of inverted building structures.

As a consequence of these artworks I began to re-consider the landscape image, exploring how I might be able to remove most of the visual information, and generate landscape images, with the minimum of information, but still maintain an illusory depth. I also noticed the significance of dust as having potential to highlight surface and material.

Artworks 2

***Das Festsetzen (the settling) series* (2008/9)**

Digital inkjet photographic print and graphite pencil, 70cm x 90cm

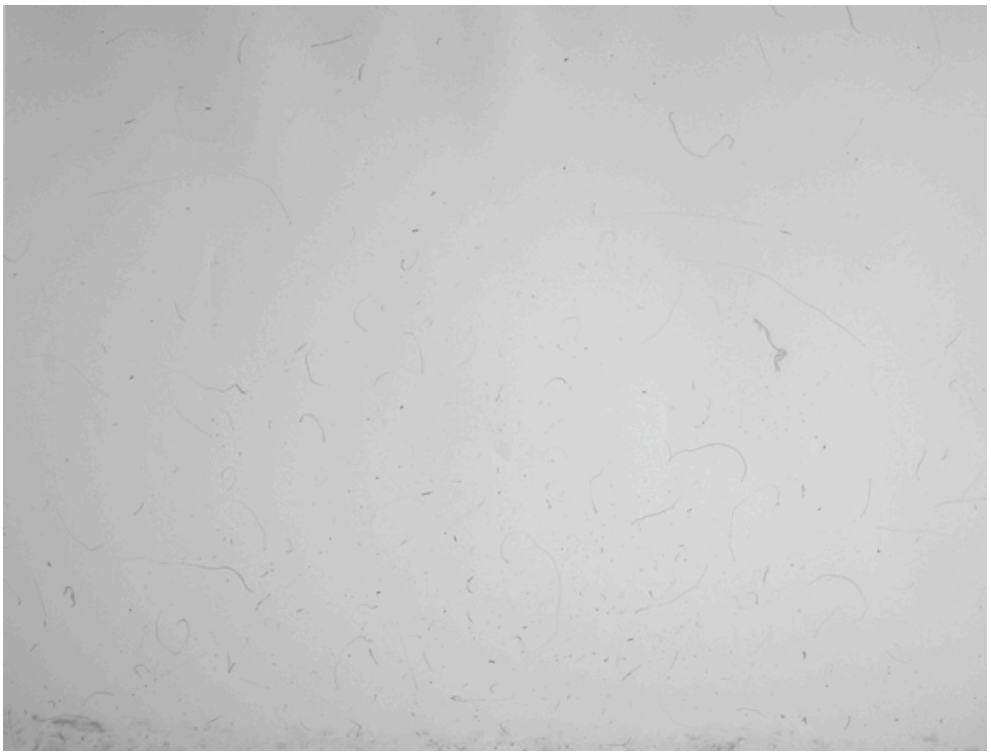
Das Festsetzen 1

Das Festsetzen 2

Das Festsetzen 3

Das Festsetzen 4

Das Festsetzen 5



Das Festsetzen 6

This series of works consists of inkjet photographic prints with graphite pencil, each work is approximately 70cm x 90cm and printed onto double-weight matte paper via an Epson 9600pro inkjet printer. The photographic images are coloured inkjet-printed images of foggy landscapes and arctic landscape scenes. The photographic images derive from both photographs I have taken, and also from found sources. The photographic images have been edited using Adobe Photoshop software to crop the images to the required scale, but have not been manipulated in terms of image content. The drawing is made directly onto the paper surface of the photographic prints. The drawings are of particles of dust and debris that have been copied from printed images of magnified sections of old slides and photographs. These artworks were exhibited and discussed at multiple venues including *Grey Matters*, Aqffin Gallery, London; *Impact 6 International Print Exhibition and Symposium*, UWE, Bristol (*See Appendix 3*)

These constructed artworks were made to further question the photographic image and the drawn surface. The aim of these works was to question how the drawing drew attention to surface, generating an optical split within the picture plane. It drew on the recent body of research by Wendy Koenig, *The Phenomenon of Interruption within the Visual Arts* (2009). The works set out to question the perception of both a horizontal and vertical orientation within the same pictorial plane, drawing on Leo Steinberg's (1979) notion of the flatbed picture plane. This body of work explored fundamental notions of emptiness within the photographic image. The photographic image generates a 'detached' arena for the physical overlaying of a hand drawn mark. This simultaneously challenges the illusion of depth apparent in the photographic image beneath and emphasises the physical object-ness of the resulting work. The second stage to the work is through hand drawing onto the printed surface. The drawing asserts the surface of the image. It places the optical and tactile within one constructed image. The overlaid drawing creates a perceived disorientation where one image is harder to be read against the other as they converge on the picture plane. This dislocation is further amplified as the drawing becomes a metaphor for the presence of the photographic lens, creating a further visual dislocation in the reading of perceived space within the image.

As a result of making and exhibiting of these artworks, it led me to explore the dust and the drawing of dust in more detail.[32] I began to use the experiments directly to gather dust onto glass sheets, from which I could then gather much more information for the drawings.

[32] During the exhibiting of these artworks at Aqffin Gallery, London, I carried out a series of questionnaires to gain feedback on the perceptual readings of the picture plane (*See appendix 4*).

Artworks 3

***Staub (dust) series* (2010-11)**

Digital inkjet photographic print and graphite pencil, 70cm x 90cm

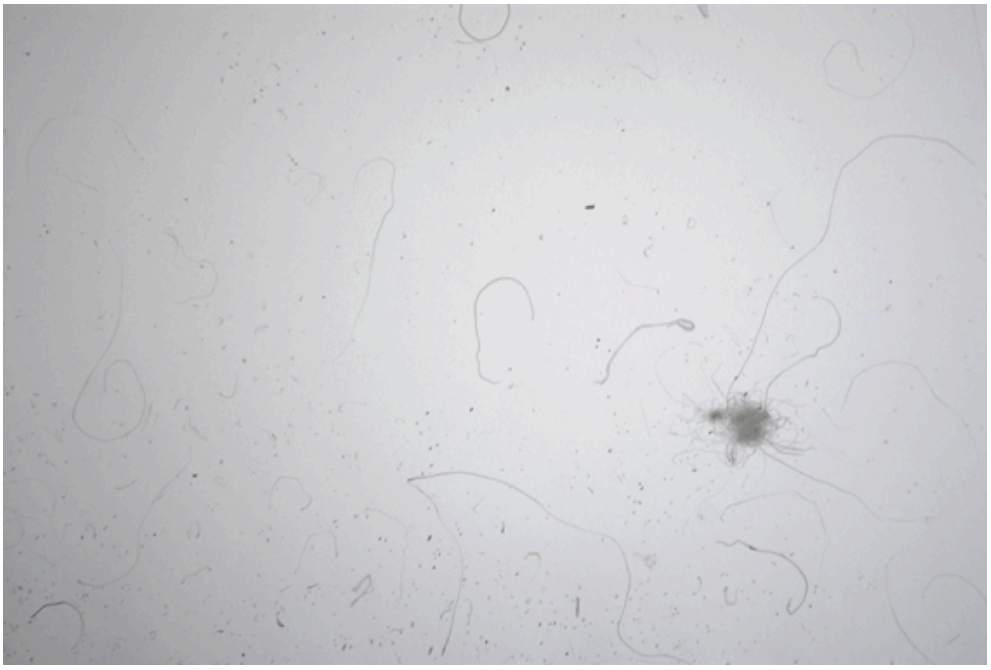
***From the series Staub* (2011)**

Digital inkjet photographic print and graphite pencil, 100cm x 200cm

Staub I

Staub I (detail)

Staub II



Staub II (detail)

Staub III

Staub III (detail)

Staub V

Staub V (detail)

Staub VI

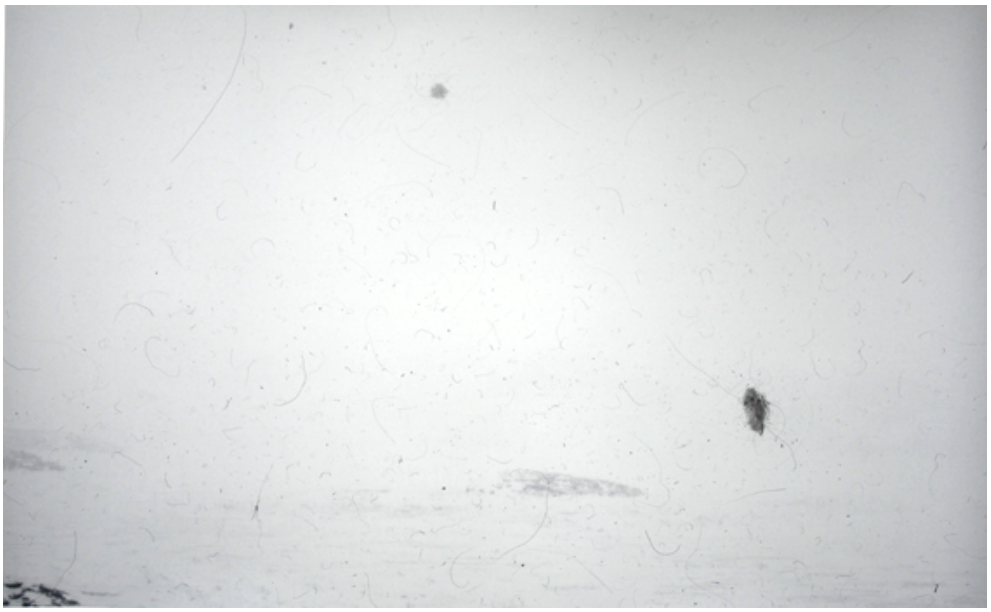
Staub VI (detail)

Staub VI (detail)

Staub VII

Staub VII (detail)

No 1, from the series Staub



No 2, from the series Staub

No 3, from the series Staub

No 4, from the series Staub

These two series of works consist of inkjet photographic prints with graphite pencil. In the series *Staub*, each work is approximately 70cm x 90cm and printed onto double-weight matte paper via an Epson 9600pro inkjet printer. In *From the series Staub,* each work is approximately 100cm x 200cm, and printed onto somerset velvet paper via an Epson 9600pro inkjet printer. The photographic images are coloured inkjet-printed images of foggy and arctic whiteout landscape scenes. The photographic images derive from both photographs I have taken, and also from found sources. The photographic images have been edited using Adobe Photoshop software to crop the images to the required scale and manipulate colour/saturation, but the images have not been manipulated in terms of image content. The drawing is made directly onto the paper surface of the photographic prints using a variety of graphite pencils. The drawings are of particles of dust and debris taken from printed images of magnified sections of old slides and photographs. These artworks were exhibited and discussed at multiple venues including *Impact 7 International Print Exhibition and Symposium*, Monash University, Australia; *Viewfinder*,[33] ArtspaceH Gallery, Seoul, South Korea (*See Appendix 3*)

[33] As part of an ongoing printmaking research group, the work has become part of *Viewfinder*, a touring exhibition by a group of artists who are questioning the nature of representation through both digital and analogue photographically-printed images.

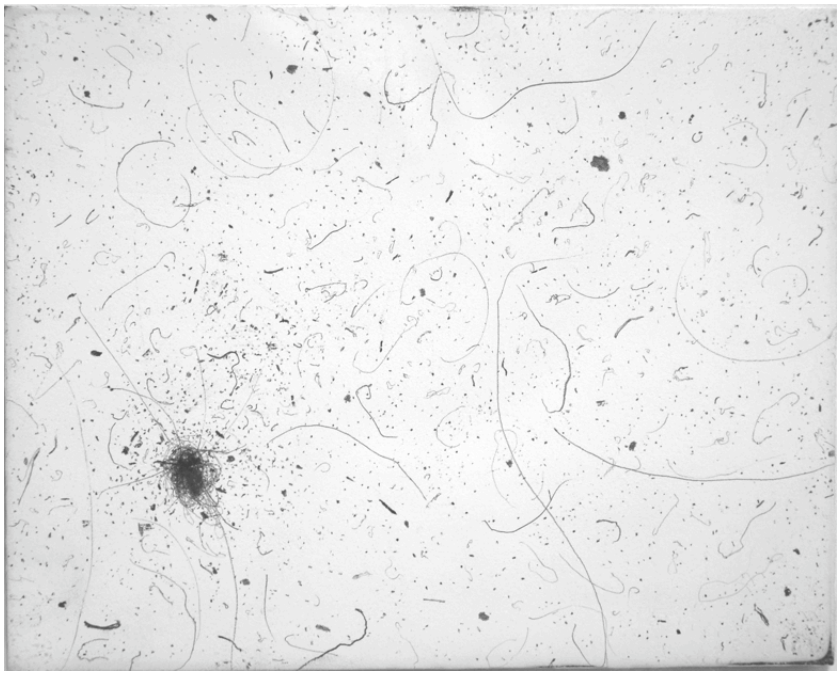
The aim of this body of work was to question the nature of tactile touch as an important aspect to the making of artworks, as evidence of my own unique contact and presence during the image-making process. The dust has become significant in this work in questioning the manifestation and perception of the technological image. It draws upon key texts by Merleau-Ponty, Nancy and Heidegger to question how touch may be concealed or revealed within an artwork through the use of technology and the hand. Dust is significant within the work as reasserting presence, matter, surface, and time within the digital print process. The work also confronts the inevitability of dust through the process of making artworks, which exist as material within the world, in direct opposition to the immaterial digitally manifest image.

As a result of this body of work I decided to see what would happen when the photographic source was eliminated altogether.

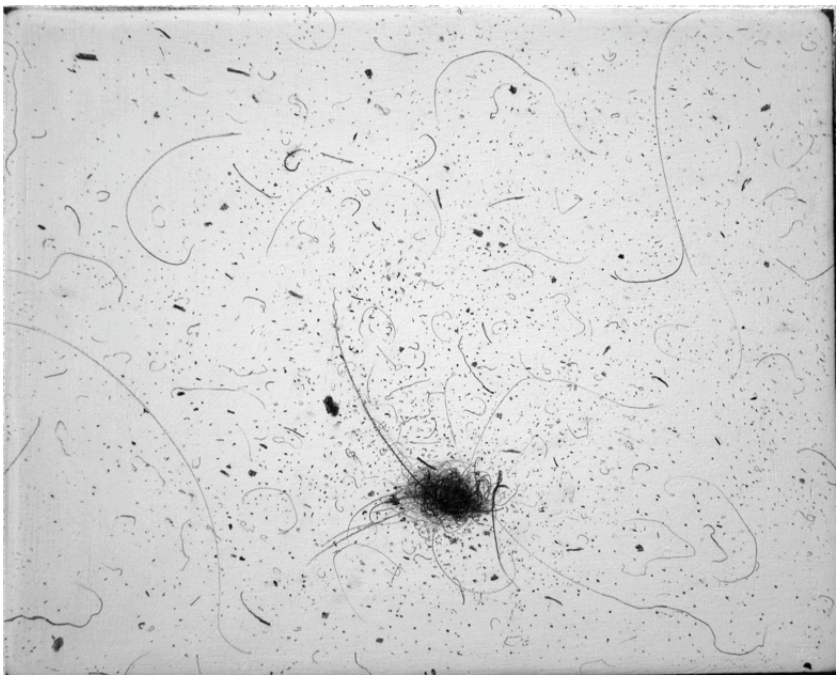
Artworks 4

***Gefallener Staub (Fallen Dust) series* (2011)**

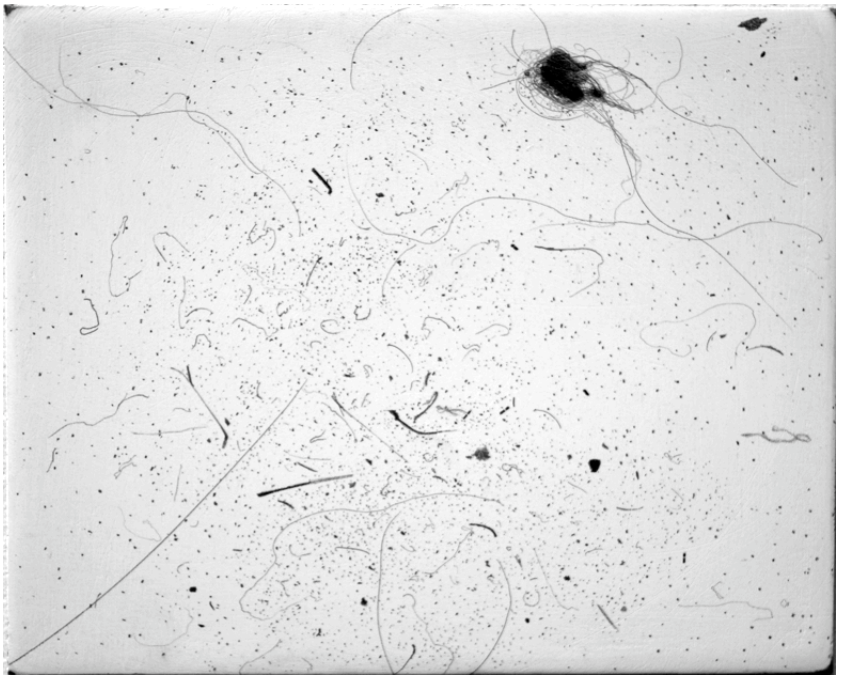
Graphite pencil on gesso coated copper plate, 10cm x 14cm



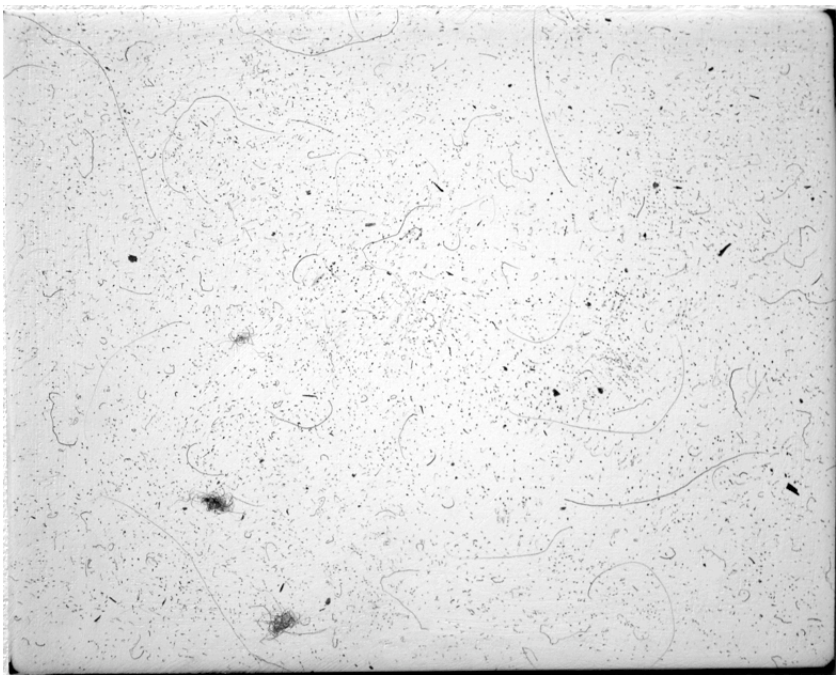
Gefallener Staub



Gefallener Staub II



Gefallener Staub III



Gefallener Staub IV

This work consists of a series of pencil drawings made onto the surface of gesso-coated copper. The works are small in scale, around 10cm x 14cm. The drawings in pencil are of particles of dust, hair and debris. These artworks were exhibited at *Jerwood Drawing Prize,* Jerwood Space, London. (*See Appendix 3*)

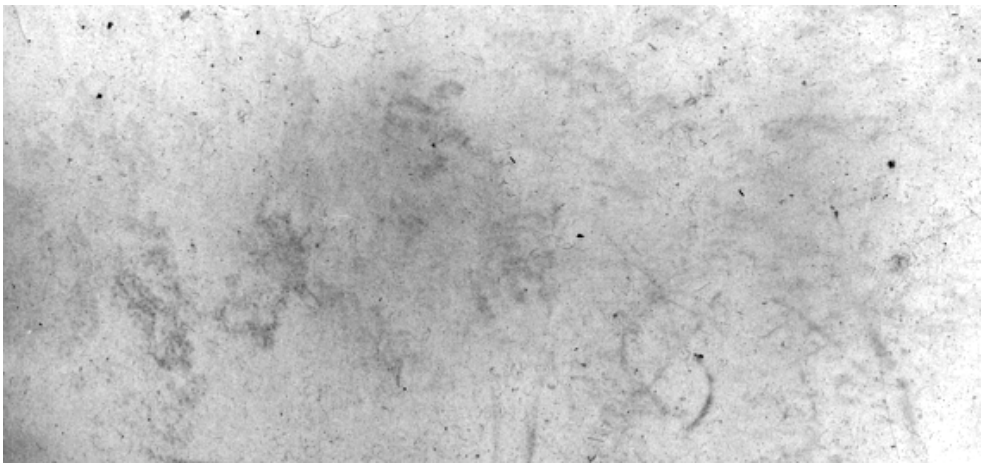
The works investigate the drawing of dust without the presence of the photographic image as a background support. The drawing of dust here becomes an image that may be seen as both nothing, and everything. I have used the copper sheet instead of paper, to refer to a more precious surface, which may then accumulate dust. The copper sheet has a more significant weight and body to paper, and so the physical handling of the plate and drawing becomes more akin to the preciousness of the Daguerreotype image.

As a consequence of these artworks I also explored how the digital image may contain both the photographic and dust, with no hand drawing.

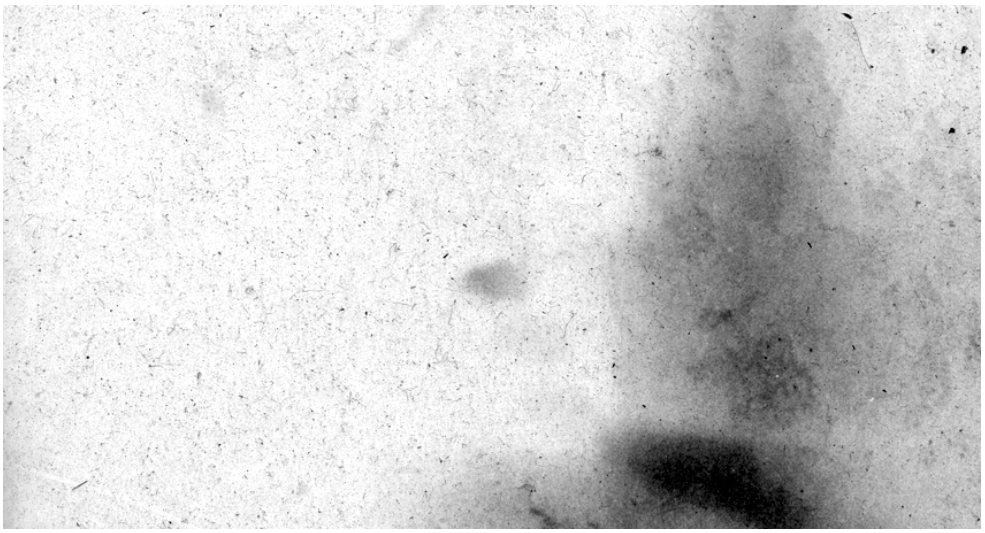
Artworks 5

***Photo and dust* (2011-12)**

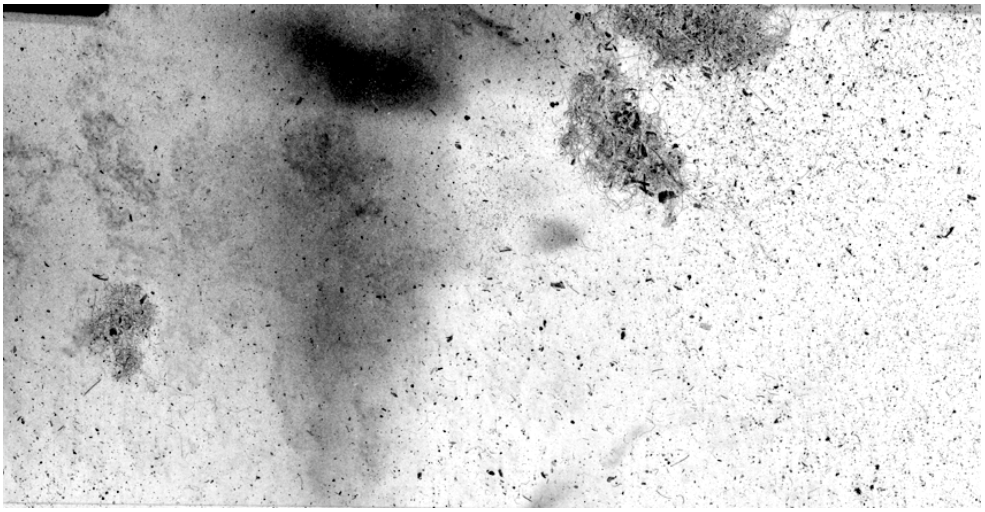
Digital inkjet print, 170cm x 80cm (Approx.)



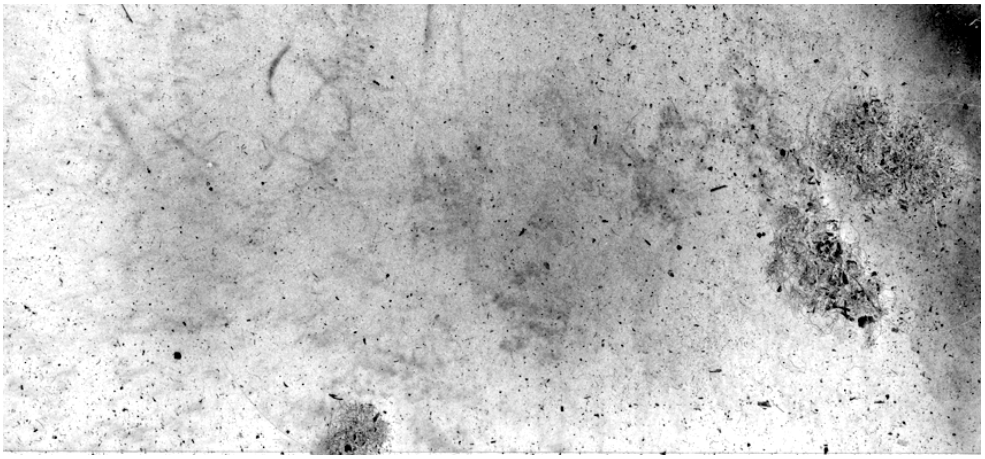
Untitled 1



Untitled 2



Untitled 3



Untitled 4

This series of works consist of inkjet photographic prints approximately 170cm x 80cm in scale and printed onto Somerset paper. These images have emerged directly through the scanning process, as part of the practical experiments. The photographic image and thin layers of dust have been scanned together to generate a digital image. The photographic image has been cropped, resized, and manipulated in exposure using Adobe Photoshop software.

This is the final body of work produced. The aim of this series was to explore how the photographic image and dust may exist together within the digital image. There is no physical drawing within these works. I wanted to see how the small section of photograph and dust which has been blown up to a large-scale print may differ perceptually from the other large-scale artworks where the drawing of dust is a separate, physical layer.

CHAPTER 5. DISSOLUTION OF THE PHOTOGRAPHIC IMAGE

Chapter 5. Dissolution of the photographic image

In my artworks *Wir Liegen auf dem Dach, Das Festsetzen* and *Staub,* I begin with the digital photographic image as the first stage in the artworks construction. The digital prints within these series evolve through my working with an image on the computer, via the screen. Digital processes of image capturing through both the camera and through digital scanning methods has been a way for me to generate a photographic image, and allows me to manipulate the image quickly through computer software programmes such as Adobe Photoshop. It is this immediacy, which is important for me here, since I can become engaged in the illusory photographic space with the minimum of delay. I work with and manipulate this illusory space, on the computer, and later, I reengage with the printed image through the act of drawing. As Virilio explains, the digital image is immediate, '…everything is always already there, offered to view in the immediacy of instantaneous transmission' (Virilio cited in Friedberg 2006: 185). This is a process that allows me to begin with erasure, or an emptying out of information in the image, rather than the gradual accumulation through marks and layers as may be seen within more traditional media such as drawing or painting. Colour of the image is also emptied out through de-saturation of the images into a grey colour, a significant shift allowing the photographic print to sit more homogenously to the colour of the graphite drawing. In the following sections I will reflect and analyse my intention in emptying out the image, and the consequences in the reading of the resulting image.

5.1 Seeing Clearly

In his essay *The Ontology of the photographic image* (1945) Andre Bazin describes the emergence of photography as liberating the painter and sculptor, or the plastic arts, from the 'necessity to duplicate the external world' (Bazin 1967: 10). This causal process embedded the image with a notion of 'realism,' and 'photographic truth' through the direct 'impression,' of whatever lay in front of the camera lens. This has long been considered photography's distinguishing characteristic, which set it apart from any other representational media. The photographic image was considered to be a more objective resemblance, or likeness captured by the 'automatic' image through the camera, and would be opposed to the authored image made directly through the hand made.

However, there are many problems to this claim of 'photographic truth', which have been widely discussed and debated since the emergence of a medium created by 'natures own hand,' as described by William Henry Fox Talbot in his illustrated book *The Pencil of Nature* (1844). Such discourses around the 'realism' of the photograph include German critic, Siegfreid Kracauer (1960) and Andre Bazin (1967).[34]

One aspect of this, which I would like to examine first, is the notion of a 'likeness' of optical clarity to human vision, and to how we may actually perceive the world. The notion of truthfulness in relation to (visual) clarity is a complex issue and carries with it conflicting responses. Writing in the 19th Century, the art critic John Ruskin, meditates on what appears to be an inevitable confusion and doubt in our ability to see clearly. In the act of simply 'seeing' the ground at our feet, he argues that there is '...a mystery...that there is literally no point of clear sight, and there never can be' (Ruskin cited in Clark 1964: 172). In his book, *Modern Painters*, Ruskin wrote the essay *Seeing Clearly* (1856), arguing that, '…there is a continual mystery caused throughout *all* spaces caused by the absolute infinity of things. WE NEVER SEE SO CLEARLY.' (Ruskin cited in Clark 1964: 172 *original emphasis*). For Ruskin, to really 'see', is as Arrhenius describes, in his analysis of Ruskin's writing,

> …a search of transcendental vision beyond the habitual; to see truthfully, to see with an "*innocent eye*" … to leave visual convention behind and really *see* the misty and the faint. To see, in one sense, that which obscures clear vision. This will mean the negation of the fiction of a distant spectator, able to see objects in a perspectival space from afar, and replace it with eyes that see with body in context. (Arrhenius 2005)

What Ruskin seems to suggest is that the clarity of structured perspective fails to adequately represent our perception of space, which becomes increasingly indistinct through distance. Another aspect to this which I would like to discuss here is optical clarity in relation to sight itself. Hermann von Helmholtz (1896), an acclaimed student of optics, describes seeing thus,

> The eye represents an optical instrument of a very large field of vision, but only a small very narrowly confined part of that field of vision produces clear images. The whole field corresponds to a drawing in which the most important part of the whole is carefully rendered but the surrounding is merely sketched, and sketched the more roughly the further it is removed from the main object. Thanks to the mobility of the eye, however, it is possible to examine carefully every point of the visual field in succession. Since in any case we are only able to devote our attention at any time to one object only, the only point clearly seen suffices to occupy it fully

[34] These early discussions were around the 'mechanically immitative' and 'accuracy' of detail, as art historian A. Hyatt Mayor discussed in his well known essay *The Photograpic Eye* (1946).

> whenever we wish to turn to details; on the one hand the large field of vision is suitable, despite its indistinctness, for us to grasp the whole environment with one rapid glance and immediately to notice any novel appearance on the margin of the field of vision. (Helmholtz cited in Gombrich 1980: 204)

The description by Helmholtz suggests that there is only a small part of what we see through our eyes that is actually clear and focused. He asserts that to see the larger visual field more clearly we must move the eye 'in succession…around the visual field.'

5.2 Visual uncertainty

As Ruskin and Helmholtz have asserted, human vision is far from clear and distinct. I would now like to discuss this in relation to the pictorial photographic image. As I have discussed, the emergence of the photographic image carried with it the claim of a more realistic likeness to the world, of a 'photographic truth' obtained through the 'objective' camera lens. This 'truth' was based on 'realism.' However, as I have established, the detail obtained through the camera may not resemble our visual perceptions.

Where Ruskin's writings around *Seeing Clearly* established his doubt in the sharpness and clarity of vision, he further examines this in relation to the Daguerreotype photograph. Ruskin expresses a further doubt in the sharpness of the photographic image to vision. Ruskin asks

> [...] why is it that a photograph always looks clear and sharp, – not at all like a Turner? Photographs never look entirely clear and sharp; but because clearness is supposed a merit in them, they are usually taken from [*sic*] very clearly marked and un-Turnerian subjects: and such results as are misty and faint, though often precisely those which contain the most subtle rendering of nature are thrown away, and the clear ones only are preserved. (Ruskin cited in Arrhenius 2005)

The writing of Art historian Erwin Panofsky, also discussed a similar misalignment of the likeness to vision through photographic representation. Panofsky argued that the 'single and immobile eye', of the camera, carried with it a cyclopean view of the world, which is a fiction, at odds with human vision (Panofsky cited in Friedberg 2006: 46). Panofsky contradicted the early use of the mechanical perspective of the Camera Obscura[35] which, as Bazin explains

[35] The camera obscura (Latin for 'dark room') was the ancestor of the modern camera. The camera was actually a large room that would be entered by the user. Light entering a small hole in a darkened room produces an inverted image on the opposite wall. Used initially to view solar eclipses, by the seventeenth century the process was made portable by fitting a lens to one end of a box and using a sheet of glass at the opposite end to view the image. A mirror inserted inside at a 45 degree angle would reverse the image, giving the viewer corrected orientation. [Internet] Available online at http://www.accaonline.org.au/Assets/17/1/DanielvonSturmeredkit.pdf [Accessed 3.4.12]

was used to ‘construct an illusion of three-dimensional space within which things appeared to exist as our eyes in reality see them’ (Bazin 1967: 11).

Over a century later than Ruskin, both Maurice Henri Pirenne and Joel Snyder have continued to question the use of Albertian perspective to adequately represent how we perceive the world, as Snyder explains

> Albertis method demonstrates how thoroughly unusual, by our standards, his notion of perception is. All things visible are delineated with exacting clarity, from one edge of the picture to the other and across planes from the foreground to the background. (Snyder 1980: 235)

In his comprehensive book *Optics, Painting and Photography* (1970) Maurice Henri Pirenne stated that ‘our visual perception of the external, physical, world is selective, incomplete and often erroneous’ (Pirenne 1970: 10). Pirenne’s research on the physiology of the eye and structure of vision, particularly in relation to painting and draughtsmanship, examined the nature of human vision and its problematic relation to the pictorial image obtained from the camera.

Art historian Ernst Gombrich also continued the debate on the likeness of the photographic image in relation to the experience of human vision. Gombrich’s discussions, like Ruskin, emerge through a questioning of Brunelleschi and Alberti’s early methods for painters, of a structured perspective picture construction derived from perception. However, more specifically, Gombrich’s essay *Standards of Truth: The Arrested Image and the Moving Eye* (1980) questions the ‘visual truth’ of the optical picture emerging from what has been described as the ‘objective’ machine. Here Gombrich explores what he describes as the ‘visual truth’ of an image, which is made from an ‘objective machine.’ As he suggests, ‘ in contrast to what I may call the man-made image, the machine-made image can now be used with confidence to give us a truthful record…’(Gombrich 1980: 182). Gombrich makes a clear distinction between this ‘truthful record’ and the term ‘visual truth.’ Gombrich is thus suggesting that the consistent clarity within a representational photographic image is untrue of how we really perceive the world.

Gombrich discussed what he means by ‘visual truth’ by referring to the clarity and perspective of the optical x-ray image, which he identifies as a sharp image at odds with human perception, as he suggests,

> What strikes the layman or even the inexperienced physician as an optimal picture because of its clarity and its easily legible contrasts may actually suppress rather than convey all the desired information. Thus the 'sharp' image on the left fails to show that the outlines of the bones in question are anything but sharp, and it is this pathological condition the x-ray should reveal. (Gombrich 1980: 183)

Gombrich describes the continuous detail seen in such objective optical images as a 'standard of consistency … based on the art of perspective…' (Gombrich 1980: 184), which he regards as '…a convention which does violence to the way we see the world' (Gombrich 1980: 195).

What emerges from Gombrich's discussion is the suggestion that the photographic image '…may be truthful in a different way, more evocative of something which is not information but rather a peculiar kind of experience' (Gombrich 1980: 214). This seems to chime with what Ruskin's described as by a 'visual uncertainty' that the representational image may possibly come closer to human vision.

Merleau-Ponty's phenomenological analysis of visual perception within his essay *Eye and Mind* (1964) is important here. Merleau-Ponty argues that the experience of visual perception shifts away from the objective (Cartesian) gaze to the subjective body, whereby it is joined by other somatic senses along with thought to generate a deeper perceptual experience. Merleau-Ponty suggests that visual perception is not just obtained through the optical organ, but is joined by other senses to create a much deeper, a complex experience (Baldwin 2004: 290).

What I have been trying to establish is a difference between the amount of information and optical detail obtained through our eyes, and how this information may be used to generate pictorial photographic images.

5.3 Hiroshi Sugimoto's *Seascapes*

In order to explore how the photographic image can operate differently I would like to introduce a series of photographic images *Seascapes* by Japanese photographer Hiroshi Sugimoto. In these works, Sugimoto's intention is not to depict a place, but to allow the lens to capture a sense of the air and light within a place. The optical images within this series contain very little coherent visual information, yet they remain deeply illusionistic, forming 'a

blank and geographically unlocatable mirror' (Kellein 1995: 10). *Seascapes* (1989-1994) consist of large scale, predominantly grey, saturated photographic images of sea horizons (figure 32). The images have been captured through very long exposures carried out both during the day and night, compressing long durations of time within single frames. Working in black and white, although seen as predominantly grey tones, the *Seascapes* images capture the subtle movements of the sea and of shifts in light and atmospheric conditions to generate optically defocused, illusionistic images. Kellein describes these images as 'an epitome of flatness, vastness and distance, and therefore of basic orientation' (Kellein 1995: 10). The large size of these prints (approximately 119.4 x 149.2 cm) amplifies the voluminous space physically captured within the camera for each image. With each image the camera has been placed identically, where the horizon line is caught centrally splitting the pictorial plane in half, one half with water and the other with air. In some of the photographs the seascape appears as an intense dark space with a subtle shift in tone delineating bottom and top half, at others the image becomes so light that it only just reveals a horizon line in which to differentiate the two pictorial halves of water and air. These images are not shot out of focus but they have become defocused through their long exposure of a moving and shifting space (figure *33*). There are very few moments within the image where one can actually gauge any sense of focus or grounding, and we are left with visual uncertainty as to distance, scale and in some of the image, we even question what it is we are looking at.

It is important here to distinguish the unfocused image from the blurred image, such as may be seen in the works of Gerhard Richter and also Ed Ruscha's landscapes around the 1980s. Here I make a distinction between the reading of the blur as a movement and the unfocused image as stillness. It is the unfocused still image that I am interested in within my

(L) Figure 32 Hiroshi Sugimoto, *Kattegat, Kullaberg,* from *Seascapes* (1996) 119.4cm x 149.2cm.
(R) Figure 33 Hiroshi Sugimoto *Celtic Sea Boscastle* from *Seascapes* (1994) 119.4cm x 149.2cm.

discussion. It is my intention, not to manufacture a blur, but capture matter which generates an impossibility of focus – the fog and arctic whiteout – both create a smothering of forms within the landscape, and so make it impossible to focus.

As I have established through the physiological research and writings of Helmholtz and Pirenne (two major researchers in the field of optics and human vision) there is a fundamental difference in the eye's clarity of the visual field, and the still optically clear pictorial image. This notion also interests Sugimoto. Sugimoto also suggests, more broadly, that the still photographic image is at odds with how we actually look at the external world, as he explains,

> Every living person has eyes constantly moving, all the time. People cannot concentrate. They don't look at a thing for a long time. Out eyes are always moving and searching for something else to see. We have no quiet and peaceful moments to face something… (Sugimoto 1994 cited in Kellein 1995: 90)

What can be seen through Sugimoto's *Seascapes*, is how he introduces a different model for thinking about depiction. Sugimoto seems to question the nature of photographic representation[36] as a resemblance to the external world and as an embodiment of visual perception. The work also generates a questioning of the viewer's own experience and knowledge in relation to the understanding of the work.

To return to the *Seascapes* series by Sugimoto, it seems that although there is little visual resemblance to the sea, through the reading of the photographs title and our prior knowledge we bring something much more to viewing of the image. This lack of clarity forces the viewer into a different relationship with the image, slowing down reading, as we are left to dwell on what is actually present to gauge an understanding of what we are looking at. It could be said, therefore, that Sugimoto's images fail to resemble *what* we see, but they more in keeping with *how* we see. What is crucial in these works is Sugimoto's intention that he does not capture a representation of a scene that we might recognise and locate, but rather a capturing of the air, space and light through the open lens of the camera. Sugimoto's conceptual approach to these works through the mechanism of the camera,

[36] Representation is defined as the depiction of someone or something in a work of art; a picture, model, or other depiction of someone or something. [Internet] Available online at http://oxforddictionaries.com/definition/representation?q=representation Photographic representation is generally considered as the 2-dimensional rendering of a 3- dimensional scene captured through the camera lens.

enables him to be rigorous in the execution of each image, and allow whatever emerges to be caught as an image. In this way his approach is similar to Ian Burn whose conceptual approach in working with the photocopier machine led to a series of images which were actually unexpected, and secondary to the act itself (discussed in chapter 1 and 2).

To return to my earlier discussion of the claim of 'photographic truth.' The notion of 'indexicality' has been widely discussed and debated throughout a number of photographic discourses - such as Barthes' *The Photographic Message* (1961), and *Camera Lucida* (1977); Rosalind Krauss, *Photography's Discursive Spaces* (1982); John Tagg, *The Burden of Representation: Essays on Photographies and Histories* (1988) – and particularly in relation to the proliferation of digital technology, where the image may more easily slide between 'truth' and 'fiction,' such as Jonathan Friday, *Digital Imaging, Photographic Representation and Aesthetics* (2007); W. J. T. Mitchell, *The Reconfigured Eye; Visual Truth in the Post-Photographic Era* (1992) amongst others.

However, in his semiotic study on the photographic image, Roland Barthes argues that, even when faced with a visual doubt, there is still the 'denotative power' of the photograph (Barthes 1977). According to Barthes, the denotative power of the photograph is an inextricable link to the truth of an image, the, *that has been*, even when we are aware of its fictitious nature. This would suggest that even though we are aware of the manipulative nature of photography, and especially through the proliferation of digital technology, there remains a lingering belief in the 'truth' of the photographic image.

In his book *The Vision Machine* (1994) Paul Virillio examines how technology has enabled a greater visual exploration of the world, thereby bringing distant objects and places into closer proximity to the eye, as Virilio describes:

> The gaze of the west was once the gaze of the ancient mariner fleeing the non-refractive and non-directional surface of geometry for the open sea, in quest of the unknown optical surfaces, of the sight-vane of environments of uneven transparency, sea and sky apparently without limits. (Virilio 1994: 28)

This is something that has also interested the art writer James Elkins. In his book *Six Stories From the End of Representation* (2008) James Elkins describes his similar interest in images, which sit at the edges of representation, as he explains

> The images I am interested in show us things we cant possibly be seeing: things so far away, so faint, so large or soft or bright that they couldn't possibly be contained in the rectangular frame of a picture - and yet they are. These are pictures of objects that literally don't exist – that couldn't exist as they are pictured – but somehow do…they are images of almost nothing, of single sparks of light, of inexplicable blazing colour, of thin lines and dots which stand for objects that cannot be understood. (Elkins 2008: xv)

James Elkins' research of the limits of representation is an interdisciplinary analysis, bridging the arts and sciences. A large section of his discussion focuses upon the production and impact of technology on image-analysis. Elkins writes of the barely visible, seemingly formless nature of images that are caught through the optical lens of the scientist, as he describes, they are… 'irreparably distant and hopelessly removed from anything that can be understood or experienced' (Elkins 2008: 229). He examines how the starting point for image-analysis[37] has minimal information, as he explains 'electron microscopists routinely begin with images that are essentially invisible' (Elkins 2008: 129). It is these images that sit on the edge of being 'nothing' that Elkins explores throughout his discussion, and are relevant to my discussion, as many of the images contain few visual clues.

It is the search for something other than completeness and clarity, which interests me most. Lyle Rexer discusses this as a sense of 'impatience with mere visuality,' in his book *The Edge of Vision* (2009), as he explains:

> We feel throughout the history of photography a chafing at its limits, an impatience with mere visuality, and a wish for some more intimate expression of the worlds relation – but one somehow made through the eyes. (Rexer 2009: 12)

What Rexer is discussing here is the questioning of how, as optical image-makers, we strive to represent our particular and individual visual relationship to the world. This 'peculiar kind of experience' where visual information is absent, allowing imagination to take over maybe what, art historian and writer, Kirk Varnedoe has suggested when looking at the whiteness of Robert Ryman's abstract paintings around the 1960s. As he asserts 'The less there is to look at, the more you have to look, the more you have to be in the picture' (Vernadoe 2006: 243). The evocation of *emptiness*, or *blankness* has been discussed by Peter Fuller (1983), as an act of *kenosis* (self-emptying), throughout abstract painting (particularly at the juncture of modernism), and by Gilbert-Rolfe (1999) as a *blankness* manifest through the wider surfaces of technology.

[37] In particular, he examines image-analysis software such as Deconvolution.

5.4 Dissolution of the landscape image

I would now like to return to my artworks, through which I have explored these ideas of visual clarity further, through the employment of the landscape photograph and also through drawing.

Wir Liegen auf dem Dach, Das Festsetzen and *Staub* employ landscape photographs. However, it is not my intention to document and depict particular places, nor to capture an experience of place. Indeed, in some of the works the images are derived from found sources and so I have not had a direct experience of being *in* these landscapes and do not *know* the places depicted. Rather, I am interested in constructing a sense of landscape, and using landscape as subject matter to provide me with the opportunity to generate a deep space, something to look out *into*, rather than *at*. My use of the photographic image is to generate a continuous perceptual field, an immediate illusionistic window. It is the point at the limits of photographic representation that interest me most. It is my intention to generate a photographic image which may sit at the verge of recognition and photographic representation, providing an *almost* blank 'field' of vision within which I can then attempt to re-engage or re-construct perception of space through drawing. So, in general, all of the photographic images are subjected to digital manipulation of harsh cropping and the editing out of colour to transpose them from recognisable places.

Although it is the photographic landscape image that visually dominates the artworks, there is very little readable information present as the visual information is reduced to a minimum in order to hold the image back from immediate and clear reading of landscape. There are two strategies I am employing to generate the image. Firstly, the capture or obtaining of particular types of landscape, and subsequently, the manipulation of the image.

In the first series of artworks *Wir Liegen auf dem Dach*, the photographs are of rapeseed fields. Taken originally in colour, it was my intention to edit out most of the visual information, to push the images as far away from recognition as possible, although still retaining a sense of open illusionistic space. These images were harshly cropped and de-saturated to a grey tonality as I begun to question how much visual information I wanted within these photographic images I started to ask how much information I could remove altogether. As a consequence of making these artworks I began to consider the landscape image in more detail, considering the ways in which I might be able to make images where most of the

visual information is lost, and generate landscape images, which were hardly visible, but still managed to maintain illusory depth.

In the two subsequent series *Das Festsetzen* and *Staub* the images are of atmospheric conditions, such as snow, mist or fog, as it is through such conditions that the scene itself becomes less clear, the landscape vista less distinct. As landscape images, these photographs are devoid of any overtly recognisable characteristics; in fact the images seem at the verge of being unrecognisable. In most of these works there is an evenly weighted, all over tonality to the image. It is diffusion of the landscape vista through the atmospheric conditions of fog and snow that there is a levelling effect of the tonality with the image caused by the disturbance within the air. Where the heavy fog pulls the image into gloominess, the whiteout almost bleaches the scene completely away. Both result in perceptual incoherence, where there is neither a foreground nor background to the image, but an all over visual plane. A plane that is visually grey, although printed in colour. This use of colour is important, as it prevents a more nostalgic reading of the black and white photograph. However, it is important that the images still maintain an illusory photographic depth even though there are little clues to generate visual perspective within the image, as it is this illusory depth, or perceived distance, which forms a crucial part in the resulting atmosphere of the artworks. It is within the *Das Festsetzen* series that the landscape is most recognisable, where more distinct rocky outcrops emerge from an all over grey visual plane, leading to a thin horizon edge. The landscape images capturing atmospheric conditions of fog are much darker in tone, generating an almost undecipherable horizon within the picture plane.

It is the capturing of such a visually indistinct space through the distorting effects of such atmospheric conditions that interests me. These images remain illusory, yet hold little information or colour. Through digital imaging processes I am able to remove visual information fairly quickly and adjust the framing of the scene to push the image even further away from its original state.

The distancing of the landscape image from any place I have known is a significant intention to construct an image, with an unknown topology, a landscape image that may simultaneously describe everywhere and nowhere.

What interests me in Ruskin's writing is how he suggests there is no such thing as clear sight. Ruskin's exploration of the 'misty and faint' also reflects my own thoughts and intentions for the photographic images I have taken through fog, where the fog generates an inability to see the landscape clearly. This is also particularly relevant to my discussion in chapter 1.1 and chapter 7, on the interruptive effects of light and marks sitting on the digital screen, which consequently shift our gaze from the image sitting *within*, to the surface marks *on* the screen. Here, the physicality of the glass of the digital screen may prevent the image within from being seen clearly. Instead the dirtiness of the screen surface interrupts the viewing of the image.

I have further explored the notion of a visual interruption of the image through the employment of drawing onto the surface of the photographs. The drawing is another way in which I can interrupt the clarity of the photographic image (discussed in detail in chapter 6). The drawing is made directly onto the print surface, it lies on top of the photograph and so it actually blocks a complete view of the photographic image.

The employment of the unclear photographic landscape image, along with the overlaid graphite drawing, generate an image that may sit at the precipice of our optical understanding of pictorial illusion and representation. These methods enable the visual image to sit just within reach of our understanding.

5.5 Grey

In my series of artworks, *Wir Liegen auf dem Dach*, *Das Festsetzen* and *Staub* it is my intention to manipulate the photographic image to a grey tone. All the photographic images are originally captured in colour but through manipulation they are taken into grey. In the first series *Wir Liegen auf dem Dach* the images were de-saturated and printed in black and white, which inevitably turns them predominately grey. However, in the subsequent series *Das Festsetzen* and *Staub,* they are not completely de-saturated into black and white. This visual grey is not without colour; it is purely optical, as a close up of the surface of these photographic prints reveals the truth of their coloured pixelated surface (*figure 34*).

The intentions for greying out the photographic images are twofold, firstly, to gain a closer dialogue between the photographic image and the graphite drawing. By limiting the images to grey, they would be as visually close to the graphite drawing as possible, which would enable an exploration of perceptual shifts which may occur between the digital and graphite surface. Secondly, the grey tone is a strategy to gain maximum perception of distance and visual ambiguity within the photographic picture plane, by removing associations with coloured human vision, and so removing any sense of the familiar, and from what Jeremy Gilbert-Rolfe discusses, as colour related to contemporary 'technological possibilities,' (Gilbert-Rolfe 1999: 88-90). It also contradicts what Kuspit described as the 'intimacy and vividness' of the digital image seen within the pixelated grid of the computer screen (Kuspit 2005).

In *Towards a Philosophy of Photography*, Vilém Flusser (2000) describes the black-and-white photograph as more realistically pertaining to a world of grey, a mixture between both black and white (Flusser 2000: 43). He suggests that 'black-and-white do not exist', since we cannot see in black and white, and that photographs '… are grey, they are theoretical images' (Flusser 2000: 43). The grey/black and white photograph also provokes a sense of nostalgia – as the return to the world where only black and white photographic print was possible. Flusser argues therefore that the notion of the black and white image in our coloured saturated world stands out as conveying a conceptual choice. He argues

> Black is the total absence of all oscillations contained in light, white the total presence of all the elements of oscillation, 'Black' and 'white' are concepts, e.g. theoretical concepts of optics. As black-and-white states of things are theoretical, they can never actually exist in the world. But black-and-white photographs do exist because they are images of concepts belonging to the theory of optics, i.e. they arise out of this theory. (Flusser 2000: 43)

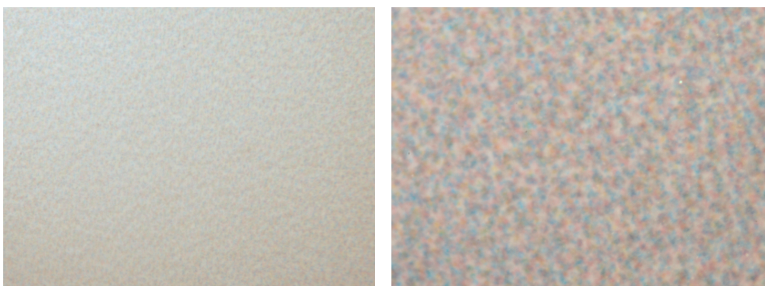


Figure 34 Magnification of the inkjet doublematte printed surface of my artworks *Das Festsetzen.*

This perception of the black and white image is also explored within Berhard Lypp's discussion of the black and white image in Ad Reinhardt's paintings as 'the systematic disappearance of the visible world in its everyday form' (Lypp cited in Koch 1995: 23). Gerhard Richter also used Grey as a means of establishing a particular removed relationship with the world. Richter explains,

> Grey, to me, was absence of opinion, nothing, neither/nor. It was also a means of manifesting my own relationship with apparent reality, I didn't want to say: "It is thus and not otherwise." And then perhaps I didn't want anyone to confuse the pictures with reality. (Richter 1993: 70)

For the American abstract expressionist painter Jasper Johns, the use of grey was both a means to examine 'colour, through its absence,' and also because grey 'stimulates vision the least.'[38]

5:6 Sublime/Emptiness

Both the series *Das Festsetzen* and *Staub* can be viewed as operating within the relation of the sublime. In using the term *sublime*, I am referring to what Burke and subsequently Kant have described as the inadequacy to present to oneself that which one has come into contact with; an impossibility to understand or imagine that which is perceived.

Edmund Burke's *A Philosophical Enquiry* (1757) initially describes the experiences, which form a fundamental aspect of the notion of the sublime as those, which 'rob the mind' (Burke cited in Phillips 1990: 53). Among the experiences Burke lists in the contents of *A Philosophical Enquiry* are Obscurity, Privation, Vastness, Infinity, Difficulty, Darkness, and Partial Blackness (amongst others) (Burke cited in Phillips 1990: 7-10). These experiences actually generate a loss of visual control or coherence and are key to Burke's ideas of provoking the sublime experience.

Lyotard's key thinking around the condition of the modern and postmodern sublime in *The Inhuman* (1991) is, like Burke, tied to feelings of loss and disruption. His idea of the sublime stems from Kant, whereby there is an inadequacy of presentation, however Lyotard argues that it is through an act of privation that we come closer to the sublime. In his discussion on

[38] Citation [Internet] Available online at http://www.artic.edu/aic/exhibitions/exhibition/johns. [Accessed] 22.05.12. Article written to coincide with the exhibition *Jasper Johns: Gray*, held at The Art institute of Chicago in 2007/8 and later held at The Metropolitan Museum of Art 2008.

the sublime, Lyotard explains that the employment of the sublime allows a resistance to the totality of understanding the world as a single grand narrative, which he describes as leading to a state of terror (Malpas 2003: 42). He explains that although realism may offer a way to describe the world, it is perhaps an image that generates questioning and doubt that is more truthful to our reality. This also chimes with Burke's description of obscurity as more truthful to the ideas of experience of the sublime than clearness (Burke cited in Phillips 1990: 55). Hence, Lyotards strategy for the sublime is an image that presents us with the un-presentable, thereby disrupting and casting doubt on the world. He describes presentation as inadequate, and therefore should be made to suffer, as he explains, 'When the point is to try to present that there is something that is not presentable, you have to make presentation suffer' (Lyotard 1991: 125).

In these terms both Burke and Lyotard's notion of the sublime question the inadequacy of the image, as a presentation of an unpresentable world. Firstly the works do this by employing the photographic image, as an optically empty, unclear image, as Philips suggests in the introduction to Burke's philosophical investigation of the sublime 'It is the absence of this visual notion of clarity that stirs our most intense feelings' (Phillips 1990: xix), Through the employment of Burke's references of privation - Vacuity, Darkness, Solitude and Silence, and also of obscurity, my artworks attempt to provoke the sublime. Secondly, by employing the visual element of dust, as pure matter, which may be said to define and describes the parameters of the entire material world (discussed in chapter 2 and 8).

Within my artworks, there is the possible reading that the images are attempting to describe my experience of being in the landscape. However, it is my intention for the images to construct a sense of the sublime, rather than being a record of my having had a sublime experience of being in the landscape. It is the particular strategy and methods I employ, through the photographic/optical and the haptic/drawing, which enables me to do this through a series of visual disruptions and sense of loss. I would suggest that my work is not an attempt to depict a sublime, but to question how the visual image might sit at the edge of understanding, and so touch upon how we might perceive a sublime image.

The term sublime here may also be used alongside notions of *Emptiness,* as touched upon previously in this section, where the picture plane has been *emptied out* of all visual elements. This notion of emptiness seems to pull a number of the artworks together that

have been previously discussed. Both Man ray and Duchamp's *Dust Breeding* and Ian Burn's *Xerox Books* may be seen to embody the notion of emptiness as work made from something most often deemed nothing. Yet, through the presence of dust, these works may contain a wealth of mater from the external world. They seem therefore to embody what Ashton (2007) has described as both emptiness and fullness.

As described earlier in this section, the photographic images comprising *Das Festsetzen* and *Staub* are manipulated to visually sit at the edges of optical representation. As pictorial images of places, they are barely identifiable and optically impossible to pull into focus. They do this by emptying themselves out of all coherent visual references that may lead us back to the reality of human vision, a visual link, or indexical sign, of an exterior space. Both the manipulated photographic images and the subject of dust seem to sit at the very edges between something and nothing, between the visible and the invisible, between absence and presence. The photographic image contents are deliberately emptied out, and dust is drawn in its place, as amplification of the loss of the photographic image. In this way the work evokes Lyotard's notion of both the modern and postmodern sublime through privation, through their literal and metaphorical emptiness. Within the works *Gefallener Staub*, the drawing of dust is the only visual element within the works. The dust becomes a mechanism for thinking about the sublime.

References:

5.1

Arrhenius, T. (2005) John Ruskin's Daguerreotypes of Venice. Modern Painters, 1856 Vol.6, p11, [Internet] Available at www.ep.liu.se/ecp/015/008/ecp015008.pdf [Accessed] 25.04.2010

Bazin, A. (1967) *What is Cinema Vol I*, trans. H. Gray. Berkeley, L.A & London: University of California Press.

Clarke, K (1964) *Ruskin Today*. Frome & London: John Murray.

Gombrich, E. H. (1980) *Standards of Truth: The Arrested Image and the Moving Eye*. In Mitchell, W. J.T. (ed.) *The Language of Images*. Chicago & London: University of Chicago Press.

Mayor, A. H. (1946) *The photographic Eye*. The Metropolitan Museum of Art Bulletin, New Series, Vol. 5, No. 1, (Sumer, 1946), pp. 15-26.

5.2

Arrhenius, T. (2005) John Ruskin's Daguerreotypes of Venice. Modern Painters, 1856 Vol.6, p11, [Internet] Available at www.ep.liu.se/ecp/015/008/ecp015008.pdf [Accessed] 25.04.2010

Bazin, A. (1967) *What is Cinema Vol I*, trans. H. Gray. Berkeley, L.A & London: University of California Press.

Baldwin, T. (ed.) (2004) *Merleau-Ponty: Basic Writings*. London & New York: Routledge.

Friedberg, A. (2006) *The Virtual Window: From Alberti to Microsoft*. Cambridge, Mass & London: MIT Press.

Gombrich, E. H. (1980) *Standards of Truth: The Arrested Image and the Moving Eye*. In Mitchell, W. J.T. (ed.) *The Language of Images*. Chicago & London: University of Chicago Press.

Pirenne, M. H. (1970) *Optics, Painting & Photography*. Cambridge. Cambridge University Press.

Snyder, J. (1980) *Picturing Vision*. In Mitchell, W. J. T. (ed.) *The Language of Images*. Chicago & London: University of Chicago Press.

5.3

Barthes, R. (1977) *Image-Music-Text*. London: Fontana Press.

Elkins, J. (2008) *Six Stories from the End of Representation. Images in Painting, Photography, Astronomy, Microscopy, Particle Physics, and Quantum Mechanics, 1980-2000.* Stanford: Stanford University Press.

Gilbert-Rolfe, J. (1999) *Beauty and the Contemporary Sublime*. New York: Allworth Press.

Kellein, T. (1995) An Art that teaches no Belief. In Kellein, T. *Hiroshi Sugimoto: Time Exposed*. London: Thames & Hudson.

Friday, J. (2007) *Digital Imaging, Photographic Representation and Aesthetics* [Internet] Available online at http://www.abdn.ac.uk/philosophy/endsandmeans/vol1no2/friday.shtml [Accessed] 06.04.2012

Rexer, L. (2009) *The Edge of Vision: The Rise in Abstract Photography*. New York: Aperture.

Varnedoe, K. (2006) *Pictures of Nothing.* Princeton and Oxford: Princeton University Press.

Virilio, P. (1994) Less Than an Image. In Virilio, P. *The Vision Machine*. Indianna & London: Indianna University Press & The British Film Institute.

5.5

Flusser, V. (2000) *Towards a philosophy of photography*. London: Reaktion.

Gilbert-Rolfe, J. (1999) *Beauty and the Contemporary Sublime*. New York: Allworth Press.

Koch, G. (1995) The Open Secret - Gerhard Richter and the Surfaces of Modernity. In Antoine, J. P., Koch, G. & Lang, L. (eds.) *Gerhard Richter.* Paris: Dis Voir.

Kuspit, D. (2005) The Matrix of Sensations. [Internet] Available online at http://www.artnet.com/magazineus/features/kuspit/kuspit8-5-05.asp [Accessed] 01.02.2010

Richter, G. (1993) *The Daily Practice of Painting (Writings 1962-93).* London: Thames & Hudson/Anthony d'Offay.

5.6

Ashton, P, W. (2007) *Evocations of Absence.* New Orleans & Louisianna: Spring Journal Books

Lyotard, J.F. (1991) *The Inhuman*, trans. G. Bennington & R. Bowlby. Cambridge: Polity Press.

Malpas, S. (2003) *Jean-Francois Lyotard*. London & New York: Routledge.

Phillips, A. (ed.) (1990) *Edmund Burke: A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*. Oxford, New York: Oxford University Press.

CHAPTER 6. DRAWING

In chapter 5 I have discussed the digital photographic element to my artworks. In the following chapter I will discuss my intention for and the resulting effects of drawing in graphite pencil directly onto the surface of the photographic print. The series of artworks to which the following discussion refers will be *Wir Liegen auf dem Dach* (2007-8), *Das Festsetzen* (2008/9) and *Staub* (2010). The drawings of dust will be discussed in two stages. Firstly, as the intention to draw onto the surface of the digital photographic print, and secondly, drawing as tactile touch. In the second stage to this discussion I will also refer to the series *Gefallener Staub* (2011) where I have removed the photographic print entirely, examining the drawing of dust alone.

6:1 Drawing on the surface

The drawing on the surface is a crucial act in re-engaging the series of photographic prints with tactile touch and contact with the material world. It is also a fundamental moment where I can assert my authorship onto the images. As Jean-Luc Nancy explains, '…such touching, or such a touch, is the sole condition for true thought' (Nancy 2008: 17).

It is at the very end of my working process that the digital photographs in *Wir Liegen auf dem Dach, Das Festsetzen* and *Staub* are printed out from a digital printer device. Up to this point they exist as virtual images, seen and worked on *in* the digital screen, and stored within the computer as data. They are made through the interface of the computer, without having come into contact with the hand. As Sassoon has argued, there is no material phase to the digital photograph until printed (Sassoon 2004: 186). Up to this final point, my images have remained concealed *in* the computer screen, kept away from the physical world and all its physical impurities. As Robins has suggested, if 'these images can be said to refer to anything it is to millions of bits of electronic, mathematical data' (Robins 1995: 31) At this point of being virtual, worked with and stored only via a screen device, the images could be said to be separate from any sense of their material surface or physical weight. It is my intention to use the digital process to work freely with the image, without ties to material weight, scale and surface. It is the manifestation of the photographic image via digital processes, which is a key strategy to ensure the images at this point remain weightless, whereby I am free to manipulate their content and the final printed scale of the images.

As Henning predicted in 1996, 'new digital imaging technologies will precipitate radical changes in perception, in consciousness, and ultimately in society' (Henning 1996: 219). I agree with Henning that I perceive and work with the digital image *in* the computer screen without any direct connection to its physical, material existence – this is concealed. Through digital methods the photographic images I make are removed from any sense of the experience that Jean-Luc Nancy describes as a bodily encounter with the world (Nancy 2008). A direct consequence of this digital process is that I have no sense of the physical properties of the image, in terms of its material surface, scale or weight, or even in terms of its indexical reference. Through other material photographic print processes there is a weight to the image (as film, paper or plate) that may be physically *felt*, and so sensed through the body, generating a consideration of the images' material value, of what Maynard refers to in his text *The Engine of Visualisation* (1997) as that which needs *care*. As Maynard explains:

> …They take energy and expense to produce, often space and care to preserve. They are subject to destruction by fire, they deteriorate physically through oxidation or magnetic influence. (Maynard 1997: 24)

Maynard's words may be used in reference to any printed material. However, it is the moment where this susceptibility begins which may differ. Within the analogue image this is immediate, as film or material support is placed within the camera. The photographic images by Miroslav Tichy (discussed in chapter 2.5) demonstrate this well, as the sensitive material of the photographic film is deliberately held open to the air and light during the moment of capture, allowing light and any impurities in the air to visibly affect and alter the resulting image. There is a different fragility to the digital image, whereby the damage may come from software and hardware incompatibilities, resulting in an unreadable image.

Henri Focillon's writing (1989) suggests a much more traditional sense of the artist's manual making process, of a 'decisive contact' (Focillon cited in Paterson 2007: 89) which seems to be completely at odds with the technological optical image, which involves apparatus and devices, and which holds the material image away from the hand. He explains:

> The artist touches, he feels, he reckons weight, he measures space, he moulds the fluidity of atmosphere to prefigure form in it, he caresses the skin of all things. (Focillon cited in Paterson 2007: 88)

Focillon is clearly referring to the somatic senses of manual making, of touch, reckoning of weight, measurement of space, caressing of skin, all of which involve an experience of the artworks through their physical presence. This is one of the main concerns within the work of Guiseppe Penone (discussed in chapters 1.1, 1.2, & 1.3). The touch of the artist, as a fundamental mark of presence and contact with the world during making, is a key aspect of Penone's artworks. However, my physical experience of the making of the final printed images within the two series *Das Festsetzen* and *Staub* through digital process means remains hidden from the material, surface, and from Jean-Luc Nancy's *weight* of things (Nancy 2008).

I would suggest that at this point in making these photographic images, Heidegger's thinking around the concealment of the world through technology is entirely appropriate. Martin Heidegger is one of the first thinkers to question the experience and perception of matter through technology, and importantly through modern technology. His two major essays which I have explored, *The Origin of the Work of Art* (1935/6) and his later essay *The Question Concerning Technology* (1953), question how things appear, or reveal themselves through their matter, and subsequently how technology might then alter this. I am using Heidegger's thinking here to question how the photographic printed image becomes manifest through the computer and concealed *in* the screen. In asking how technology might alter appearance, it seems that the image in the computer conceals matter and form; therefore I am gauging a different materiality, weight, scale and surface – the screen itself. As Gilbert-Rolfe has asserted, 'this is a hard plastic surface with no discernible part to play in one's relationship to the ephemeral image it contains, substance is subsumed into transmission' (Gilbert-Rolfe 1999: 26). According to Heidegger's analysis, these things are concealed from the artist when working via digital processes. To use Heidegger's terms, it is the modern technology of the digital machine that abstractly brings forth the photographic printed images from the virtual to the physical world.

6:2 Drawing as tactile touch

The drawings within the artworks *Wir Liegen auf dem Dach, Das Festsetzen* (2008/9) and *Staub* (2010) are made by placing the photographic printed image flat onto a drawing board. Using a graphite pencil, the marks are then drawn directly onto the print surface. The drawing emerges slowly, copied from small printed images of dust and debris that have been collected from the series of scanning experiments made as part of the research

(discussed in chapter 3). Where Duchamp intentionally left *The Large Glass* artwork open to the air so that it would gradually gather dust, as he describes it, to *Breed*, it is my intention to allude to this delay in time. The drawing is an illusion of the dust, the mimicking of the gradual accumulation of matter on surface. However, where Duchamp sought chance and the inevitable effects of dust settling, I am intentionally drawing each particle of dust, as a visible mark. One of my intentions for the drawing of dust on the prints is to draw attention to the concealment of the image through digital photographic technologies. As I have discussed throughout the research, the digital image is separate from the inevitable decay of the material world. Drawing and physically marking the surface of the photographic print is a strategy I use to reassert the presence of my own hand, my mark as author, into the digital process, generating an immediate indexical link to my own presence. This brings me again to Jean-Luc Nancy's thinking about the sense of the weight of things, of pressure and contact. As Nancy wrote:

> … everything ends up communicating with weighing…it is a weight…it presses against other bodies, right up against other bodies. (Nancy 2008: 93)

This pressing up against, the weighing, of bodies may only happen when the work reveals itself with a physical surface. It is also the point where the image is brought into close physical proximity to my own body, and at such proximity, it reasserts my experience of the image as objective, and tactile, as opposed to the experience, which is subjective and optical (Riegl 2004). This reveals an important distinction in my experience of the image, which reveals the actual 'integrity of things' as Riegl argues:

> The optical approach showed … chaos; the tactile offered …sufficient conviction of the individual integrity of things. (Riegl 2004: 401)

This notion of optical distance also emerges in the viewing of the work. Where the photographic prints are relatively large scale (ranging between 90cm to 200cm in scale, see chapter 4), the drawing demands closer inspection of the surface. This also generates a split in the viewing of the work as two distances. Firstly, the distance required to see the photographic image in its entirety, and secondly, the proximity required to see the drawing.

It is only when the image is printed out does it become physical and gain a weightiness and surface that exists in the world, that may be touched, or affected by touch. At this moment of printing, it has a pureness, or newness, by not having been in contact with any other surface

or material. However, at this point, material and surface may also now become affected by light, air and other external factors, as Maynard (1997) has pointed out. The delicate nature of the digital print surface, (discussed throughout chapter 1), is even more prone to the effects of light and contact than the analogue print. It is also without any direct engagement of my own hand having made the print, and this is a key moment in highlighting my somatic sense of loss in the making of the printed images via the computer and digital screen.

The physical and metaphorical concerns of contact and touch explored by Giuseppe Penone (discussed in chapter 1.1, 1.2 and 1.3) reveal the direct tracing of the activity of the world, an indexicality referenced through all material surfaces by contact. In Penone's words:

> The trail or trace of grease, the organic layer on the seats of trains, on the handles of hoes, on handrails, supports in trams, windows set in doors, jacket cuffs, armrests, banisters, handles, tables, cushion covers, cutlery, books, the handles on vases, walls...(Penone cited in Fer 2004: 89)

Penone's method is not too dissimilar to that of a forensic scientist, who lightly powders a surface and lays down tape to pull up imprints left through contact and touch. The search is for visual evidence of presence and contact. The series of works *The Imprint of Drawing* (discussed in chapter 1.3) literally and metaphorically centre around a moment of touch, of the pressure of the Penone's own fingerprint. In Penone's work, the primacy of touch that Merleau-Ponty asserts in *The Phenomenology of Perception* (1945) (discussed in chapter 1.3) becomes significant in the conception and execution of the artworks. Here, proximity and tactility are put at the forefront of making. As Riegl has also asserted, tactility reasserts proximity and touch over optical distance, and thereby reaffirms a sense of truth (Riegl 2004). As Michael Newman explains, when discussing the importance of contact within the work of Giuseppe Penone:

> We handle things to feel their mass; we tap them for their resonance, by which we can tell whether they are hollow or solid and of what they are made; we scratch them with our fingernails to test their surface, as if touch were less easily fooled than vision. (Newman 2004: 103)

The fingerprint as a way of revealing physical matter and surface also refers back to Heidegger's early critique of truth in *The Question Concerning Technology* (1953) through a revealing, and how technology forces this revealing of matter, and therefore what Heidegger refers to as a truth (Heidegger 1977) (discussed in chapter 1.2).

It is essential that I physically draw the marks in these artworks directly onto the photograph surface via the hand; pencil end physically touches the inkjet surface. The scale of the print, the physical weight and image surface all affect how and where I apply the pencil onto the prints. As Berger (1952) suggests:

> To draw is to know by hand – to have proof that Thomas demanded. Out of the artist's mind through the point of a pencil or pen comes proof that the world is solid, material. (Berger 2008: 102)

The handmade mark is evidence of direct human contact with the surface of the work where the digital print amplifies an absence of the direct human hand, or the intervention of technology. To overlay in the computer would be a distinctly different process, a non-physical act according to Mitchell (1992). The hand must play a part in the process of image making, to enable a bodily encounter to the work, to reassert a sense of my own presence. As Berger suggests,

> It is the actual act of drawing that forces the artist to look at the object in front of him … to dredge his own mind, to discover the content of his own store of past observations. (Berger 2008: 3)

Where it has been suggested that the photographic image has become severed from the indexical, the drawing is a mark that generates a new indexical reference to the presence of the body. Each drawn mark attests to the presence of the hand, through the pressure and weight of each line or mark made. As soon as the drawing is begun, the image becomes unique and loses its ability to reproduce. The drawing therefore acts like a fingerprint on the photographic print surface, generating a new identity through the uniqueness of the drawing mark. Where the print may be reproduced through the printer device, the drawing is unique, and cannot be copied exactly.

In drawing onto the surface of the photographic print, there are three significant disruptions that have been generated: a disruption of time, a disruption of material, and a perceptual disruption of image space. Firstly, there is a split in the sense of time within the image.[39] Fer describes the difference in surfaces emerging from the printed image and drawing within Penone's *The Imprint of Drawing* whereby

[39] In a short essay in 1979 Ian McKeever wrote of the major difference of the all over immediacy of the photographic field in contrast to the slow accumulation of certain drawing processes (McKeever 1979). McKeever described drawing as an additive process over a blank support. In contrast, he described the photographic process as a deleting process, selecting and editing out of the frame.

> At least two other temporal registers unfold: the momentary time of the imprint and then the slow expanding time of the labor of drawing. (Fer 2004: 89)

Fer describes the print as an immediate image, made quickly, which sits on the paper surface in contrast to the slow accumulation of the drawing. In relation to the generation of the photographic field, where the camera encapsulates all at once through the lens, my process of drawing is a laborious act which may take up to three or four days to complete.

The time for the photographic print also differs through the digital printer. Through analogue darkroom processes, the print emerges subtly, tonally, through chemical saturation of the exposed paper, whereas the digital print appears completed, line-by-line, through the digital printer.

Secondly, there is a sharp contrast between the smooth inkjet mechanical surface and the carbon mark made by the pencil. Where the photographic print is illusory space, the drawing has no perspective, sitting across the entire picture surface, gathering in places to become fairly dense. As a hand drawn mark it bears no characteristics of the mechanical inkjet surface beneath. The graphite is rough against the grain of the paper, it is matter, which leaves a direct trace of its contact with the surface through pressure, and as pressure changes so does the density of its mark. The graphite pencil is applied as physical matter sitting on the smooth digital inkjet surface. By placing these works under a microscope I was able to see the bulky carbon weight of the pencil mark lying on top of the thin paper inkjet image support (*figure 35*). The appearance of the pencil mark under such magnification is surprising, in that it has a very weighty physical presence on the smooth inkjet surface. It appears visibly similar to the way in which we perceive physical matter within the works of German artist Anselm Kiefer. Kiefer combines heavy physical material to photographic surfaces within many of his paintings, frequently using the photograph as a representational

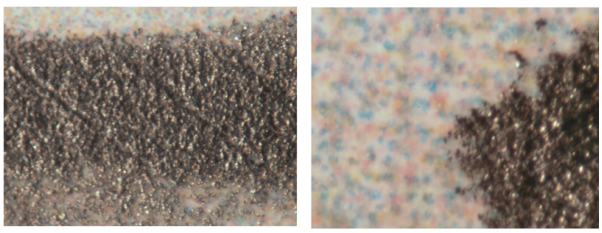


Figure 35 Magnifications of a pencil drawing on the double-matt inkjet-printed surface of *Das Festsetzen.*

base onto which he adds paint, lead, sand and other materials. The result is both a perceptual and physical clash, as the photographic image sits between and lies beneath material weight.

The nature of the graphite pencil as hard carbon matter being pushed against the surface of the matte paper to make a mark creates another visual effect. Where the graphite drawing catches the light, it shines and reflects the pencil mark, drawing the eye away from the photographic image to the surface of the paper. In this moment there is a defocusing of the eye from the photographic image to the pencil mark. This perceptual shift from drawing to photographic image is the same effect that was seen within my experiments, where the dust sits brightly against the darker image.

Thirdly, there is a disruption of the illusory space of the photographic image. The optical nature of the photographic image is compromised by the intervention and blockage of the pencil mark. As the photographic print is first laid out and has been brought into close proximity, its surface is revealed as an all over image field. Although there are little recognisable representational forms within the photographic prints, there is still an overwhelming sense of an illusory, constant image surface.

It is important within the construction of the artworks that the image remains photographic, that the drawing is made onto this surface as opposed to being made onto a blank paper sheet. As the first pencil mark is made onto the image, there is an immediate sense of marring this photographic surface. The evenness and flatness of the printed surface is physically disrupted by graphite being rubbed across it. The pencil mark created on the continuous, even photographic surface may be seen as 'breaking the spell' (Strauss 2008: 203) of the illusionistic image. As Strauss explains when discussing the visual effects of splattering oil paint over snap-shot photographs within the works of Gerhard Richter, 'Painting over an existing image can be an anarchic gesture, a retaliation' (Strauss 2008: 204). Strauss' referral to the 'anarchic', and 'retaliation' of the painted mark seems to suggest a fight within the image, between the painted mark and the photographic image. This clash has also been described as generating 'irreconcilable contradiction(s)' (Heinzelmann 2008: 85) leading to a more complex reading of visual interruption, which I shall discuss in more detail within the next section.

What is important within these artworks discussed, is the homogenisation of the drawing and the photographic print. It is the direct combination of the handmade pencil drawing of dust and the digital inkjet photographic print which generates dualities of materiality, surface and time. It is this contradiction between the photographic printed image and the drawing, between inkjet surface and graphite pencil, which allows me to generate a visually ruptured image.

References

Berger, J. (2008). In Savage, J. (ed.) *John Berger: Berger on Drawing*. Ireland: Occasional Press.

Fer, B (2004). Pressure Points: Penone's Tactile Vernacular. In De Zegher, C. (ed.) *Guiseppe Penone: The Imprint of Drawing*. New York: The Drawing Center.

Gilbert-Rolfe, J. (1999) *Beauty and the Contemporary Sublime*. New York: Allworth Press.

Heidgegger, M. (1977) *The Question Concerning Technology and other essays,* trans. M. Lovitt. New York: Harper Perennial.

Heinzelmann, M. (ed.) (2008) *Gerhard Richter: Overpainted Photographs*. Ostfildern, Germany: Hatje Cantz.

Henning, M. (1995) Digital Encounters: Mythical pasts and electronic presence. In Lister, M. (ed.) *The Photographic Image in Digital Culture*. London: Routledge.

Maynard, P. (1997) *The Engine of Visualisation: Thinking through Photography*. Ithaca, New York: Cornell University Press.

Mitchell, W. (1992) *The Reconfigured Eye; Visual Truth in the Post-Photographic Era*. London: MIT Press.

Nancy, J. L. (2008) *Corpus*, trans. R. A. Rand. New York: Fordham University Press.

Newman, M. (2004) Sticking To The World – Drawing As Contact. In De Zegher, C. (ed.) *Guiseppe Penone: The Imprint of Drawing*. New York: The Drawing Center.

Paterson, M. (2007) *The Senses of Touch: Haptics, Affects and Technologies*. Oxford & New York: Berg.

Riegl, A. (2004) *Historical Grammar of the Visual Arts*, trans. J. E. Jung. New York: Zone Books.

Robins, K. (1995) Will Image still move us. In Lister, M. (ed.) *The Photographic Image in Digital Culture*. London: Routledge.

Sassoon, J. (2004) Photographic materiality in the age of digital reproduction. In Edwards, E & Hart, J. (eds.) *Photographs Objects Histories: On the Materiality of Images*. London & New York: Routledge.

Strauss (2008) The Painter Breaks the Spell. In Heinzelmann, M (ed.) *Gerhard Richter: Overpainted Photographs*. Ostfildern, Germany: Hatje Cantz.

CHAPTER 7. PERCEPTUAL INTERRUPTION

I have discussed the artworks so far in terms of the deliberate construction of drawing onto a landscape photographic digital print. One intention of employing these strategies is to generate a variety of perceptual effects through creating an interruption or blockage in the visual reading of the image. One form of interruption has been briefly discussed in chapter 3.8, as dust falling onto the scanner bed whilst scanning a photographic image allowing a shift in the perception of the picture plane. I have also touched upon the visual disturbance of the photographic surface by the physical and material act of drawing. The artworks *Das Festsetzen series* (2008/9) and *Staub series* (2010) deliberately employ the strategy of blocking the perception of the photographic image through the addition of drawing. This following section will discuss this aspect of the perceptual interruption further, referencing the recent research by Wendy Koenig (2009) to explore the possible generation of new meaning through visual interruption methods.

7:1 Dust as perceptual blockage of the image

As images utilising photography and drawing, the artworks *Wir Liegen auf dem Dach, Das Festsetzen* and *Staub* exist as two separate physical layers. Where the photographic image fills the entire picture plane, as a continuous surface, the drawing is fragmentary, sitting on top of the surface. As the drawing sits directly on top of the photographic print, it blocks the printed image beneath. However, as it does not cover the whole photographic surface, it allows parts of the photographic image to be seen around and within the drawing. It is this perception of both the drawing and the photograph within the same pictorial plane, which I argue generates shifts in the perceptual reading of the image. This may be seen to be a perceptual shift between Alberti's illusory *window* and Steinberg's flatbed plane (discussed in chapter 1.1), where the photograph generates an illusory optical depth and the drawing pulls the eye to the literal surface of the image. This phenomenon was also revealed within the experiments (discussed in chapter 3) where the dust fell onto the glass surface and became visually embedded within the photographic image.

As I have previously discussed (Chapter 3.8), Wendy Koenig's recent research, *The Phenomenon of Interruption within the Visual Arts (2009)*, offers new insights into the reading of a number of the artworks, through an *interruption* generated by a visual blockage

or gap. Koenig describes the notion of visual *interruption* as brought about through a number of visual strategies, whereby

> …what is presented to the eye…difficult to "see" or make out, or is impossible to bring into "focus," or is resistant to conventional methods of "reading" or interpreting, or … the viewer's senses are jolted or disquieted… (Koenig 2009: 4)

In revisiting the works of Daido Moriyama, Lartigue and Tichy (discussed in Chapter 2), we may read a *blocking* of the expected perception of the photographed image by the fall of dust and light during the process of capturing and printing. The transfer drawings of Rauschenberg (discussed in chapter 1.1) also reveal an interruption through gaps in the photographic image, made directly by the fragmentary nature of the transfer process. This may be seen as the cause of the perceived *flickering* effect that Lewis Kachur describes as the perceptual effect of Robert Rauschenberg's transfer drawings (Kachur 2007: 12).

This interruption of an illusory photographic image may be perceived in Helen Chadwick's *Viral Landscapes* (1988-89), (*figure 36*) which consist of a series of large-scale photographic prints of coastlines over which microscopic cell images, taken from Chadwick's own body, have been superimposed. Here we perceive a microscopic horizontal image blocking the illusory vertical landscape space. The interruption is a horizontal sheet effect, an image taken from under a microscope with no perspective, and superimposed over a vertical illusory landscape image. This could be suggestive of Steinberg's shift in orientation of the picture plane (Steinberg 2007), as a flip may be perceived from the vertical landscape scene onto which horizontally derived images are then placed.

It is pure matter, the materiality of paint, as opposed to the illusion of photography that generates an interruption of the photographic image in Gerhard Richter's *Overpainted Photographs.*[40] The *Overpainted Photographs* consist of a large series of small photographic

Figure 36, Helen Chadwick, *Viral Landscape No 1,* (1988-89) C-Print photograph, powder coated steel, aluminium faced plywood and Perspex.

[40] Richter began making the series *Overpainted photographs* from 1989 onwards.

prints, taken from Richter's own personal archives, which are then used as backgrounds for painting (*figure 37*). Botho Strauss describes how Richter's processes of dragging, smearing and splattering the photographic prints with paint actually 'cancel out' the photograph (Strauss 2008: 207). Strauss seems to be suggesting that the physical application of paint actually denies the illusory presence of the photographic image. Richter is deliberately employing a strategy here, to create a clash between two pictorial planes, between the illusory space of the photograph and surface plane of the paint. Schneede describes these works as 'a meeting of two worlds, of oppositions', as he explains:

> When the autobiographical material is brought into contact with the thick paint, two worlds meet, materially and in terms of the senses: the uniformly glossy, two dimensional surface of the photographic paper that nevertheless captures a personal moment in the past, and the paint, which tends to be warm, richly saturated, diverse, thick or thin, pasty or cracked, tending towards the relief; the photograph, whose interest lies in what It represents, and the paint, whose interest lies in its emotional impact. (Schneede 2008: 196)

A small series of these images, made around 2008, reveal small, thick blobs and spots of paint appearing at random intervals across the photograph image surface (*figure 38*). These sit apart from the other small prints that are almost completely smothered by the paint, revealing only a small section of the photographic image beneath. This series of photographs have been left on the studio floor, lying flat, in the same manner that Toba Khedoori left large, wax-covered sheets to dry (discussed in chapter 2.2); they lie exposed to the studio environment around them. As Richter painted large canvases above the photographs, paint splattered across their surface. These images are much subtler in the reading of the two pictorial planes. The smaller material spots of paint may almost be read in harmony with the illusory space of the photograph.

Within all these works, although the photographic image is blocked in some way, it perceptually feels intact in the background, even though the particles of paint actually prevent the image from appearing. Strauss describes this as 'the spell' of the photographic


(L) Figure 37 Gerhard Richter, Overpainted photograph
(R) Figure 38 Gerhard Richter, Overpainted photograph

image (Strauss 2008: 203). As I have discussed earlier, within Barthes' structural analysis of the semiotics of the photographic image, he describes the photograph as having pure denotative power (Barthes 1977: 17), arguing that our immediate expectation of the photographic image is that of a truth that lies before the camera lens, continuous and whole.

To return to my artworks, *Das Festsetzen* (2008/9) and *Staub* (2010), it is my intention to employ similar methods of visual interruption, of stopping the photographic emerging wholly by manipulation and, by blocking its reading, allowing me to generate a more complex perceptual unfolding of pictorial space within each image. Koenig's term *interruption* may be seen within the artworks as a visual blockage by both the act of drawing onto the photographic image, and also by the manipulation of the photographic image, which pulls the image into visual obscurity and therefore prevents clear coherent reading.

Through these methods of interruption, a constant optical to and fro occurs, between the perception of two pictorial planes within the same image, between the drawing and the photographic image, which generates further complexity by perceptually opening up the pictorial space within the image as much as possible. The employment of the photographic landscape image, the overlaid graphite drawing, and the use of dust as subject for the drawing, all attempt to generate an image that may sit at the precipice of our optical understanding of pictorial illusion and representation. These methods enable the visual image to sit just within reach of our understanding and visual reading.

References

Barthes, R. (1977) The Photographic Message. In Barthes, R. *Image-Music-Text*. London: Fontana Press.

Kachur, L. (2007) Paraphrase: On Robert Rauschenberg's Transfer Drawings of the 1960s. In *Robert Rauschenberg, Transfer Drawings from the 1960s*. Jonathan O'Hara Gallery.

Koenig, W. (2009) *The Phenomenon of Interruption in the Visual Arts*. New York: Edwin Mellin Press.

Steinberg, L. (2007) *Other Criteria: Confrontations with Twentieth-Century Art*. New York: Oxford University Press.

Schneede, U. M. (2008) Reality, the Photograph, the Paint, and the Picture. In Heinzelmann, M (ed.) *Gerhard Richter Overpainted Photographs*. Ostfildern, Germany: Hatje Cantz.

Strauss, B. (2008) The Painter Breaks the Spell. In Heinzelmann, M (ed.) *Gerhard Richter Overpainted Photographs*. Ostfildern, Germany: Hatje Cantz.

CHAPTER 8. DRAWINGS OF DUST:

PERSONAL EXPERIMENTS

Chapter 8. Drawings of dust: Personal experiments

The drawings on the surface of the photographic prints in my artworks *Das Festsetzen*, *Staub* and *Gefallener Staub* are of magnified particles of dust and debris, hair, grit, and scratches. The subject of dust has emerged increasingly from the body of experiments made early on in my research (discussed in chapter 3). The experiments revealed that it was the unexpected visibility of dust within the photographic scans that have resulted in a shift in the perception of the photographic picture plane. From this moment, I began to use the image scans of dust made during these experiments as reference for the drawing element within the artworks (see chapter 3.7). The scanned images were slightly manipulated and cropped to pull out the dust in more detail within each image, then printed out and drawn directly onto the surface of the large photographic prints. The range of dust collected was surprisingly varied, even though collected within the same studio space. There are a variety of forms seen within these captured images, from minute round particles to larger clumps of hairs and debris, all of which have been used for the drawings.

Dust has emerged as a significant visual element within my artworks to signify the presence of surface, materiality, and weight. However, another aspect to this is the generation of a number of paradoxical readings through the visible presence of dust. Within the later series of artworks (*Das Festsetzen*, *Staub* and *Gefallener Staub*) I have drawn dust onto both the photographic image surface and the blank surface to examine this in more detail.

8.1 Dust: An index

Dust is considered as nothing, a nuisance, yet it is probable it contains anything and everything that is material, from our past and present. As the dust drawing is delicate, it demands close up inspection of the physical surface of the artwork. At this close distance the range of dust is revealed – copied from the captured dust during the experiments. My drawings of dust visually contain very little, they are delicate and fragmentary, not fully covering the paper or painted surfaces upon which they rest. Yet, as dust, the drawing could be read as traces of things from my own environment and also from my body. This is an interesting counter to the blank gesso or empty photographic image upon which the dust drawings sit.

Dust seen in this way becomes both raw material and a metaphor for the disintegration of the entire material world. As Amato explains:

> Out of things are made; into it they dissolve. So constant, so pervasive, dust, aggregating and disintegrating, gauges matter on its way to and from being. So dust would seem to measure history and the historian, not the reverse. (Amato 2000: 5)

The reference to dust as raw material and metaphor may be traced back to Biblical references, where it was written that man is dust and back to dust man will go, a reassertion that after all, man is material, and, as Italian historian and critic Elio Grazioli suggests in his book *La Polvere nell'arte* (2004),[41] 'after death the body becomes indistinguishable from a pile (of dust) on the ground' (Grazioli 2004: 2).

Dust in this respect may be regarded as the instant *readymade*, as art in life, as everything already present, existing everywhere. I would like to return to the significance of Duchamp's 'gathering dust' for the photograph *Dust Breeding.* Duchamp's intention to let dust gradually settle on the surface of the artwork was an intentional part of the realisation of the artwork *The Large Glass* whereby his own hand was eradicated.

However, in my drawing dust, the dust is not real but illusory. It is drawn from the photographic image. Although it is drawn in a manner that asserts the dust drawing as more 'real' than the photographic image – where the photograph has been through an emptying out process – eradicating topological references, the drawing fills the entire picture back in – with suggestions of the presence of everything and anything. It is a crucial moment in generating an indexical link to material presence through the, albeit artificial, suggestion of the weight of each particle of dust being present on the image surface.

In my series *Gefallener Staub* (2011) the photographic printed image has been removed from the work entirely to explore the drawing of dust. I wanted to question further how the dust, without the photographic image, might evoke perceptions and new readings within an image. The dust has been drawn in graphite pencil onto a layered surface of white gesso, painted onto copper sheet, which generates a very fine, pure flat surface on which to draw in

[41] *La Polvere nell'arte* (2004) is currently only published in Italian. It is a broad discourse of both the material and metaphorical presence of dust within the visual arts. I have found just a few English translations of small sections of the text within *La Polvere nell'arte* , and asked some Italian friends to help translate these sections a little further.

detail particles of dust from the photographic scans. The copper has been used as an alternative to paper to generate a reading of the preciousness of the surface, against the unsightliness of the image of dust. It also emerges from the reading of surface within Junichiro Tanizaki's essay *In Praise of Shadows* (2001), where he describes how objects become dusty, covered with a patina from marks of touch over touch, of a slow build-up of grime and filth. This perceived preciousness of materials and surfaces that show visual evidence of time and touch is an interesting contrast to what are seen as western desires of polished newness.

Dust is seen as unclean. But actually, a clean world would be an oppressively muggy world, without dust we would be in a climate more akin to that of a sauna. Dust is fundamental to our world's climate. Interestingly we can refer this back to the aforementioned cleanliness of the digital print image, which may therefore be seen as too clean, too perfect to represent the perception of the external world.

8.2 Defining borders: The visible and the invisible

Both Amato (2000) and Holmes (2001) have asserted that dust is the stuff of life and death, and so it may signify simultaneous readings of absence and presence, the visible and the invisible, and also be read as a metaphor for different temporalities.

If dust is present, something material must have dissolved, or decayed. It must have arrived through exposure to air, or through the entropy of matter. By being present it therefore draws attention to the absence of that from which it has emerged. If dust appears within an image it signals the existence of both the material presence of the image at some point in the works' making, and also the disappearance of something else that we do not see.

This dust within all my artworks also confronts our visibility and awareness of the material world around us. As with the minute drawings of dust, we are confronted by the fact that, generally, we cannot see this material 'stuff'. In this way the dust draws our attention to that which is all around us, but which we cannot see with the naked eye. It is a world that is only fully revealed through technological apparatus – the microscope, or the zoom function of image editing software within the computer. This also asserts how digital technology enables more and more of this to be revealed. As my experiments have demonstrated, even when I

thought I had cleaned the scanner bed thoroughly, there was still a trace of dust – of the material world that was and is – ever circulating around the atmosphere.

My strategy of using the photographic image has been to push both physical presence and representation to the very edges of disappearance: the drawing of dust is a direct reassertion of both. Where the photographic image is made through digital processes, devoid of tactile touch, the graphite drawings are made directly by my own hand, with graphite matter. Where the photographic image almost dissolves into nothing, the dust pulls the viewer back as much as possible – but also to nothing - to that which must be scrutinised at close proximity, thereby reasserting what Riegl termed the 'objective gaze' (discussed in chapter 1.3).

As dust settled on the transparent glass bed during my experiments it blocked the scanning of the image behind it, asserting itself as solid matter. It also drew attention to the fact that the glass sheet of the scanner bed was physically present. Under normal circumstances, the lens captures an image straight through the glass sheet – the glass becomes invisible. This same reading also occurs when we see dust within the photographic image, it reasserts the presence of the glass lens of the camera apparatus, which like the *window* is seen through; it is invisible and not intentionally captured, unless dust and scratches sit and define it as a surface. Where I have drawn the dust on top of the photograph, it generates a shift in the reading of the picture plane; through this assertion of the glass window – the photographic lens - the glass surface through which the photograph is captured. As Ladd explains, (when referring to the over painted photographs of Gerhard Richter):

> For many photographers the image has no surface. The illusion of photography in providing a window into which we perceive literal description and dimension by Richter's hand is now disrupted due to the addition of paint. Often a tense relationship, the results run the gamut of the surreal to the beautiful to the disturbed… (Ladd s.d)

As I have argued, the reading of dust creates an interruption of the reading of the photographic image, resulting in a constant to and fro in the perceptual reading of orientation in the image. This to and fro occurs as we look *into* the photographic image and then look *at* the surface of dust (discussed in chapter 3.8 and chapter 7).

8.3 Dust: A measurement of time

What was evident throughout my practical experiments was that there is no material surface that is without dust. When I left a series of glass sheets out in the open air of the studio for specific periods of time, dust began to settle (discussed in chapter 3). The longer the glass sheets were left undisturbed, the more dust settled. As a consequence of time and circulation of air, the glass surfaces were marked with the visual evidence of entropy, which Smithson defines as the homogenisation and eventual collapse of the material world, living and decayed, natural or artificial.

This difference in the thickness of dust settling over time is something that I have explored within the drawings. In some of the drawings there is a much more intense drawing of dust that actually begins to smothers the entire surface when viewed close up, although, again, at a distance the large scale photograph still dominates the perception of the image. As the dust drawing becomes fuller on the picture surface, there is a sense of the almost suffocation of the image or surface upon which it sits – which seems to chime with how Connor described the muffling and choking effects of dust (chapter 2.5).

Dust may therefore be read as a visual indicator of the passage of time. In order to gather a layer of dust, Duchamp left *The Large Glass* uncovered near an open window for three to four months (discussed in chapter 2.1). For Duchamp, the visual presence of the raw material of dust symbolises temporality. Duchamp's idea for the use of dust followed from the ideas of Leonardo da Vinci, where the falling and marking of dust onto a surface enabled a 'measure of time' (Marquis 1981: 178).

In the artworks *Das Festsetzen* (2008/9) and *Staub* (2010), the dust is drawn onto a printed surface. This immediately generates a rupture in reading. Here, dust becomes a signifier of the artificiality of both the materiality and sense of time of the drawing, contrasting against the instant nature of the digital photographic print. The slow accumulation of my drawing marks made onto the surface mimics the slow accumulation of dust as it gradually falls onto the surface; it brings the artwork into the realm of the real world through both the act of drawing and the subject of drawing dust, a reference to the unfolding of time; of the presence of the image; of the past, and of the future of the material image. The reading of the dust also asserts the notion of the inevitability of the future. The presence of dust signifies the future death of the material world.

The visual significance of dust as subject matter emerged from my practical experiments, as a quite unexpected element and has now become central to my practice and research.

References

Amato, J. A. (2000) *A History Of the Small & the Invisible*. Berkley, Los Angeles & London: University of California Press.

Ashton, P, W. (2007) *Evocations of Absence.* New Orleans, Louisiana: Spring Journal Books.

Grazioli, E. (2004) *La Polvere nell'arte*. Milano: Bruno Mondadori.

Holmes, H. (2001) *The Secret Life of Dust: From the cosmos to the kitchen counter, the big consequences of little things*. New York: John Wiley & Sons.

Ladd, J. (s.d) *Gerhard Richter's Overpainted Photographs*. 2009. The Exposure Project. [Internet] Available online at http://theexposureproject.blogspot.co.uk/2009/06/gerhard-richters-overpainted.html [Accessed] 15.02.2010

Marquis, A. G. (1981) *Marcel Duchamp: Eros, c'est la vie, A Biography*. New York: The Whitson Publishing Company.

Tanizaki, J. (2001) *In Praise of Shadows*, Vintage: London.

CONCLUSION

The aim of my research has been to question how the visual presence of drawings of dust within an artwork may open up and shift perceptual readings within the visual image. Central to my research has been my art practice, which has been maintained throughout the textual research and writing. The practice has served in two ways, firstly, to visually question various aspects of the theoretical and critical issues and concerns, which have arisen as central to my own art practice; and secondly, it has also proposed new questions significant to the research and directed the thinking and arguments that have unfolded. I have explored and identified a number of artists' works throughout the research, chosen by virtue of their resonance with my own practice and thinking.

To enable a more focused and logical discussion, each aspect of the research has been separated into chapters. To summarise: in chapter one I established a number of key issues and theories around the perception of the photographic picture plane through a number of different photographic print processes. This revealed key themes and issues around the significance of orientation, materiality, surface and touch. In chapter two, I narrowed the focus to the visual effects of dust on the perceptual reading of an artwork. This was explored through the analysis of a number of artists' work, selected to visually demonstrate and substantiate my argument that visibility of dust on the photographic image shifts perceptual readings and opens up new avenues for thought. In chapter three, I continued to explore the subject of dust through the analysis of a series of practical experiments, which were made throughout the research in conjunction with the textual and practical research. Chapter four is the largest and most significant area of the research, focused on my own artwork, the practical research. In this section my practice is placed into the context of my overall research argument.

At the start of the research, the question of orientation within the image was central. The reading of the photographic picture plane has been explored through two opposing perceptions of pictorial orientation, the *vertical* illusory window of Leon Batista Alberti, and Leo Steinberg's *horizontal* notion of the flat bed. Through a short historical survey of the development of the photographic print process I have highlighted and examined key processes, which, I have argued, reveal how the physical nature of image production plays a

significant role in the perception of the printed image picture plane orientation. Where the photographic image is captured on a flat, horizontal bed, such as the photogram and photocopy or scanning process, the image is generated through direct contact and so reveals a horizontal surface plane. This visible evidence of the horizontal orientation of capture is a direct consequence of the unique combination of material factors, weight and the pull of gravity present during the imaging process. The works of Man Ray, Lazlo Moholy-Nagy, Helen Chadwick, and Ian Burn have been used as key references to this visual characteristic of flatbed processes, whereby weight, gravity and physical matter are all revealed within the image as a consequence of this process. The openness of these processes to contact and air also enables other elements to affect the image, such as fingerprints, debris, and dust, which will mark or fall onto the horizontal surface through touch, gravity and weight. What I have argued is that as a result, the perception of such visual elements within the image draws attention to and signifies materiality and bodily presence, just as we experience and perceive things in the world.

What has been revealed through the research is how the ontology of the digital photographic print process generates a difference in both the way we encounter and experience the image during making, and in the resulting aesthetic and expressive potentials of the printed image. The phenomenological approach of Martin Heidegger, one of the first major thinkers to consider how technology and matter impact on experience and perception, has offered key insights into how we perceive the very essence of what a thing is, through its matter and form. This led me to explore how the bodily absence, the removal of human contact with the digital image during making of the print, may generate a sense of loss or concealment of surface, weight and time, a sense of separateness, as these perfect spotless surfaces exist outside our physical experience. What this has highlighted is a specific expressive potential offered through the experience of both making and perceiving the digital photographic printed image.

As the digital image has no material state at any stage from capture to moment of printing, the sense of somatic tactile touch and contact with the image is removed altogether. Through the key thinking of Aristotle, and Maurice Merleau-Ponty, who assert that the somatic sense of tactile touch is fundamental and central to human experience and perception, I have argued that this separation of the image from material, weight and gravity must therefore have significant implications in our perception during and after its making.

One such implication is that as the image, until printed, is never physically open, to have a tactile contact with the world, its surface will not have the visual potentials which, I have highlighted, are significant within other photographic processes, of being visibly affected by possibilities of surface interruption by air, light, touch, and physical matter (aspects which have been raised as visually significant characteristics in the perception of the image from the flat-bed processes of the photogram and photocopier). A second implication is that the bodily presence of the image, its weight, physical surface and scale will not be able to be gauged by our human senses. The image may therefore be said to be weightless, free floating from any ties to physical size and surfaces until it becomes physically printed. Another implication of this is that the image will not bear those marks that evidence a sense of time and place. Where the image has no direct contact with other material things, it may be seen as having a sense of perpetual physical newness, of being a pure surface, hidden from the impurities that the material world contains, in respect to air, light and matter, until it is printed.

What has emerged as significant throughout the research has been how the visual element of dust, sitting within or upon a visual image may signify all the things which I have previously discussed, in asserting the perception of bodily presence, material surface and tactile touch. Where dust is seen within the image, it becomes an index to material presence; it settles upon the surface of the image, visibly asserting the existence of both itself and the image surface, and also evidences a sense of elapsed time. The photograph *Dust Breeding* (1920) by Man Ray and Duchamp, has been a key artwork, which I have used to visibly demonstrate and discuss how the element of dust raises and exposes many of the issues I have highlighted as fundamental in the perception of the image; of surface, materiality, weight and touch. Duchamp intentionally gathered dust onto the surface of his artwork *The Large Glass*, to invite the stuff of the world – and not his own hand - to make the work, the ultimate readymade artwork. *Dust Breeding* highlights how dust is inevitably everywhere material, in the air we breathe, on objects and surfaces. It may therefore be used to generate new visual and metaphorical readings by its very presence as matter.

A series of practical experiments using a flat-bed digital photographic scanner tested out a number of issues and theories around the visible implications of the immateriality and sense of separateness of the digital photographic process, as well as opening a pathway of

exploration into the role of dust. In what may be considered the *normal* scanning process, where the image has to be placed in direct contact with the bed, via a heavy lid, I attempted to open up this process, allowing light, air and matter to enter and affect image capture. What emerged quite unexpectedly throughout these experiments was the visual impact that dust and debris has when falling onto the glass scanner bed during the capturing of an image. The dust caught during the scanning generates a *visual interruption,* which affects the perception of the picture plane in the resulting scanned images. I claim that the dust perceptually shifts the reading of the illusory photographic image through a visual interruption, and a new reading of image surface. The result is twofold, a perceived split in image orientation, from vertical to horizontal orientation; and the opening up of a new perceptual reading of distance, as the eye oscillates back and forth, between vertical illusory distance and horizontal surface proximity. The result may also be read metaphorically as the reading of the metaphorical *window*, which actually may be read as the photographic lens; and the reading of time, of the elapsed time in the gradual settling of dust. My research has revealed that these readings occur as a direct result of the dust, settling onto the surface of the scanner bed during the experiments.

The practical work has been a central and fundamental part of the research. My art practice has been the instigator of the research project, and has since been maintained as a constant testing bed of all the issues and theories which have emerged throughout its undertaking.

What has emerged through the practice is how the digital photographic process may be intentionally used as a method of generating the photographic printed image which bears no visual evidence of its making process; it may be regarded as free floating, having no weightiness or size. The image is made virtually, our experience and perception of it during making is without any sense of material or tactile touch; we cannot gauge it as a physical body, it emerges from a non-impact printing process with minimal tactile touch, having not been pressed up against any other surface which may visually affect it.

An integral aspect of the research has been the implications of drawing in graphite pencil onto the surface of the photographic printed image. I claim that it is the drawing that opens up entirely new aspects to the image, both visually, and metaphorically. Firstly, it visually ruptures the visibility of the photographic image, by acting as a screen, opening up a new pictorial orientation when perceiving the image. It is the pencil mark of dust on the surface of

the photograph that generates a new perceived space within the image, between the vertical orientation of the illusory photographic image and the horizontal screen effect of the drawing. As dust, the drawing amplifies a screen effect through its lack of perspective, and its gravitational pull to settling upon surfaces. Where the dust is seen against the photographic image, it asserts a new reading of the presence of the photographic lens, the scanner or photocopier bed, all of which, as clear glass, are usually captured through but not captured as surface, unless, as I have revealed through the practical experiments, it settles on the bed, visually interrupting the captured subject. Secondly, the drawing reasserts tactile touch through the indexical mark of the hand. As unique as a fingerprint, each graphite mark counteracts the continuity and sense of separateness of the digital printed image surface beneath. The drawing sits upon the surface as physical matter, bulky, weighty, and also a little shiny against the matt inkjet paper.

I also claim that the drawing of dust generates the question of whether the clarity and perfection sought through the photographic lens is actually a rather limited representation of human vision, as vision may never be completely equivalent to the optical clarity of the photographic image. The clarity may be read as separateness, since these perfect spotless surfaces exist outside our physical experience. As we look out into the exterior world, we encounter light, air and matter, all of which, along with capabilities of individual eyesight, and the ever-changing focus of our concentration, affect our perception. An indistinct photographic image, which generates a perceptual disruption in visual reading, may therefore more accurately describe our perceptual experience of looking, and perhaps more importantly may open up the image to other less purely visually descriptive reading.

My claim is that it is through the particular strategies and methods employed within the artwork, the indistinct photographic illusory space and the physical drawings of dust, that the expressive potential of the visual contradiction or paradox emerges: the appearance (of the dust surface), and the disappearance (of vision through the photographic image). Also, drawing of dust on the photographic image ultimately signifies the inevitable decay of the material world, and is thus an index of both presence and absence. That the dust is drawn rather than real adds a further layer of complexity to the image.

My original contribution towards new knowledge is through the employment of a visual contradiction between two visual languages, which generates a new perceived space, a

rupture, between illusory and tactile surface, between the clarity of a near, real surface, and the indistinct illusion of a distant exterior world. It enables me to create a sense of space within an image, in a way more resonant with my own experience: more fractured, open and complex than a more coherent photographic image, and one that offers an arena within which to contemplate themes of perception, time, memory and mortality.

BIBLIOGRAPHY

Amato, J. A. (2000) *A History of the Small and the Invisible*. Berkeley & London: University of California Press.

Amelunxen, H. V., Iglhaut, S. & Rotzer, F. (1996) *Photography after Photography: Memory and Representation in the Digital* Age. Munich, Germany: G+B Arts.

Andrews, M. (1999) *Landscape and Western Art*. Oxford: University Press.

Antoine, J. P., Koch, G. & Lang, L. (eds.) (1995) *Gerhard Richter.* Paris: Dis Voir.

Arnheim, R. (1970) *Visual Thinking*. London: Faber and Faber.

Ashton, P, W. (2007) *Evocations of Absence.* New Orleans, Louisiana: Spring Journal Books.

Ault, J., Brinbaum, D & Jager, J. (2008) *Wolfgang Tillmans: Lighter*. Ostfildern, Germany: Hatje Cantz.

Aristotle. (1986) *De Anima (on the soul)*, trans. H. Lawson-Tancreed. London: Penguin.

Baldwin, N. (1989) *Man Ray*. London: Hamish Hamilton.

Baldwin, T. (ed.) (2004) *Merleau-Ponty: Basic Writings*. London & New York: Routledge.

Barthes, R. (1977) *Image-Music-Text*. London: Fontana Press.

_____ (1993) *Mythologies*. London: Vintage.

_____ (2000) *Camera Lucida: Reflections on Photography*. London: Vintage.

Bachelard, G. (1969) *The Poetics of Space*. MA: Beacon Press.

Batchelor, D. (2000) *Chromophobia*, London: Reaktion Books.

Batchen, G. (1999) *Burning with Desire*. Cambridge, Mass and London: The MIT Press.

_____(2000) *Each Wild Idea*. Cambridge, Mass and London: The MIT Press.

Bazin, A. (1967) *What is Cinema Vol I*, trans. H. Gray. Berkeley, L.A & London: University of California Press.

Baudrillard, J. (1994) *Simulacra and Simulations*. Ann Arbor, Michigan: University of Michigan Press.

_____ (2009) *Why hasn't everything already disappeared?* United Kingdom :Seagull Books.

Benjamin, A. (2005) *Walter Benjamin and Art*. New York, London: Continuum Press.

Benjamin, W. (1999) *Illuminations*. London: Pimlico.

_____ (2008) *The Work of Art in the Age of Its Technological Reproducibility and other Writings on Media*. Cambridge, Mass and London: The Belknap Press of Harvard University Press.

Benson, R. (2008) *The Printed Picture*. New York: The Museum of Modern Art.

Biro, M. (1998) *Anselm Kiefer and the Philosophy of Martin Heidegger*. Cambridge: Cambridge University Press.

Buchloch, B. (ed.) (2009) *Gerhard Richter (October Files 8)*. Cambridge, Mass & London, England: MIT Press.

Buchloh, B. H. D., Chevrier, J. F., Rochlitz, R., & Zweite, A. (2000) *Photography and Painting in the work of Gerhard Richter: Four essays On Atlas*. 2nd ed. Museu d' Art Contemporani de Barcelona: Libres De Recerca.

Burgin, V. (ed.) (1982) *Thinking Photography*. Hampshire: Palgrave Macmillan.

Butin, H. (2010) *Gerhard Richter, Volke Bradke, 1966, 16mm, s/w, 14:32 min.* Cologne, Germany: Dumont.

Brind, S., McKenzie, R., & Sutton, D. (eds.) (2007) *The State of the Real: Aesthetics in the Digital Age*. London, New York: I.B.Tauris & Co Ltd.

Cazeaux, C. (2000) *The Continental Aesthetics Reader*. London and New York: Routledge.

Clarke, K (1964) *Ruskin Today*. Frome & London: John Murray.

Classen, C. (ed.) (2005) *The Book of Touch.* Oxford & New York: Berg.

Coldwell, P. (2010) *Printmaking: A contemporary Perspective*. London, UK: Black Dog Publishing.

Coldwell, P., & Rauch, B. (2009) The *Personalised Surface: New Approaches to Digital Printmaking*. FADE.

Cox, R., George, R., Horne, R.H., Nagle, R., Pisani, E., Raph, B., & Smith, V. (eds.) (2011) *Dirt: The filthy reality of everyday life*. London: Profile Books.

Denes, A. (1989) *Book of Dust: The beginning and the end of time and thereafter*. Rochester, New York: Visual Studies Workshop Press.

Derrida, F. (2005) *On Touching Jean-Luc Nancy*, trans. C. Irizarry. Stanford, California: University of Stanford Press.

De Zegher, C. (ed.) (2004) *Guiseppe Penone: The Imprint of Drawing*. New York: The Drawing Center.

Edwards, E & Hart, J. (eds.) (2004) *Photographs Objects Histories: On the Materiality of Images*. London and New York: Routledge.

Elkins, J. (1998) *On Pictures and the Words that Fail Them*. Cambridge: Cambridge University Press.

_____ (ed.) (2007) *Photography Theory*. New York and London: Routledge.

_____ (2008) *Six Stories from the End of Representation. Images in Painting, Photography, Astronomy, Microscopy, Particle Physics, and Quantum Mechanics, 1980-2000.* Stanford: Stanford University Press.

_____ (2011) *What Photography Is*. New York & Oxon: Routledge.

Elger, D., & Obrist, H. U. (eds.) (2009) *Gerhard Richter: Text.* London, Thames and Hudson.

Friday, J. (2002) *Aesthetics and Photography*. Hants: Ashgate Publishing Ltd.

Friedberg, A. (2006) *The Virtual Window: From Alberti to Microsoft*. Cambridge, Mass and London: MIT Press.

Flint, K. (2000) *The Victorians and the Visual Imagination*. Cambridge: Cambridge University Press.

Flusser, V. (2000) *Towards a philosophy of photography*. London: Reaktion.

Galen, A. J. (1993) *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*. Evanston, Illinois: Northwestern University Press.

Gere, C. (2002) *Digital Culture*. London: Reaktion.

_____ (2006) *Art, Time and Technology*. Oxford and New York: Berg.

Gilbert-Rolfe, J. (1999) *Beauty and the Contemporary Sublime*. New York: Allworth Press.

Gillham, B. (2000) *Case Study Research Methods*. London: Continuum.

_____ (2007*) Developing a questionnaire*. 2nd Edition. London: Continuum.

Gombrich, G. (1973) *Illusion in Nature and Art*. London: Gerald Duckworth & Company Ltd.

Green, C. (2001) *The Third Hand: Collaboration in art from conceptualism to postmodernism*. Minneapolis, London: University of Minnesota Press.

Heidgegger, M. (1977) *The Question Concerning Technology and Other Essays*, trans. W, Lovitt. New York: Harper Perennial.

Heinzelmann, M (ed.) (2008) *Gerhard Richter Overpainted Photographs*. Ostfildern, Germany: Hatje Cantz.

Helmerdig, S., Scholtz, M. (2006) *Ein Pixel, Zwei Korn*. Frankfurt am Main: Anabas Verlag.

Henderson, L. D. (1998) Duchamp in Context: Science and Technology in the *Large Glass* and Related Works. Princeton, New Jersey: Princeton University Press.

Heyne, R., Neususs, F. M. (2009) *Lazlo Moholoy-Nagy: The Photograms, Catalogue Raisonné*. Ostfildern Germany: Hatje Cantz.

Hofer, P. (Introduction) (1967) *The Disasters of War by Francisco Goya Y Lucientes*. New York: Dover Publications.

Holmes, H. (2001) The Secret Life of Dust: From the cosmos to the kitchen counter, the big consequences of little things. New York: John Wiley & Sons.

Howarth, S. (ed.) (2005) *Singular Images: Essays on remarkable photographs*. London: Tate Publishing.

Huxley, A. (1943) *The Complete Etchings of Goya*. London: Allan Wingate.

Ivins, W. M. (1973) *Prints and Visual Communication.* Cambridge, Mass and London: MIT Press.

Janus (ed.) (1980) *Man Ray The Photographic Image*, trans. by M. Baca. Gordon Fraser Gallery.

Jeffrey, I. (1981) *Photography: A Concise History*. London: Thames & Hudson.

Joseph, B. W. (2002) *Robert Rauschenberg*. October Files 4. The MIT Press.

Judovitz, D. (1995) *Unpacking Duchamp: Art in Transit*. Berkeley, California: University of California Press.

Jurgens, M. C. (2009) *The Digital Print: A complete guide to processes, identification and preservation*. London: Thames & Hudson.

Kaneko, R., & Vartanian, I. (2009) *Japanese Photobook's of the 60s and 70s*. New York: Aperture Foundation

Kellein, T. (1995) *Hiroshi Sugimoto: Time Exposed*. London: Thames & Hudson.

Koenig, W. (2009) *The Phenomenon of Interruption in the Visual Arts*. New York: Edwin Mellin Press.

Krauss, R.E. (1985) *The Originality of the Avant-Garde and Other Modernist Myths*. Cambridge, Massachusetts: MIT Press.

Krell, D, F. (ed.) (1977) *Basic Writings: Martin Heidegger*. New York: HarperCollins Publishers.

_____ (2004) *Basic Writings: Martin Heidegger*. London and New York: Routledge.

Lebel, R. (1959) *Marcel Duchamp*. Trans. By George Heard Hamilton. London: Trianon Press.

Lipkin, J. (2005) *Photography Reborn: Image Making in the Digital Era*. New York: Abrams Studio.

Lister, M. (ed.) (1995) *The Photographic Image in Digital Culture*. London: Routledge.

Lyotard, J.F. (1991) *The Inhuman*, trans. G. Bennington & R. Bowlby. Cambridge: Polity Press.

Maisel, D. (2008) *Library of Dust*. San Francisco: Chronicle Books.

Malpas, S. (2003) *Jean-Francois Lyotard*. London & New York: Routledge.

Marks, L. (2002) *Touch: Sensuous theory and multisensory media*. Minneapolis/London: University of Minnesota Press.

Marquis, A. G. (1981) *Marcel Duchamp: Eros, c'est la vie, A Biography*. New York: The Whitson Publishing Company.

Martin, J. H. (1982) *Man Ray Photographs.* Thames & Hudson: London.

Maynard, P. (1997) *The Engine of Visualization: Thinking through Photography*. Ithaca, New York: Cornell University Press.

_____ (2005) *Drawing Distinctions: The varieties of graphic expression*. Ithaca, New York: Cornell University Press.

Merleau-Ponty, M. (2002) *The Phenomenology of Perception*. London & New York: Routledge.

Miles, R., Saunders, G. (2006) *Print Now: Direction and Definitions*. London: V&A.

Mitchell, W.J.T. (ed.) (1980) *The Language of Images*. Chicago & London: University of Chicago Press.

Mitchell, W. J. T. (1992) *The Reconfigured Eye; Visual Truth in the Post-Photographic Era*. London: MIT Press.

Murray, R. (2006) *How to write a thesis*. Maidenhead, Berkshire: Open University Press.

Nancy, J. L. (2005) *The Ground of the Image.* New York: Fordham University Press.

_____ (2008) *Corpus*, trans. R. A. Rand. New York: Fordham University Press.

Newman, A., De Zegher, C. (2003). *The Stage of Drawing – Gesture, and Act; selected from the Tate collection*. Tate Gallery; Drawing Center New York.

Newton, C. (1979) Photography and Printmaking. London: V&A, Compton & Pitman.

Norwich Gallery, Norwich School of Art & Design (2004) *Living Dust*.

Noyce, R. (2006) *Printmaking at the Edge*. London: A&C Black.

Paterson, M. (2007) *The Senses of Touch: Haptics, Affects and Technologies*. Oxford & New York: Berg.

Penrose, R. (1975) *Man Ray*. London: Thames & Hudson.

Phillips, A. (ed.) (1990) *Edmund Burke: A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*. Oxford, New York: Oxford University Press.

Pirenne, M. H. (1970) *Optics, Painting & Photography*. Cambridge. Cambridge University Press.

Rabate, J-M. (Ed.) (1997) *Writing the image after Roland Barthes*. Philadelphia, University of Pennsylvania Press.

Ray, M. (1963) *Self Portrait.* London: Andre Deutsch.

Ray, M., & Martin, J. H. (1982) *Man Ray: Photographs*. Thames & Hudson: London.

Rexer, L. (2009) *The Edge of Vision: The Rise in Abstract Photography*. New York: Aperture.

Richter, G. (1993) *The Daily Practice of Painting (Writings 1962-93).* London: Thames & Hudson/Anthony d'Offay.

Riegl, A. (2004) *Historical Grammar of the Visual Arts*, trans. J. E. Jung. New York: Zone Books.

Roberts, J. (1998) *The art of interruption.* Manchester and London: St. Martin's Press.

Rosenberg, J. D. (ed.) (1964) *The Genius of John Ruskin*. London: George Allen & Unwin.

Savage, J. (ed.) (2008) *John Berger: Berger on Drawing*. Ireland: Occasional Press.

Sayre, E. A. (1974) *The Changing Image: Prints by Francisco Goya.* Boston: Museum of Fine Arts.

Schneider, E. (ed.) (2002) *Hiroshi Sugimoto: Architecture of Time*. Bregenz: Kunsthaus Bregenz.

Schon, D. A. (2009) *The Reflective Practitioner*. Farnham, Surrey: Ashgate Publishing.

Schwarz, A. (1969) *The Complete Works of Marcel Duchamp: Notes and Projects for the Large Glass*. London: Thames & Hudson.

Selenitsch, A. (2008) *Australian Artists Books*. Australia: National Gallery of Australia Publishing.

Sennett, R. (2009) *The Craftsman*. London: Penguin.

Siegel, J. (1995) *The Private Worlds of Marcel Duchamp: Desire, Liberation, and the Self in Modern Culture*. Berkeley, Los Angeles and London: University of California Press.

Sim, S. (2001) *Lyotard and the Inhuman*. London: Icon Books.

Sladen, M. (2004) *Helen Chadwick*. London: Barbican Art Gallery and Hatje Cantz.

Sontag, S. (1979) *On Photography*. London: Penguin Classics.

Sparks, S. (ed.) (2006) *Multiple Arts: The Muses II / Jean-Luc Nancy*. Stanford, California: Stanford University Press.

Steedman, C. (2001) *Dust*. Manchester: Manchester University Press.

Steinberg, L. (2000) *Encounters with Rauschenberg*. New Pref. London: The University of Chicago Press.

_____ (2007) *Other Criteria: Confrontations with Twentieth-Century Art*. New York: Oxford University Press.

Stephen, A. (2006) *On Looking at Looking: The art and politics of Ian Burn*. Melbourne, Australia: The Miegunyah Press.

Taylor, M. C. (1992) *Disfiguring (Art, Architecture and Religion)*. Chicago and London: University of Chicago Press

Tanizaki, J. (2001) *In Praise of Shadows*, Vintage: London.

Vasselen, C. (2005) *Textures of Light: Vision and Touch in Irigaray, Levinas and Merleau-Ponty*. London & New York: Routledge.

Varnedoe, K. (2006) *Pictures of Nothing.* Princeton and Oxford: Princeton University Press.

Van de Vall, R. (2008) *The Edges of Vision*. Farnham, Surrey: Ashgate Publishing.

Virilio, P. (1994) *The Vision Machine*. Bloomington, Indiana & London: Indiana University Press & British Film Institute.

Wild, J. (ed.) (1964) *Merleau-Ponty: Sense and Non-Sense*, trans. H. L. Dreyfus & P. A. Dreyfus. Evanston, Illinois: Northwestern University Press.

Wye, D. (1996) *Thinking Print: Books to Billboards 1980-95*. New York: Museum of Modern Art.

ONLINE ARTICLES/PUBLICATIONS

Arrhenius, T. (2005) *John Ruskin's Daguerreotypes of Venice*. Modern Painters, 1856 Vol.6, p11, [Internet] Available at www.ep.liu.se/ecp/015/008/ecp015008.pdf [Accessed] 25.04.2010

Brimblecombe, P. Dillon, B. and Najafi, S. (2005) *Elementary Particles: An Interview with Peter Brimblecombe*, Cabinet Magazine Issue 20 Ruins Winter 2005/06. [Internet] Available online at http://www.cabinetmagazine.org/issues/20/dillon_najafi.php [Accessed] 09.10.2010

Carter, K. (2010) *Miroslav Tichý: Tarzan Retired*. [Internet] Available online at http://www.americansuburbx.com/2010/04/theory-miroslav-tichy-tarzan-retired.html [Accessed] 01.07.2012

Chadwick, H. (1999) *Interview with Chris Blackford*. In Rubberneck [Internet] Available online at http://www.users.globalnet.co.uk/~rneckmag/chadwick.html [Accessed] 13.4.2010

Chamberlain, C. (2009) *Something in the Air.* Cabinet Magazine Issue 35 Dust. Fall 2009. [Internet] Available online at http://cabinetmagazine.org/issues/35/ [Accessed] 09.10.2010

Clancy, L. (2008) *Nigel Rolfe: Dust Breeding*, Art Review no28 D. [Internet] Available online at http://artreview.com/forum/topic/show? [Accessed] 02.05.2011

Connor, S. (2009) *Pulverulence*, Cabinet Magazine Issue 35 Dust Fall 2009. [Internet] Available online at http://cabinetmagazine.org/issues/35/connor.php [Accessed] 09.10.2010

Critchley, (2009) *Heidegger's Being and Time*. [Internet] Available online at: http://www.guardian.co.uk/commentisfree/belief/2009/jul/27/heidegger-being-time-philosophy. [Accessed] 06.2011

Dillon, B. (2009) *A Dry Black Veil.* Cabinet Magazine Issue 35, Dust Fall 2009. [Internet] Available online at www.cabinetmagazone.org/issues/35/dillon.php [Accessed]09.02.2010

Dillon, B. & Duprat, J. (2005) *Silent Witness: An interview with Jean Duprat*. Cabinet Magazine Issue 20 Ruins Winter 2005/06. [Internet] Available online at http://cabinetmagazine.org/issues/35/ [Accessed] 09.10.2010

Dillon, B. & Najafi, S. (2005) *Elementary Particles: An Interview with Peter Brimblecombe*. Cabinet Magazine Issue 20 Ruins Winter 2005/06. [Internet] Available online at http://cabinetmagazine.org/issues/35/ [Accessed] 09.10.2010

Friday, J. (2007) *Digital Imaging, Photographic Representation and Aesthetics* [Internet] Available online at http://www.abdn.ac.uk/philosophy/endsandmeans/vol1no2/friday.shtml [Accessed] 06.04.2012

Gorner, P. (s.d) *Heidegger, Phenomenology and the Essence of Technology*. [Internet] Available online at http://www.abdn.ac.uk/philosophy/endsandmeans/vol2no1/gorner [Accessed] 05.2011

Heim, M, (1992) *The Computer As Component: Heidegger and McLuhan, Philosophy and Literature*, 16:2 (1992:Oct.) p.304. [Internet] Available online at http://aphelis.net/heidegger-mcluhan-technology/ [Accessed] 05.2011

Kennard, P. (2007) *Interview with Paul Coldwell*. [Internet] Available online at http://www.faderesearch.com/digitalsurface/case-studies/interviews/interview-links/peter-kennard-interview/ [Accessed] 02.07.2012

Kennedy, J. (2005) *Dust and the Avant-Garde*. CLCWeb: Comparative Literature and Culture 7.2 (2005) [Internet] Available online at: http://docs.lib.purdue.edu/clcweb/vol7/iss2/ [Accessed] 09.10.2010

Kuspit, D. (2005) *The Matrix of Sensations*. [Internet] Available online at http://www.artnet.com/magazineus/features/kuspit/kuspit8-5-05.asp [Accessed] 01.02.2010

Ladd, J. (s.d) Gerhard Richter's Overpainted Photographs. 2009. The Exposure Project. [Internet] Available online at http://theexposureproject.blogspot.co.uk/2009/06/gerhard-richters-overpainted.html [Accessed] 15.02.2010

Lewis, C. (2008) *Martian Landscapes Plus Dust - Eva Stenram At Leeds Pavilion*. [Internet] Available online at http://www.culture24.org.uk/science+%26+nature/space/art57526 [Accessed] 03.01.2011

Mijatovic, A. (2010) *Division of Touch in Jean-Luc Nancy and Derrida*. [Internet] Available online at http://www.inst.at/trans/17Nr/5-3/5-3_mijatovic17.htm [Accessed] 06.2011

Rosen, S. (2000) *Focusing on the Flesh: Merleau-Ponty, Gendlin and Lived Subjectivity*. [Internet] Available online at http://www.lifwynnfoundation.org/focusing.htm [Accessed] 06.2011

Rosenberg, K. (2003) *Dust Memories*. Frieze Magazine. Issue 78. October 2003. [Internet] Available online at: http://www.frieze.com/issue/review/dust_memories/ [Accessed] 20.11.2010

Saltz, J. (s.d)*Toba Khedoori: Immense miniatures*. [Internet] Available online at http://www.lacan.com/khedoori.htm [Accessed] 05.10.09

Slatman, J. (2011) *The sense of life: Husserl and Merleau-Ponty on touching and being touched*. Art and Research. [Internet] Available online at [Accessed] 05.2011

Smithson, R. (1973) *Entropy Made Visible: Interview with Alison Sky*. [Internet] Available online at http://www.robertsmithson.com/essays/entropy.htm [Accessed] 14.06.2012

Stoecker, W (2011) *My Empire of Dust*. BBC Radio 4. [Internet] Available online at http://www.bbc.co.uk/programmes/b012r7jx [Accessed] 15.08.2011

Turner, C. (2009) *Bacon Dust*. Cabinet Magazine Issue 35 Dust. Fall 2009. [Internet] Available online at http://cabinetmagazine.org/issues/35/ [Accessed] 09.10.2010

Warner, N. (2009) *Detritus: A Sleeping Beauty*. [Internet] Available online at www.nickwarnerphoto.com/text_docs/01_detritus.pdf [Accessed] 09.10.2010

PERIODICALS/JOURNALS

Batchen, G. (2004) *Light and Dark: The Daguerrotype and Art History*. The Art Bulletin. Vol. 86, No. 4, (Dec., 2004), pp. 764-776.

_____ (2008) *Photography: Latent History*. Art in America. Vol. 96, No. 2, (2008), pp. 54-57.

Bernard, C. (2000) *Bodies and Digital Utopia*. Art Journal, Vol. 59, No. 4. (Winter, 2000), pp. 26-31.

Carman, T. (1999) *The Body in Husserl and Merleau-Ponty. Philosophical Topics*, Vol. 27, No. 2, Fall 1999.

Dahlberg, L. (2008) *Impressed by light: British Photographs from paper Negatives, 1840-1860*. Aperture No. 191. Summer 2008.

Davis, D. (1995) The Work of Art in the Age of Digital Reproduction; An evolving thesis: 1991-1995. Leonardo, Vol.28, No.5, Third annual New York digital Salon. pp.381-386.

Drucker, J. (1999) *Art and the Digital Revolution*. Art Journal, Vol. 58, No. 1 (spring, 1999), pp. 107-110.

Ester, M. (1990) *Image Quality and Viewer Perception*. Leonardo, Supplemental Issue, Vol. 3, Digital Image, Digital Cinema: SIGGRAPH '90 Art Show Catalog, (1990), pp 51-63.

Green, J. S., & Kraft, R. N. (1989) *Distance perception as a function of photographic area of view*. Perception & Psychophysics. 45 (4), 459-466.

Harman, G. (2009) *Technology, Objects and Things in Heidegger*. Cambridge Journal of Economics. May 29, 2009.

Haxthausen, C. W. (2004) *Reproduction/Repetition: Walter Benjamin/Carl Einstein*. October 107, Winter 2004, pp.47-74.

Hulick, D. (1990) *The Transcendental Machine? A Comparison of Digital Photography and Nineteenth Century Modes of Photographic Reproduction*. Leonardo, vol.23, No.4. pp.419-425.

Jachec, N, & Stallabrass, J. (1989) *Review: Through the looking glass: photographic Art in Britain, 1945-1989. London, Barbican Art Gallery*. The Burlington Magazine, Vol. 131, No. 1039. (Oct., 1989), pp. 723-724.

Kaufman, R. (2002) *Aura, Still*. October 99, Winter 2002, pp.45-80.

Knizek, I. (1993) *Walter Benjamin and the Mechanical Reproducibility of Artworks Revisited*. British Journal of aesthetics, Vol. 33, No. 4, October 1993

Krauss, R. E. (1999) *Perpetual Inventory*. October, Issue 88, Spring, pp. 87+

Ledes, A. E. (2007) *Early Photography*. The Magazine Antiques (1971), Vol. 172, no. 4, (October 2007), pp.18-20.

Malina, R. F. (1990) *Digital Cinema: The Work of Art in the Age of Post Mechanical Reproduction*. Supplemental Issue, Vol. 3, Digital Image, Digital Cinema: SIGGRAPH '90 Art Show Catalog, (1990), pp 33-38.

Mayor, A. H. (1964) *The Photographic Eye*. The Metropolitan Museum of Art Bulletin, New Series, Vol. 5, No. 1, (Summer, 1946). Pp.15-26.

Melin, W. E. (1986) *Photography and the Recording Process in the Age of Mechanical Reproduction*. Leonardo, Vol. 19, No. 1. (1986), pp. 53-60.

Search, P. (1995) *The Semiotics of the Digital Image*, Leonardo, Vol. 28, No. 4. (1995), pp. 311-317.

Shiff, R. (1992) *Handling shocks: On the representation of experience in Walter Benjamin's Analogies*. Oxford Art Journal. Vol. 15, No. 2, (1992), pp. 88-103.

Snyder, J. (1999) *Burning with Desire: The Conception of Photography by Geoffrey Batchen*. The Art Bulletin. Vol. 81, No. 3 (Sept., 1999), pp. 540-542.

Tillim, S. (1983) *Benjamin rediscovered: The work of art after the age of mechanical reproduction*. Artforum 21, May, No.5, 65-73.

Yau, J. (2004)*Time Halted: The Photographs of Hiroshi Sugimoto*: A Column. American Poetry Review. Sep/Oct 2004

CATALOGUES AND MONOGRAPHS

Arnolfini Gallery, Bristol. (1980) Ian Mckeever: Fields, Waterfalls and birds.

Art Gallery of Western Australia (1992) Ian Burn: Minimal Conceptual work 1965-1970.

Jonathan O'Hara Gallery. (2007) Robert Rauschenberg, Transfer Drawings of the 1960s.

Museum of Contemporary Art, Los Angeles. (2001) Toba Khedoori: Public Offerings.

Museum fur Gegenwartskunst Basel. (2001) Toba Khedoori: Gezeichnete Bilder.

Nigel Greenwood Inc Ltd. (1979) Ian McKeever: Field Series 1978.

ONLINE SOURCES

http://www.artic.edu/aic/exhibitions/exhibition/johns. [Accessed] 22.05.12.

http://www.asci.org/artikel17622 [Accessed] 06.07.10

http://www.henry-moore.org/hmi/archive/turning-the-pages--helen-chadwick-notebooks. [Accessed] 04.12.11

http://collections.vam.ac.uk/item/O119081/award-made-during-the-invasion-document-kennard-peter/ [Accessed] 02.07.2012

http://www.markushansen.com/introno.html [Accessed] 02.12.2010.

http://www.metmuseum.org/toah/works-of-art/69.521 [Accessed] 02.03.2010

http://mooonriver.blogspot.com/2007/02/dust-breath-and-varnish-on-glass.html, [Accessed] 02.12.2010

http://www.npg.si.edu/exhibit/duchamp [Accessed]

http://oxforddictionaries.com/definition/english/time [Accessed] 02.07.12

http://www.stevenconnor.com/sand/ [Accessed] 10.06.2010

http://www.tate.org.uk/collections/glossary/definition.jsp?entryId=222 [Accessed] 05.11.11

http://www.vam.ac.uk/vastatic/microsites/photography/processframe.php?processid=pr009 [Accessed] 12.11.11

LIST OF ILLUSTRATIONS

APPENDIX

List of Appendices

Appendix. 1
(See page 26 & 71)
Email correspondence between Jo Love and Mel Ramsden 24th June – 9th July 2012.

Appendix. 2
(See chapter 3)
My working notes during the practical experiments.

Appendix. 3
See chapter 4)
Artwork Outputs 2007-2012.

Appendix. 4
(See chapter 4)
Questionnaires completed throughout the exhibition
Grey Matters – Aqffin gallery, London, 26 November -10 December 2009.

Appendix. 5
Artworks presented for Viva examination. Held at Avenue Gallery, University of Northampton, 1st-26th October 2012

Appendix. 6
(See chapter 3)
DVD inserted on inside back cover containing complete series of image scans for each of the experiments in chapter 3.

Appendix 1
(See pages 26 & 71)
Email correspondence between Jo Love and Mel Ramsden, 24th June – 9th July 2012

Jo Love to Mel Ramsden 24th June 2012-07-21

Hi Mel

Anne gave me your email.
I hope you are well - Anne said you were busy jet setting around the world at present!!
I wanted to say again it was so nice to meet you..thankyou for coming to see my work!!

Could I ask you about Ian wanting to make more Xerox Books!! You mentioned it briefly when we were talking about my dust!

……

Mel Ramsden to Jo Love 5th July 2012

Dear Jo,

That's nice and old fashioned of you to refer to the miseries and frustrations of air travel as 'jet setting'.

Anyway, about Ian trying to make more Xerox books: in 1968 photocopy machines were, compared to today, quite primitive things. Above all they were quite dirty and photocopying a blank sheet of paper, then photocopying the copy and so on and so on, tended to make 'noise' in the shape of dots and other strange blemishes. When he tried it later – maybe in the 80s – all those old machines had been superseded and the new ones did not cause any 'noise' (if it be that) whatsoever.

I've attached a picture of a work made by Ian in 1967. Its title is 'Nine sheets of glass and a diagram for nine sheets of glass'. He was doing work like this just before the Xerox Books. The point is that glass is 'blank' –obviously – but when several sheets are stacked on top of each other there is a strange blurry atmosphere effect generated despite of or because the glass is blank. That's the sort of one-thing-after-or-on-top-of-each-other discipline he was using when he first tried photocopying a blank sheet of paper and then copying the copy – often up to 80 or so pages. The appearance was secondary, it was about the discipline. It's very important to understand that. It was unexpected, simply the result of a method of production. He had no idea about the appearance. He wasn't a dot-ist or a dust-ist. This was Conceptual Art, you know.

I hope this is of some help.

Best wishes,

Mel

…….

Jo Love to Mel Ramsden 9th July 2012

Hi Mel

Did I tell you you are a star? !!!!...a jet setting star!! You know ive never been on a plane! thats probably why i
sound old fashioned...

Thanks so much for you comments...very interesting and perfect for my research...

Yes, its that interest in process which is what I was after...
Its weird that as part of my research, very early on, I was experimenting with the scanner by elevating images during the process, putting air and light back into the scanning of an image..I used glass sheets to suspend the image, and after several layers I got a wierd patterning effect. I described it a s a moire effect, but its as you just said..blurry and odd ! ha!!

I have quoted you...I hope you dont mind..but I said, explained by HRH superstar Mel Ramsden!!

Hope to see you and speak to you soon.
Thankyou again!!!

Best

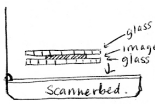
21.01.09

Experiment 1.

Epson perfection 4990 photo flatbed scanner
B+W photographic image.
2mm clear glass sheet (A4).

Process/Method

- b+w photograph scanned face down as an original scan
- add 2mm glass sheet between glass bed + image then scan - repeat - building up glass between scanner bed and image - up to 10 layers

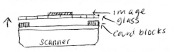


Layer 0 - original scan - - sharp contrasty, clear image.
Layer 1 - 2mm glass sheet added.
- no change in image
Layer 2 - no change in image (4mm)
Layer 3 - no change in image. (6mm)
Layer 4 - moiré effect in sky. Softening of subtle detail (8mm)
+ edges to structures. dulling down of contrast.
Layer 5 - most significant shift. (10mm)
Huge moiré effect visible with in top half.
All over grey cast - softening of image. - darkening - smoothing of edges. characteristics.
Loss of whites. Whitest is bit of dust
Layer 6 - amplified moiré effect. (12mm)
- greyer image - softened edges - misty - romantic
Layer 7 - greyer still, pixels removed, de-ratched, close to unclear. (14mm)
Bits of dust, hair, scratches appear/work ~~in foreground~~ in front

1a Experiment [illegible] (21.02.09)

As per experiment 1. – glass sheet removed.
Cards blocks used to suspend image sandwiched between glass sheet.

Method.



As per experiment 1 – except.
5mm card added repeatedly to elevate glass sheet holding image.
Every 5mm until 190mm → then every 10mm until 300mm

Results

~~Layer 0~~ – original scan – close contact.
1 Original – Well contrast, sharp b+w image b+w tonal range

Layer 1 (0mm) – 2mm suspension. very slight softening

+5mm – grey cast as per exp 1.
background in image becoming foggier
detail increased in softness

+10mm – Greys getting darker – detail lost in darker areas – but still see detail in mid windows etc.
– significant shift from original – distanced – soft – hazy grey over all.
bottom of image – no whites within image.
Specks appear whitest – beginning to stand out from the image away / apart.

+15mm – most significant split from dust specks to image.
Seems distance. – not together?
Sudden shift of focus? – the speck seem easiest to focus on.
and push image to background position – out of focus.
window detail is harder to see – still see imagery of figures.

+20mm – increase of above – darker image overall – evening out of tone – grey all over

+25mm – as above.
+30mm – as above – loss of detail of figures
+35mm – darker shift – ~~loss of detail~~

blocking. (although blocking – feels as though image still behind it)

Layer 8 – Exaggeration of previous (10mm)
Dull dark grey image – no contrast – no sharpness – softness!
White marks of dust etc. appear stark against ~~[illegible]~~
grey photo – like looking through glass –
feel as if we are placed outside of image.

Layer 9 – Exaggeration of previous (15mm)
Soft image, dull grey, no contrast
Marks split away sharp, bright white.

Layer 10 – All over
Dark grey, soft, hazy, not a blur? but softness
Moiré still very evident. (20mm)
Scratches, dust ~~[illegible]~~ bright and focused against background.
Feel removed, distant, behind the glass lens?

– puts the dust nearest – onto the lens and put space from the lens to the target subject (photograph).

The lens sees through the dust + space to the photograph.

— reverse of distance through media.

Too close – too flattened? – lack of space traditionally seen through and made through.

1. See through space to photograph – capture an image through light
2. Space through which image is ~~ma~~ printed – made.

Experiment 2. – reverse. – without dust glass layer. (03-09-09

layer ⟷ height

1. 20.psd – 136 mm –
2. 19 – 128 mm – Still dust due to height and air – even after cleaning.
3. 18. – 120 mm – beginning to become much more visible
4. 17 – 112 mm –
5. 16 – 104 mm –
6. 15 – 96 mm –
7. 14 – 88 mm – much more recognisable
8. 13 – 80 mm – glass sheet support is visible on preview – ← pause – light much brighter in room causing overexp. of image – no clouds – very bl[…] lig[…]
9. 12 – 72 mm – continued but seems lighter!
10. 11 – 64 mm –
11. ~~1~~0 – 56 mm –
12. ~~13~~ 9 – 48 mm –
13. ~~14~~ 8 – 40 mm –
14. ~~15~~ 7 – 32 mm –
15. ~~16~~ 6 – 24 mm –
16. 5 – 16 mm –
17. 4 – 8 mm –
18. 3.psd – 0 mm – close together with no space. – photograph scanned as normal procedure.

~~19. 2 –~~
~~20. 1 –~~

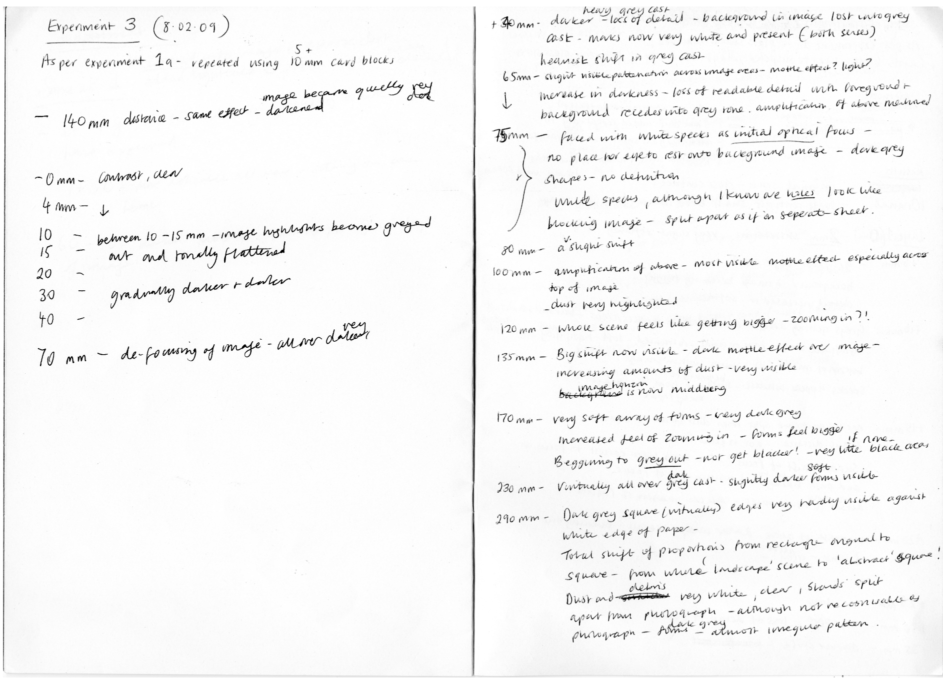
Experiment 2 –

Same as 1 – added tightened exposure layer but zoomed into image to expose dust in more detail

– at layer 1+10 – already specks of white have appeared.

1+50 – more noticable all over – setting on one level

60–70 – darker mottle effect happening on top of image



Experiment 3 (8·02·09)

As per experiment 1a - repeated using 5+ 10 mm card blocks

— 140 mm distance - same effect - darkened image became quickly very dark

- 0 mm - contrast, clear
4 mm - ↓
10 - between 10 - 15 mm - image highlights become greyed
15 - out and tonally flattened
20 -
30 - gradually darker + darker
40 -

70 mm - de-focusing of image - all over very darker

+ 40 mm - darker - heavy grey cast - loss of detail - background in image lost into grey cast - marks now very white and present (both senses)
heaviest shift in grey cast
65 mm - slight visible patternation across image areas - mottle effect? light?
↓ increase in darkness - loss of readable detail with foreground + background recedes into grey tone. amplification of above mentioned
75 mm - faced with white specks as initial optical focus - no place for eye to rest onto background image - dark grey shapes - no definition
White specks, although I know are holes look like blocking image - split apart as if on separate sheet.
80 mm - a slight shift
100 mm - amplification of above - most visible mottle effect especially across top of image
_dust very highlighted
120 mm - whole scene feels like getting bigger - zooming in?!
135 mm - Big shift now visible - dark mottle effect over image - increasing amounts of dust - very visible
image horizon is now middle grey
170 mm - very soft array of forms - very dark grey
increased feel of zooming in - forms feel bigger
Beginning to grey out - not get blacker! - very little if none - black areas
230 mm - Virtually all over dark grey cast - slightly darker soft forms visible
290 mm - Dark grey square (virtually) edges very hardly visible against white edge of paper -
Total shift of proportions from rectangle original to square - from whole 'landscape' scene to 'abstract' square!
Dust and debris very white, clear, stands split apart from photograph - although not recognisable as photograph - dark grey forms - almost irregular pattern.

20 cards = 8 mm.

19.08.09

Experiment with scanning dust + image with putting air between.

---

1. Glass sheet with dust layer on surface 2mm
2. 2 Glass sheets with black & white photograph between 4 mm.

---

1. Scan dust alone — as 'normal'.
2. Scan photograph with glass sheets.

8.

Experiment 1. – Leaving dust flat on bed – elevate photograph progressively behind/above.

Untitled 3.doc dust glass layer + photograph layer. 6 mm – no space – seem melded together?

Untitled 4.doc dust glass layer + 8 mm elevation of photograph. ? (↓ +8)

5. dust glass layer + 16 mm elevation of photograph.

6. " + 24 mm. " } most significant first visual shift – duller – more blurred. (24 - 32 mm)

7. " +32 mm "

8. " +40 mm "

9. " +48 mm. "

10. " +56 mm. "

11. " +64 mm "

12. " +72 mm "

13. " +80 mm "

14. " +88 mm "

15. " +96 mm " ← dust visible bright white, but pics still unclear

16. " +104 mm "

17. " +112 mm " ← the white dust is stark + sharp really pulling to surface

18. " +120 mm "

19. " 128 mm "

20. " 136 mm "

Appendix 3
(See chapter 4)
Artwork outputs from 2007-2012

Artworks 1
Wir Liegen auf dem Dach (we are lying on the roof) (2007-8)

2008

Research Narratives, Exhibition and Symposium, Chelsea College of Arts, London October 2011. An exhibition and symposium around practice based research.

2009

6th Graphic Biennial – Novosibirsk State Museum, Russia
A full colour international catalogue was produced.

Received a *Digital Print Award* by an international jury. Following the success of the show I was then invited to submit works to Hotplate exhibition the following year.
http://theprintsaurus.com/printsaurus_en/exhibition_en/ex_09_RUS_en.htm

2010

Hotplate – International Print Exhibition, Phoenix Gallery, Brighton. 3rd July – 15th August 2010
The group exhibition arisen out of the project initiated in Novosibirsk, Siberia, in 2009 (above). Works from nine countries were exhibited, focusing on installation and unframed work, seeking to position prints as objects and site-specific pieces.
http://sodaworks.co.uk/blog/exhibition-hot-plate
http://hybridpress.blogspot.com/2010/06/hot-plate-international-exhibition-of.html
http://www2.worthingtoday.co.uk/pdfs/WhatsON29thJuly.pdf
http://www.phoenixarts.org/site-archive/123-international-printmaking.html

Artworks 2
***Das Festsetzen (the settling) series* (2008/9)**

2009

Grey Matters – Aqffin gallery, London, 26 November -10 December 2009

A joint exhibition with Michael Evans at an international central London gallery with an international curator.
The work was selected as *'top 5 exhibitions to visit'* by Whitechapel Art Gallery's First Thursday event.
Full colour catalogue available
http://www.aqffin.co.uk/art-gallery.php
http://www.firstthursdays.co.uk/content.php?page_id=1947
http://www.artrabbit.com/uk/events/event/16121/grey_matters_jo_love_and_michael_evans
http://www.drawingcenter.org/viewingprogram/share_portfolio.cfm?pf=4675

Impact 6 – International Print Exhibition and Symposium, UWE, Bristol
The exhibition was network project led by myself and Nick Devison form Anglia Ruskin University.
A Catalogue is Available
The Impact of this show led to invitation to exhibit at Library Gallery, Islington London in 2009.
These exhibitions have now led to an Exhibition in Seoul, South Korea at an international gallery, and also at Anglia Ruskin Gallery, Cambridge.
http://www.impact.uwe.ac.uk/events/individual_exhibitions_uwe.html

Borderless - Wimbledon Space, Wimbledon College of Art, London, 9Th September – 8th October 2010. Colour catalogue available.

2010

Invited speaker at "*Landscape & the Metaphysical*", The University of Plymouth. 1st - 2nd July 2010
Paper title: From the emptiness of representation to the representation of emptiness.

Published Online at http://www.landwater-research.co.uk/lw.php?pg=land-and-the-metaphysicall

2nd Penang International Print Exhibition, Penang State Museum and Art Gallery, Malaysia.
1 small work exhibited and retained within the Museum collection
Full colour catalogue available

2011

Invited speaker at Wrexham International print exhibition & Symposium, Yale College, Wrexham 19th April 2011
Paper title: Materiality and surface of the digital print

Artworks 3
***Staub (dust) series* (2010-11)**

2011

Impact 7– International Print Exhibition and Symposium, Monash University, Australia 27th-30th September 2011
http://impact7.org.au/about.html
http://impact7.org.au/exhibitions/devison.html

Viewfinder, Artspaceh Gallery, Seoul, South Korea, 22 June – 5 July
A Joint funded project by The University of Northampton, Anglia Ruskin University and Artspaceh gallery. Full colour catalogue available
http://www.artspaceh.com/
http://www.saatchi-gallery.co.uk/pdpac/index_2.htm
www.printresarchnetwork.org.uk

Viewfinder, Ruskin Gallery, Anglia Ruskin University, 9th – 24th November 2011
A Symposium around the works was held 23rd November 2011

Bite, Mall Gallery, London 23rd - 3rd September 2011
International Printmaking Exhibition. Invited artist
http://www.mallgalleries.org.uk/index.php?pid=171

Scope: New Photographic Practices, Tsingua University Gallery, Beijing, China, November 2011. Full colour catalogue available.

2012

Viewfinder, Avenue Gallery, University of Northampton. April 2012

Artworks 4
***Gefallener Staub (Fallen Dust) series* (2011)**
Graphite pencil on gesso coated copper plate, 10cm x 14cm

2011

Jerwood Drawing Prize - Jerwood Space, London. 14 sept-30th October 2011
Touring UK 2011-2012

http://aestheticamagazine.blogspot.com/2011/10/primacy-of-drawing-jerwood-drawing.html
http://www.jerwoodvisualarts.org/page/3423/Jerwood+Drawing+Prize+2011/184
http://www.ameliasmagazine.com/art/jerwood-drawing-prize-2011-exhibition-review/2011/09/14/

Appendix 4

(See chapter 4)

Questionnaires completed throughout the exhibition

Grey Matters – Aqffin gallery, London, 26th November -10th December 2009 (see appx.3)

What do you feel is the significance of the drawing of dust?

It emphasises/ a 'screen' or surface – so it suggests or lens places the viewer in relation to the lens & the distant space

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

The work creates an interesting dynamic between the viewer and the space through the window so it makes you think of life beyond the day to day in the city etc & of where you fit in to the vastness of the world!

How do you consider yourself?

Practitioner? (Y)/ N (Resting!!)

Formal art training?(Y)/ N & Level MA

Do you regularly visit art exhibitions?(Y)/ N

Other feedback.

They are fab!

Thank you for your time
Jo Love

(3)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

it's all the focus. It makes you think of vast space beyond the edges. My eye doesn't rest on a particular spot,

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

~~[illegible] but mainly drawing~~ No where specifically. more often the dust.

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

photo is bg
drawing is fg

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

further away — which in some ways brings it closer!

(but the drawing emphasises the space between the surface & the distance)

Do the images seem out of focus?

No

What do you feel is the significance of the drawing of dust?

It emphasises/ suggests a 'screen' or surface - or lens so it places the viewer in relation to the lens to the distant space

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

The work creates an interesting dynamic between the viewer and the space through the window so it makes you think of life beyond the day to day in the city etc & of where you fit in to the vastness of the world!

How do you consider yourself?

Practitioner? (Y)/ N (Resting!!)

Formal art training? (Y)/ N & Level MA

Do you regularly visit art exhibitions? (Y)/ N

Other feedback.

They are fab!

Thank you for your time
Jo Love

(3)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

it's all the focus. It makes you think of vast space beyond the edges. My eye doesn't rest on a particular spot

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

No ~~[illegible] but mainly drawing~~ where specifically + more often ~~the~~ the dust.

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

photo is bg
drawing is fg

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

further away → which in some ways brings it closer!
(but the drawing emphasises the space between the surface & the distance)

Do the images seem out of focus?

No

What do you feel is the significance of the drawing of dust?

Storm ?

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

Sense of loss

How do you consider yourself?

Practitioner? Y/ N

Formal art training? Y/ N & Level MA FINART

Do you regularly visit art exhibitions? Y/ N

Other feedback.

interesting
looks quite cold in Winter though!

Thank you for your time
Jo Love

(4)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

SKY/AIR. (Top half of the image)

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

Drawing - one to another

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

As Background

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

It makes the scene ~~[illegible]~~ seems go futher away

Do the images seem out of focus?

No

What do you feel is the significance of the drawing of dust?

to bring texture to the print

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

Winter? resting?

How do you consider yourself?

Practitioner? (Y)/ N

Formal art training? (Y)/ N & Level

Do you regularly visit art exhibitions? (Y)/ N

Other feedback.

Loved it, very intriguing (sorry can't spell that-?)

Thank you for your time
Jo Love

(5)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

The empty space behind the drawing.

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

1st the drawing, then the photo

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

Drawing as foreground

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

The space appears further away.

Do the images seem out of focus?

Yes, some of them.

What do you feel is the significance of the drawing of dust?

I guess it's about seeing. The camera as a mechanical eye. The dust draws attention to what is normally hidden in a photograph its surface? The lense? "The photograph is an image without a code"

Does this work lead you to have any thoughts about anything else? for eg, History ? Mortality?

Again looking, that seeing is actually embodied and that photographs are disembodied.

How do you consider yourself?

Practitioner? (Y)/ N

Formal art training? (Y)/ N & Level

Do you regularly visit art exhibitions? (Y) N

Other feedback.

I would like to see this piece as part of a group. There is a nice sense of blankness? Whiteout? A closing down of vision?

Thank you for your time
Jo Love

/ (6)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

I guess the 'focus' lies somewhere between an awareness of surface (or flatness) and an implied pictorial space. Maybe the focus is a kind of tension between the two.

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

My gaze tends to rest on the lower part of the photograph – the ground

Where do you see the drawing and photograph within the image? One as foreground, background or within the middle of the image?

I think I shift from one to the other. I don't really see the difference between drawing and photograph.

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

There is a sense of shifting from surface to depth* - the human marks attract (distract?) my attention
* and back again

Do the images seem out of focus at all?

NO
Although it's difficult to focus on both at the same time.

What do you feel is the significance of the drawing of dust?

I read the specs as microscopic moments in real time - how/how against the macroscopic landscape - history/fate

Does this work lead you to have any thoughts about anything else? for eg, History ? Mortality?

The screen of dust reads like radio interference as it morphs into an image of a distant place/time. But one which has no distinguishing features - a wilderness or non-place. Time is a wilderness.

How do you consider yourself?

Practitioner? (Y) / N

Formal art training? (Y) / N & Level

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

Without being told the marks are hand-drawn I don't read them in that way, even knowing they are I still don't feel that is important to the way I see them, in fact I ignore the knowledge.
The image has a stillness, distance, sorrow. It is extremely meditative & can retain my attention for a long while as remains layers of thought evoke.

Thank you for your time
Jo Love

7

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

An in-between space, a tension between vertical picture plane (real) and horizontal deep space (illusion)

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

One to another - not really resting

Where do you see the drawing and photograph within the image? One as foreground, background or within the middle of the image?

foreground

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

further away

Do the images seem out of focus at all?

not really.

What do you feel is the significance of the drawing of dust?

SOMEHOW IT SEEMS TO 'ANIMATE' THE PHOTOGRAPH AND AS I LOOK AT THE TOP PART OF THE PHOTO (SKY) INSTEAD OF MOVING INTO THE SPACE THE SPACE IS TIPPED BACK FORWARD LIKE SOME EARLY MODERNIST PAINTING

Does this work lead you to have any thoughts about anything else? for eg, History ? Mortality?

HISTORY YES, PERHAPS FOREDOOM AND MORTALITY IN THE SENSE OF A 'NEATLANN ROMANTIC TRADITION'.

How do you consider yourself?

Practitioner? (Y) / N

Formal art training? (Y) N & Level BA / MA / MPHIL

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

THAT (WHEN) I LOOK AT THESE IMAGES THE MARKS I FEEL A SENSE OF 'MAKING' VIA THE MARKS. NOT GESTURE BUT MORE OF THE MARKS BEING OR FALLING?

Thank you for your time
Jo Love

10

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

THE EMPTY SKY / MIST / FOG

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

THE DRAWING MARKS AND THE SPACE BEHIND - SPACE AND BACK TO SURFACE

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

DRAWING AS FOREGROUND OR POSSIBLY DRAWING AS SURFACE

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

CLOSER ODDLY ENOUGH

Do the images seem out of focus?

YES BUT I WONDER IF THIS IS BECAUSE OF SOME KIND OF 'INTERFERENCE' FROM SURFACE MARKS

What do you feel is the significance of the drawing of dust?

SOMEHOW IT SEEMS TO 'ANIMATE' THE PHOTOGRAPH AND AS I LOOK AT THE TOP PART OF THE PHOTO (SKY) INSTEAD OF MOVING INTO THE SPACE THE SPACE IS TIPPED BACK FORWARD LIKE SOME EARLY MODERNIST PAINTING

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

HISTORY YES, ALWAYS FOREBODING AND MORTALITY IN THE SENSE OF A 'NORTHERN ROMANTIC TRADITION'.

How do you consider yourself?

Practitioner? (Y) / N

Formal art training? (Y) / N & Level BA/MA/MPHIL

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

THAT (WHEN I LOOK AT THESE IMAGES THE MOST I FEEL A SENSE OF 'MOVEMENT' VIA THE MARKS. NOT GESTURE BUT MORE OF THE MARKS BEING OR FALLING.)

Thank you for your time
Jo Love

(10)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

THE EMPTY SKY / MIST / FOG

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

THE DRAWING MARKS AND THE SPACE BEHIND - SPACE AND BACK TO SURFACE

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

DRAWING AS FOREGROUND OR POSSIBLY DRAWING AS SURFACE

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

CLOSER COZY ENOUGH

Do the images seem out of focus?

YES BUT I WONDER IF THIS IS BECAUSE OF SOME KIND OF 'INTERFERENCE' FROM SURFACE MARKS

What do you feel is the significance of the drawing of dust?

To highlight the interpretive of the human process of photography

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

It reminds me of the fragilities of my childhood

How do you consider yourself?

Practitioner? Y / (N)

Formal art training? (Y) / N & Level

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

They give me a sense of peace within myself. Cold

Thank you for your time
Jo Love

(11)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

To me there is no focus. The image upon the wall is the focus, it is the whole that captivates the eye.

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

It doesn't rest, the longer you view the more you see.

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

To me they feel like one, an organic harmony

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

I find it difficult to say. They would seem the print without the drawing they feel neutral together

Do the images seem out of focus?

No

What do you feel is the significance of the drawing of dust?

For me it's very powerful. It highlights the manipulation of photography that is so debatable when trying to represent "truth"

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

Nope - About the construction of reality is the main issue for me here

How do you consider yourself?

Practitioner? (Y) N

Formal art training? (Y) N & Level

Do you regularly visit art exhibitions? (Y) N

Other feedback.

great

Thank you for your time
Jo Love

(12)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

on the highlighted marks

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

It doesn't really rest but the marks hold my gaze

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

I wouldn't know they were drawing marks if I hadn't been told. Not sure what I would have thought without an explanation

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

Closer

Do the images seem out of focus?

Not really

What do you feel is the significance of the drawing of dust?

What dust ?

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

History or mortality? Give it a rest !

How do you consider yourself?

Practitioner? (Y) N

Formal art training? (Y) N & Level

Do you regularly visit art exhibitions? (Y) N

Other feedback.

Some work on questionnaires? Lots of leading questions?

Thank you for your time
Jo Love

(13)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

Me, in front of it.

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

I didn't realise there was a photographic element to these images

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

Drawing (lines) front
Photo (Dartmoor) back

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

I have an issue with thinking about these as Drawing(s) Photo.

Do the images seem out of focus?

?

What do you feel is the significance of the drawing of dust?

expresses movement

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

How do you consider yourself?

Practitioner? (Y) / N

Formal art training? (Y) / N & Level

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

Thank you for your time
Jo Love

(14)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

~~Centre of~~ horizon
The horizon

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

1 2 the other

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

Drawing - foreground

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

Make more textural and 3D
Closer

Do the images seem out of focus?

NO

What do you feel is the significance of the drawing of dust?

old photo
scratches,

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

How do you consider yourself?

Practitioner? Y / N

Formal art training? Y / N & Level

Do you regularly visit art exhibitions? Y / N

Other feedback.

Thank you for your time
Jo Love

Thank you x

(15)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

scratches and landscapes
challenging in gradation black & white

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

between states,
relationship between two.

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

middle space.

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

further for space
closer for drawing

Do the images seem out of focus?

they do. they don't.
our eyes focus in/out seem

What do you feel is the significance of the drawing of dust?

Gives meaning / importance / subjectivity to the invisible / incidental / everyday.

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

history, fragility, chance, improvisation, disorder.

How do you consider yourself?

Practitioner? Y / (N)

Formal art training? Y / (N) & Level

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

Thank you for your time
Jo Love

(16)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

division between earth + sky — is horizontal division.

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

Drawing makes optical stains impossible!

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

Drawing foreground, photo background

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

further away - somehow aweur / nostalgic.

Do the images seem out of focus?

yes.

What do you feel is the significance of the drawing of dust?

Not sure

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

Reminds me of walking in the mountains, being cold, and delightfully isolated

How do you consider yourself?

Practitioner? Y / (N)

Formal art training? Y / (N) & Level

Do you regularly visit art exhibitions? (Y) / N

Other feedback.

Lovely images - thank you

Thank you for your time
Jo Love

(17)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

The focus seems to lead into the background, but the background fades to white. So I find myself looking for something in the distance

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

The scattered marks draw my eye up from the solid detail of the rocks

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

I see the drawing as very foreground - like when you stretch to concentrate on dust falling in front of your eyes, and you lose focus on the scene beyond.

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

Not sure

Do the images seem out of focus?

Yes - like screens often do in real life

What do you feel is the significance of the drawing of dust?

No sig.

Does this work lead you to have any thoughts about anything else?for eg, History ? Mortality?

Existance

How do you consider yourself?

Practitioner? ~~Y~~ / N

Formal art training? ~~Y~~ / N & Level

Do you regularly visit art exhibitions? Y / ~~N~~

Other feedback.

Thank you for your time
Jo Love

(18)

'Das Festsetzen' – Jo Love

This work forms part of a practice based research project.
I would appreciate a few minutes of your time to respond to a number of questions around the perceptions of space within the images.

What and where do you feel is the focus of the image?

Mid-space

What does your gaze rest on? Drawing or photograph? One to another? Or doesn't it rest at all?

Mid-space

Where do you see the drawing and photograph within the image? One As foreground, background or within the middle of the image?

Don't see them as separate

What do you think happens to the photographic space through the overlaying of the drawing? Does the space seem further away or closer?

Further but only less the question q1.6 the 2 otherwise - see Q3 above

Do the images seem out of focus?

No

Appendix 5

Artworks presented for Viva examination

Held at Avenue Gallery, University of Northampton, 1st-26th October 2012

Appendix 6

DVD inserted on inside back cover containing complete series of image scans for each of the experiments in chapter 3 and a series of microscope photographs taken of from some of the artworks discussed in chapter 4.