On Distance in Photographic Images

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Abstract

This thesis forms an inquiry into distance as experienced in the medium of photography. Distance manifests itself in myriad forms right down to contact with the photo-sensitive surface, which is where the photogram is born.

Separation of the observer from the observed was the model for the camera obscura, a model followed by a great number of eighteenth and nineteenth century spectacles, before the 'black box syndrome' was passed on to the camera image, both still and moving.

Maurice Blanchot's statement "the game of distance is the game of near and far" is the key to my juxtaposition of camera images versus contact-based processes such as the photogram and, by extension, the X-ray. Camera images are taken at a distance (far), but are easily read (near), whereas the photogram requires the closest of proximity for its creation (near) but the resulting image is often not immediately decipherable and therefore cognitively far.

I examine in depth the history and ontology of the photogram and, to a lesser extent the X-ray, with regard to the element of touch and the visual dissolution of boundaries between 'inside and out'. Touch and vision intermingle in many ways; some interactions incite memories, others produce sensations of knowledge that can never be experienced or verified.

Much writing on the nature of photography has been concerned with veracity through contiguity and the transference of light waves. I investigate this particular notion of 'touch' as well as the all-pervasive idea of the indexicality of the photographic image, which I find does not to stand up to the requirements of the index as defined by the semiotician Charles Sanders Peirce. But, in a final instance of role reversal concerning near and far, the photogram does.

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Introduction

The game of distance is the game of near and far
Maurice Blanchot

When looking at a photograph, the issue of distance does not usually spring to mind - and even if that were the case, what kind of distance would we be contemplating?

Would it be the distant view traditionally employed in landscape photography; the distance of a sitter to the photographer (and therefore the viewer) at a portraiture sitting; a spatial distance manipulated by optics, as in foreshortening of space by means of a telephoto lens; or the distortions introduced by the use of a wide-angle lens? Or would we be inclined to think about distance in linear time: the time that has passed between the creation of the photograph and our viewing of it?

The medium of photography combines all these aspects - and many more besides- in one deceptively simple entity which, due to its ability to 'stop time' and present a single slice of the past while being instantly present as an object, acquires meaning on a multitude of levels.

The French novelist and philosopher Maurice Blanchot (1907-2003) addresses the ambiguity of distance in his work 'Le Pas Au-Dela', translated as 'The Step / Not Beyond'. His statement "The game of distance is the game of near and far" has inspired my investigations into distance in photographic imagery, a medium which, as will become clear, is able to give even Blanchot a good run for his money in terms of reversal and ambiguity.

The game of near and far will surface on many levels in what is to come, but initially inspired my investigation because, as well as operating in the perception of the image, it also seems to encapsulate the fundamental differences, both perceptually and intellectually, between a photograph made by a camera, be it analog or digital, and the photographic processes based on

contact; namely the photogram and, by extension, the X-ray. This is where the 'game of distance' is being played out.

In this investigation, the photogram becomes the key for an exploration far beyond its own ontology. It serves to point out issues pertaining not only to its own genre but to sense perception at large and the concept of vision affiliated with photography and technology in particular. It also serves to interrogate photographic discourse; more pertinently, its exclusions during the modernist phase in the 1950s and 60s, when Beaumont Newhall wrote *The History of Photography*[1] which omitted the early history of the photogram altogether. Newhall first mentions this process when it was resurrected in the 1920s in the spirit of Dadaism and Surrealism.

The game of near and far allows me to interrogate photography, the photogram in particular, in a new light. Previously, the photogram has been written about in technical / instructional terms or in connection with the work of specific artists where it has been theorised in light of a particular artist's output.[2] This thesis makes connections between fields of knowledge concerning inquiries into sensorial workings and perceptional matters pertaining to the human body which have not been previously connected with writings on the subject. It aims to enlarge the boundaries of thinking about the subject, issues connected with touch, tactility and closeness in particular, and the issue of *haptic visuality* or *embodied perception* which has so far been only written about in terms of the moving image, most notably by Laura Marks[3]. My assertion that this particular mode of perception corresponds with the perceptional mode of photograms has, to my knowledge, not been previously addressed. By and large, the photogram has been classified under *photographic techniques* and has been assigned the same perceptional mode.

My endeavor here is a conceptual and theoretical study around the relationship between photograph and photogram as it pertains to

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[1] Beaumont Newhall, *The History of Photography: From 1839 to the Present* (London: Secker&Warburg, 1982).

[2] See for example the writing on works by Adam Fuss, p. 58-61

[3] In: Laura Marks, U., *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* (Durham and London: Duke University Press, 2000). And Laura Marks, U., *Touch: Sensuous Theory and Multisensory Media* (Minneapolis: University of Minnesota Press, 2002).

contemporary artistic practice. While I am giving a brief historical outline of both, it is outwith the aim of this thesis to provide a detailed historical account. The methodology of this inquiry does not aspire to the art historical standard of producing primary research via visits to archives or interviews with artists. The originality of the argument, therefore, lies in the new connections created between the sense of touch and the creation of a visual manifestation, in a rigorous re-interpretation of the received notion of indexicality in photography and in an investigation and classification of a range of practices of contemporary artists who use the photogram as a means of expression. My own practice and the body of work connected with this thesis constitute a different but no less valid original contribution to knowledge.

The tactile aspect of the photogram and its use by contemporary artists forms part of the revival of phenomenologies pertaining to theories of the visual turn versus the linguistic, which has dominated critical theory since the 1970s. The backlash came in the 80s and 90s through writers like Hal Foster, Jonathan Crary and Martin Jay who, each in their own way, re-introduced phenomenology as a means of re-evaluating vision in a more 'embodied' manner.[4] Disappointingly, Rosalind Krauss, a revisionist of modernist criticism, mentions the photogram in her writings on photography but, failing to spot the difference, deems it to operate along the same lines as the photograph.

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[4] Hal Foster edited the famous *Vision and Visuality* volume of the Dia Art Foundation in 1988 which incorporated essays by himself, Crary, Krauss and Jay among others. He continued writing on postmodern culture. Jonathan Crary notably wrote *Techniques of the Observer* in 1991, which put the body back into vision and perception. Martin Jay has been occupied with vision all along and has published numerous books the subject, among them a comprehensive survey on vision entitled *Downcast Eyes*, which charts the supremacy of language over vision in twentieth century French philosophy. Rosalind Krauss has continually aimed at re-contextualising Modernist art through a framework of postmodernist theory. Her writings are collected in *The Originality of the Avant-Garde and Other Modernist Myths* in 1986 and *The Optical Unconscious* in 1993. Most recently, she has collaborated with Benjamin Buchloh,, Hal Foster and Yve-Alain Bois on *Art since 1900: Modernism, Antimodernism and Postmodernism*(2004).

This thesis locates itself on one hand within theories around vision and visuality while, on the other hand, exploring and confirming phenomenological perception, previously addressed by Crary, Foster et al, as well as making connections between vision and the sense of touch through close examination of the workings of the photogram.

The game of distance is the game of near and far.

Blanchot's sentence appears throughout this thesis and acts as a touchstone, a refrain, to reflect on issues of distance and role reversal, parallels and opposites that may or may not end up as the same.

Blanchot's writings in *The Step Not/Beyond* manifest absolute ambiguity, which can frustrate or reassure. Fragmentary in nature, it hides more than it offers:

> • *Entwined, separated, witnesses without testimony, coming towards us, coming toward one another also, in the detour of time that they were called upon to make turn.* [5]

and:

> • *A hand that extends itself, that refuses itself, that we cannot take hold of in any way.*[6]

As well as researching this thesis, I have created a body of work entitled *Transitaria*, consisting of photograms, digital images and an animated video piece. Over the years, I have frequently returned to the photogram as a working method, attracted by its aspect of 'hands-on' work with the subject matter and an element of unpredictability in the final result. Having always been aware of a fundamental difference in perception between photographs and photograms, I took the thesis as an opportunity to investigate this further. During this time, I was creating photograms while researching their history

[5] Maurice Blanchot, *The Step Not Beyond*, trans. Lycette Nelson (New York: SUNY Press, 1992), 84.
[6] Ibid, 106.

and place in the visual perception of images, which in turn shed new light on my perception of photography as a whole. Closely interlinked in this fashion, theory informed practice and vice versa.

The written and the practical work operate concurrently, again on the principle of near and far. They are interactive in as much as *here* I am examining the ontology of what can be experienced *there*. The relationship between this text and *Part Two* equals the relationship between *Part Two* and the actual works: near and far.

Additionally, the practical work is *near* in the sense that it illuminates visually a number of points I make in the written work (it encompasses both the photogram and digitally manipulated images) and its proximity to the thesis - near, because some of it can be seen and is written about in *Part Two*.

On the other hand, the actual works themselves are distant; in fact, some are physically non-existent at the time of writing. Distant in space and also, being photograms, perceptually 'far'. Distant, also, is the perceptual experience for the reader, since the works are on a scale made for a large space. In *Part Two*, they are presented as a fraction of their intended size.

Part Two then acts as a *coda* to the thesis: as in a piece of music, the coda is not so much an appendix as an addition to the basic structure which serves to round up and complete the experience of the whole.

As well as the practical work in *Transitaria*, the methodology of this thesis can be said to operate under the attributes of the *Hybrid*. The chapters themselves are not designed to follow the convention of introduction and summarisation, but rather encapsulate the idea of near and far as well as hybridity by incorporating both elements of theory and a discussion of how these theories are translated into practical works.

Chapter One outlines the history of the photogram, a process used by botanists, among others, before the invention of lens-based photography to 'document' plants or anything that could be flattened sufficiently to leave a sharp imprint. Curiously enough, this method of 'photogenic drawing' made visible by means of the cyanotype (or blueprint) process has been largely

omitted from the canons of photographic history. The quest for a means of 'automatic drawing' meant that the process of the photogram was not perceived as a discipline-specific or 'art' process (botanists used it extensively) but rather as a method of copying and disseminating all manner of documents relatively inexpensively. Largely forgotten is one of its first and most eminent practitioners, Anna Atkins, a prominent botanist who notably published volumes of photograms of British Algae just in time to beat William Henry Fox Talbot's first photographic publication *The Pencil of Nature*. With the advent of Talbot's negative / positive process, or photography as we still know it today, photograms were largely forgotten about until they were 'rediscovered' by the early Dadaist Christian Schad. The photogram process contained the anti-art and anti-representational character the Dadaists and Surrealists were searching for. Famously used by Man Ray and Laszlo Moholy-Nagy, photograms embodied the Zeitgeist of a new era of 'progress, machines and speed' by disabling the 'artist's hand' and producing results which could not be pre-visualised. For Moholy-Nagy in particular, the photogram corresponded with his modernist Truth-To-Medium-Specificity philosophy and his endeavor to capture light in the purest form of photographic process. In conjunction, I highlight Wolfgang Krauss' theory of the photogram as the first conceptual use of photography which emerged precisely from this era.

During the spread of conceptual art practice in the 70's, artists were experimenting with the broadening and extended use of media. The photogram process was employed in order to bypass the prevalent genre of Modernist / Formalist photography and to engage with the medium of photography itself as the subject of artmaking.

Looking at more recent uses of the photogram, I construct an account of how contemporary practitioners are working with the photogram and discuss the work of Adam Fuss, Anne Ferran, Marco Breuer and Ellen Carey. Using an example of a virtually identical photogram by Adam Fuss and Anne Ferran, I expose the very different philosophies of the artists and later identify three groups and ways of working with the photogram by interrogating the intentions of the artists, namely 'Documentarist', 'Metaphorical' and

'Essentialist'. Of interest here is the language in which the works are described, both by critics and by the artists themselves, which goes a long way in determining how the work is seen and ultimately historicised.

Chapter Two has the issue of distance and separation of vision at its centre. The black box, which has been a part of every picture-making machine since the camera obscura, has always served to distance the observer from the observed, thereby promoting disembodied spectatorship. The *black box syndrome,* as I call it, operates in a variety of ways but is always a means of separation. Starting with the black space inside the camera obscura which the light beam has to traverse to manifest the image – albeit upside-down on the opposite surface – it translates into the interior of any photographic device. We look through the viewfinder and by means of optics we traverse the 'black box', the interior of the device, without necessarily being conscious of it. Entering this space visually means to be cut off from visual contact with the immediate world around us. Some scenarios, such as the cinema auditorium, position the spectator within the 'black box' itself. Separation, which is necessary in any kind of photographic picturing device, has been in evidence since the inception of spectacles, starting with early peepshows[7]. Two examples are examined where contemporary artists interact and give a new twist to those 17th century spectacles and visual crowd-pleasers, the Magic Lantern and, later, the Panorama. The section *Traversing Black Space* examines the conventions of camera use in photography's infancy and goes on to look at how the camera sees and has added to our ability to visualise events, such as a raindrop's precise impact on a puddle or reading blur as movement. One period of great change was the so-called *New Vision* era, from the 1920's onwards, when the then-new small portable cameras were trained on everyday scenes from unfamiliar angles. Although these smaller cameras did not visually resemble the black box anymore, it is important to point out that the spatial separation between the observer and the observed was still very much intact, though the act of looking through the viewfinder of a small camera

[7] The contemporary meaning of 'peep-show' does not apply since these early contraptions were merely pictures contained in a box; their name derived from the act of 'peeping' though a small aperture in order to view them.

suggested the contrary: an immediate proximity to the scene observed. The resulting 'modern' imagery, unfamiliar to the eye then, was indicative of the factors influencing artists at that time: the ideas of speed, machines and movement, epitomized by Dziga Vertov's 1929 film *The Man With A Movie Camera*.

Where does all that leave the photogram? In the final section of Chapter Two, I have assembled literary examples for what could be termed distance-related increments of voyeurship. While the stories themselves are concerned with types of visuality, I extend them into technologies of vision in order to demonstrate, by analogy, the perceptional differences between the photograph and the photogram. Taking up the trope of Charles Baudelaire's *flâneur*, I examine his – typically male - motifs through Baudelaire and Walter Benjamin, before detailing the voyeuristic role in ETA Hoffman's *Cousin's Corner Window* from 1815 and Edgar Allen Poe's *Man of the Crowd* written in 1840. In the latter story, the aloofness that is the flâneur - or the observer separated by the black box, for the sake of my argument - gives way to a being-as-one with the crowd and immersion therein. A fitting metaphor, as the photogram needs the closest of contact to even come into existence. No black box or distancing devices here, but whereas it has to be *near* in terms of its creation, the resulting image is not as easily accessible as a photograph: *far*, in other words.

Chapter Three introduces the haptic to the visual in that it presents an ontological investigation of touch-orientated processes and the photogram in particular. The notion of near and far is again demonstrated in the complete reversal of tones in photograms and the distance manifested in its non-signification.

In discussing Helen Chadwick's *Pool*, an installation made with large photocopies - a hybrid medium situated between the photograph and the photogram in representational terms - I investigate the reasons why she may have decided to use this particular kind of imaging device rather than her usual medium of photography.

I draw attention to a theory by Jean-Claude Lemagny, whereby monochrome photography experiences a reversal of tone values in terms of perception of space and volume, and argue that the photogram once more reverses this perception, including the function of what Roland Barthes named the *referent*.

Space in, and perception of, a photogram are explored by means of Floris Neusüss' *Nachtbilder* or *Night Pictures*. Neusüss, a life-long creator of photograms from 1960 onwards, leaves sizeable chunks of photographic paper in his garden at night to expose for hours. In the space of these prints, the visual and the haptic meet in unexpected and accidental ways, leaving the notions of Cartesian vision and perspective for dead.

While literature on the photogram as artistic medium in a historical and critical context is scarce and usually restricted to the works of individual artists, Neusüss has published several books giving a historical and chronological overview of what has been produced since Talbot. *Das Fotogramm in der Kunst des 20. Jahrhunderts* concentrates on the period from the 1920s to the 1960s, whereas catalogues of later group exhibitions, such as *Die Lichtreichen Schatten* or *Experimental Vision,* include the 1980s[8]. His own prolific output is recorded in the monographs *Nachtstücke* (1997) and *Anteidola* (2003).

When considering the difference between photographs and photograms, the terms 'depiction' versus 'manifestation' surface inevitably, as does the issue of touch and authenticity. Georges Didi-Huberman's writing on the Turin Shroud makes it clear that signification sometimes becomes clearer when obscured. Absence and presence in the case of the photogram also undergo a reversal of sorts, inviting speculations on the 'visible resulting in blindness'[9], and vice versa. In this context, the concepts of Gilles Deleuze's *fossil* and Walter Benjamin's *fetish* apply due to issues of contact and despite, or maybe because of, non-signification at first glance.

Vision interacts with other senses on a regular basis and this chapter ends with a discussion of Mona Hatoum's installation *Deep Throat*, where, in a visceral

[8] Too numerous to mention here, see the Photogram/X-Ray section of the Bibliography p. 207-211
[9] Jaques Derrida p. 129-130

demonstration of the technology of vision, the video of a medical camera being lowered into the artist's stomach merges the visual with the tactile.

Chapter Four delves deeper into the subject of touch and its relevance to vision. The term *haptic*, coined by the art historian Alois Riegl in 1902, dominates this section, as it applies to a host of visual and tactile purposes. 'Haptic visuality'[10], a more recent term, occurs when the viewer is denied access to three-dimensional space in an image. Unable to enter dimensionally, the eye grazes the surface and experiences texture rather than orientation in space. The photogram represents the ultimate haptic image because it does not operate in perspectival space. It needs close surface scanning to be read and interpreted. For the photogram, the haptic is not just a description of the quality of the image but, equally important, a description of the process by which it came into being; as is the case for the X-ray.
Generally, the connection between touch and vision is mostly experienced subconsciously and often advertisers show us images designed solely to appeal to our sense of touch, be it swathes of satin, or swirling pools of chocolate. In the intriguing case of the chocolate river and waterfall in the film *Charlie and the Chocolate Factory* (2005), as touch and vision merge we seem to be able to *see* what *feels* right, even for entirely fictional scenarios.

Returning to photography, touch in the photograph is a phenomenon often cited but largely unsubstantiated. Here I have collected examples of how the *surface* of a photograph responds to actual touch and how some photographs have to be physically handled in order to be 'seen'.

Throughout this document I have made frequent references to X-rays in connection with the photogram, as a touch-orientated process and a means of exposing inner structures. In Chapter Five I explore the X-ray and the apparent dissolution of boundaries between inside and outside, a function directly related to the photogram process. I investigate its functions beyond

[10] this term has first been extensively used by Laura Marks in Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*.

the obvious medical applications, tracing its history from the initial shock of its power to transcend the boundaries of the body, and the subsequent change of image from the 'spectre of death', to a positive treatment, something that could affirm your health. The notion of the duality of the X-ray, being able to see the inside and outside at the same time, is an instance of Sigmund Freud's *Uncanny*, namely, the notions of body doubling and the shock of making visible what is hidden. Part of this phenomenon, as I am arguing, may be due to our lack of internal perception which prevents us from experiencing or *feeling* the depth of our bodies, a sensation which clashes with the internal body pictured so clearly in X-rays.

In art, the X-ray influenced Futurists and Constructivists. What interested them was not so much the medical application, but the fact that there were structures, and even 'worlds', out there, invisible to the human eye and which could only be experienced with the aid of a machine or a mechanical or scientific device. While micro- and macroscopy also extended the sense of vision, the X-ray proved to be a very different entity.
Here, the issue of distance surfaces again: both in the making of the X-ray (the plate has to be in close proximity to the area pictured) and in the reading of it, which has to be interpreted rather than just *seen*. In this way, the X-ray can be considered an extension of the photogram: the principle of origination is the same; both processes present a negative image, but the X-ray has the longer reach.

Chapter Six addresses the semiological classification of the photograph and the photogram. Writings on images and semiology tend to be based on the theories of Charles Sanders Peirce (1839-1914) who, as opposed to the Saussurean school, does not insist on signs being rooted in language. I am concerned in particular with two of Peirce's semiotic terms; the Icon and the Index. With the rise of semiotics from the 1960s onwards and in the theoretical and critical debates since the 1970s in particular, photographs have been increasingly classified as indices, based on an apparent notion of contiguity through the transmission of light waves. Roland Barthes was one of the chief disseminators of this theory, closely followed by Rosalind Krauss.

Examining the writings of Peirce and a variety of other sources of definitions of icon and index, I argue for the restoration of the status of icon to the photograph while indexicality remains the domain of the photogram, based on the fact that an index is an indicator, whereas the icon resembles.

In Chapter Seven: *Conclusion* I present my findings in summarised form and highlight the areas of original contribution to knowledge.

Part Two: Transitaria – Images and Writings constitutes the near / far element of this thesis – depending on one's position. In *Prologue: Eternal Return* I examine Maurice Blanchot's notion of the Eternal Return in relation to the medium of photography. The impossibility of the situatedness of the photograph and the resulting ambiguities form a suitable background for the relationship between theory and practice.

The essay *Beauty and the Beast,* initially a conference paper at the *Monsters and The Monstrous* conference in Budapest in 2004, presents an introduction to the medusa, the subject of my work *Transitaria*. I examine aspects of their attraction when in their element, but repulsion when found on dry land. In the popular imagination, medusae seem to have been gendered female and have given rise to numerous characters in films and fantasy games, such as the pink frilly captors of *Marvin the Clownfish* in *Finding Nemo* (2003) and the *Pale Lady Jellyfish* game-character for the game *Dungeons & Dragons*.
In *Beauty* I reflect once more on my practice and address parallels and differences between works by Susan Derges and *Flux*, my series of water photograms.

The notion of shape-shifting and mutation is inherent in the nature of the medusa. In the colour work "Hybrids' I have digitally extended this inherent ability to create a race of new simple organisms: simultaneously fantastic and plausible.

As indicated at the beginning of this introduction, this whole project and my approach to it can best be described in 'hybrid' terms. *Transitaria*, my own body of practical work bears witness to that. It runs parallel to the thesis and

intersects thematically in a number of ways. Comprised of photograms, digitally manipulated colour photography and a video piece, it represents an ongoing dialogue with the topics addressed here in writing, while in itself *Transitaria* comprises a number of practices ranging from the nineteenth to the twenty-first century.

1 The Photogram: History and Practice

This chapter forms an inquiry into the photogram[11]. From explanations of the technique to interpretations of the same: What it does and how it does it: from its beginnings in photographic history and relevant practitioners through to its rediscovery in the 1920 and 30s, where it was given a new raison d'être. The process, initially linked to Cyanotypes and Salt Prints, had largely lain dormant after William Henry Fox Talbot's experiments leading up to the invention of the Calotype process in the early part of the 19th century. It was 'rediscovered' in the spirit of the Dada movement by Christian Schad in Zürich in 1918 and then taken up by Surrealists such as Man Ray and the artist Moholy-Nagy in particular.

Such a seemingly simple and arguably limited process as the photogram has nevertheless managed to be used as a technique by artists with widely differing philosophies and working methods. I will discuss the work of contemporary artists Anne Ferran, Adam Fuss, Marco Breuer and Ellen Carey who all use photograms as a means of expression but, as I will explain, for a variety of reasons.

Using these artists' works, I am proposing three categories of the photogram that artists' philosophies and working methods can be said to operate under: *Documentary*, *Metaphorical* and *Essentialist*.

[11] I am using the term *photogram* to describe the process. The word itself was coined during the 'rediscovery' period in the 1920s. Talbot named the process 'photogenic drawing'.

1.1 Beginnings

The principle of the photogram as a photographic process was first applied in 1725 by Johann Heinrich Schulze (1684-1744) in a demonstration of light-sensitive substances. Schulze fixed paper stencils in the shapes of letters to a jar containing light sensitive salts mixed with a large amount of chalk. After exposure to the sun he removed the stencils and found that the chalk compound had remained white where covered, whereas the rest of the mixture had turned a medium brown. Thomas Wedgwood (1771-1805), the son of the British porcelain manufacturer, conducted similar experiments in 1799, but spread the solution on paper and sheets of leather, using the photogram technique to obtain an image[12]. Unfortunately, none of these images could be made permanent and they vanished with extended exposure to light.[13]

Some of the earliest surviving examples of the photogram process are the botanical cyanotypes made by the botanist Anna Atkins (1799-1871), who drew inspiration from the experiments with 'photogenic drawings' carried out by William Henry Fox Talbot (1800-77), himself a botanist, and from Sir John Herschel (1792-1871), inventor of the Cyanotype process, who was a family friend and later instrumental in 'fixing the image' of Talbot's Calotype process. After many years of working with the process, Atkins issued her volumes of *British Algae: Cyanotype Impressions* in the year 1843. This was the first time any publication had been illustrated photographically. The cyanotype process produced a vibrant blue image tone with the shapes of the algae remaining white or, depending on the opacity of the material, showing shades of light blue to almost black. Atkins' publication was a labour of love: hundreds of algae specimens had to be flattened and dried and thousands of sheets of paper had to be coated with the Cyanotype solution, dried, then

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[12] For a good account of these first experiments see Larry Schaaf's *The Beauty of the First Idea: A Selective Pre-History of Photography* in: Larry J. Schaaf, *Out of the Shadows: Herschel, Talbot, & the Invention of Photography* (New Haven & London: Yale University Press, 1992), 23-27.

[13] See also J.A. gen. Eisenwerth Schmoll, ""Das Nutzlose Bild" Oder Von Technischen Fehlern Zur Künstlerischen Praxis: Experimentelle Fotografie Zwischen 1830 Und 1960," in *Das Foto Als Autonomes Bild: Experimentelle Gestaltung 1839-1989* (Stuttgart: Edition Cantz, 1989).

sandwiched with the algae specimen and exposed to the sun. To make these prints permanent, they simply had to be submersed in running water, which served to wash out any remaining chemicals that had not been hardened by the exposure to the sun.

Figure 1: Anna Atkins, *Porphyra Laciniata*, Cyanotype ca. 1853

It was a ten year project for Atkins, resulting in 15 copies, each containing 400 photograms and 14 pages of text (fig.1).

According to the historian Geoffrey Batchen, "Atkins herself described these images as 'impressions of the plants themselves'. She thus conjured up that direct indexical relationship between an object and its representation that is presumed to be photography's special privilege."[14]

[14] Geoffrey Batchen, "Photogenics," in *Each Wild Idea* (Cambridge, Mass: MIT Press, 2001), 160.

As will become clear, there was a considerable difference in how Atkins and Talbot, who made photograms from texts, drawings and plants, viewed their respective activities.

William Henry Fox Talbot was a scholar, scientist and photographic pioneer. He was among the few early practitioners who could imagine a wide range of applications for the medium and eventually set up the first publishing house for photography. Talbot called his early efforts at the photographic process 'photogenic drawings'. He started his experiments with what is now termed a 'salted paper' printing process in the spring of 1834. After coating plain writing paper with a solution of ordinary table salt, then applying a layer of the light-sensitive silver nitrate, he sandwiched the dry paper with leaves and, famously, scraps of lace. In order for a recognisable image to form, the material had to be in very close contact with the paper. Talbot, like Anna Atkins, used glass to introduce weight, but later on modified his 'printing out frames' with air-filled bladders to ensure a flat plane contact. After exposure to the sun for roughly twenty minutes, the visible parts of the paper would turn a very dark brown. Talbot removed the leaves in subdued light and they left their outlines, in light tones, on the paper. The problem was the instability of the image, which would fade with exposure to even subdued indoor lighting. Later that year, Talbot experimented with washing the exposed print in a concentrated sodium solution, which served to stabilise the image up to a point. He made a great number of 'shadowgrams' but, as with the cyanotype process, his treated paper was not light sensitive enough to be used in his hand-crafted wood and brass cameras, which he affectionately called his 'mouse traps', capable of "producing a bit of magic: natural magic".[15]

[15] For Talbot's discovery of the photographic process see Michel Frizot, "1839-1840: Photographic Developments," in *A New History of Photography*, ed. Michel Frizot (Köln: Könemann Verlagsgesellschaft, 1998), 27.
See also Russell Robert's account of the link between 'natural magic' and the remains of belief in alchemical forces in: Russell Roberts, Michael Gray, and Burnett-Brown Anthony, *Specimens and Marvels: William Henry Fox Talbot and the Invention of Photography* (New York: Aperture, 2000), 9,10.

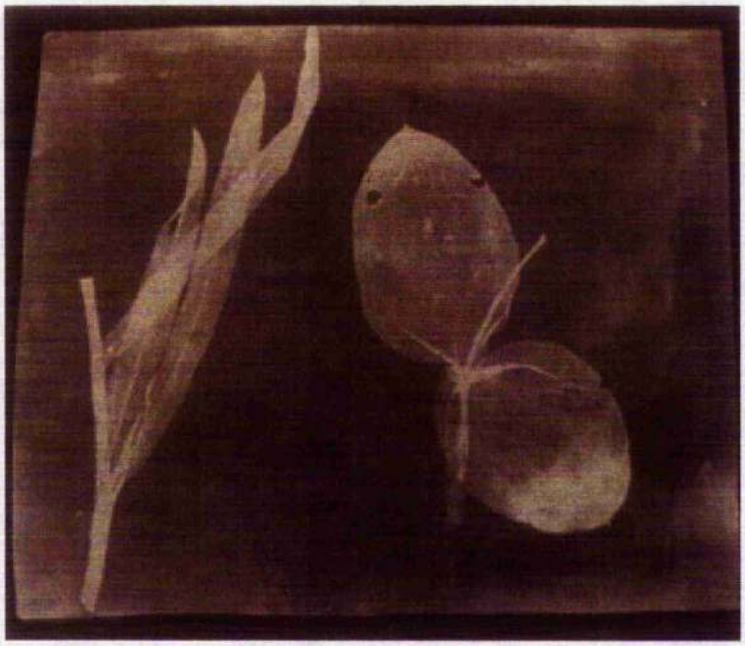

Figure 2: William Henry Fox Talbot, *Orchid leaves*, April 1839, photogenic drawing

In 'Some Account of the Art of Photogenic Drawing', published in *The London and Edinburgh Philosophical Magazine and Journal of Science* in March 1839, Talbot wrote about his early experiments with photograms:

> The first kind of objects which I attempted to copy by this process were flowers and leaves, either fresh or selected from my herbarium. These it renders with the utmost truth and fidelity, exhibiting even the venation of the leaves, the minute hairs that clothe the plant, … for the object which would take the most skillful artist days or weeks of labour to trace or to copy, is effected by the boundless powers of natural chemistry in the space of a few seconds.
>
> To give an idea of the degree of accuracy with which some objects can be imitated by this process, I need only to mention one instance. Upon one occasion, having made an image of a piece of lace of an elaborate pattern, I showed it to some persons at the distance of a few feet, with the inquiry, whether it was a good representation? When

the reply was, "That they were not to be so easily deceived, for that it was evidently no picture, but the piece of lace itself".[16]

Unfortunately, Talbot's photogenic drawings failed to capture the imagination of the general public. The camera obscura pictures, such as the famous view of the library window at Lacock Abbey, were tiny and, due to insufficient fixing, very hard to decipher. The photograms of plants and flowers were larger, but did not look life-like because of the reversed tones and were of interest to a minority only. In the instance of the lace, however, the tone reversal worked in Talbot's favour, as he so enthusiastically described above (fig.3). The white lace, insubstantial as it might look, was nevertheless opaque enough not to let any light through its strands, thereby leaving a white and very realistic looking 'imprint'.

Figure 3: W.H.Fox Talbot. *Photogenic Drawing of Feathers and Lace*, 1839

[16] William Henry Fox Talbot, "Some Account of the Art of Photogenic Drawing," in *Photography in Print: Writings from 1816 to the Present*, ed. Vicky Goldberg (New York: Simon and Schuster, 1839), 39.

In 1819, Talbot's friend John Herschel, a prominent astronomer and physical scientist who also worked on light sensitive solutions, discovered a formula that would allow the image to be stabilized. His formula containing sodium thiosulphate is still the basis for the modern day fixing bath. Although Herschel shared his discovery with Talbot at the time, Talbot did not choose to use it until 1839, when he discovered that, with the aid of Herschel's 'fixing solution', his images could now be made permanent. Always on the look-out for commercial applications and ways to replicate the photographic image, Talbot had started to make photogenic drawings of labels, patterns, Hebrew texts, maps and art drawings (among them those of Albrecht Dürer) and copied them again to make a positive image using the salted paper process[17]. According to Russell Roberts:

> By copying words and images, Talbot considered the photograph in relation to existing methods of reproduction, such as handwriting, lithography, engraving and letterpress printing. He carefully orchestrated these uses, comparing marks made by hand with marks made by a machine, and offering reflexive statements on the inherent value of his photographic process in relation to both. ...[18]

In 1840, Talbot discovered a new silver nitrate based formula for sensitising the paper which required much shorter exposures to form an image which meant that an image could be exposed inside a camera. In 1841, he patented the Calotype process, also known as the Talbotype.[19] Thus, Talbot's and Herschel's inventions laid the foundations for photography as we know it. It was also John Herschel who suggested that Talbot should use the word 'photography' instead of 'photogenic drawing' and the terms 'positive' and 'negative' instead of Talbot's 'reversed copy' and 're-reversed copy'. Once

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[17] Roberts, Gray, and Anthony, *Specimens and Marvels: William Henry Fox Talbot and the Invention of Photography*, 36-41, 59, 63.
[18] Ibid., 39.
[19] For an account on the race to produce a permanent image, see Helmut Gernsheim and Alison Gernsheim, "The Introduction of Photography on Paper," in *A Concise History of Photography*, ed. Helmut Gernsheim (London: Thames and Hudson, 1971).

the speed of the light sensitive solutions increased and became fast enough for their use in cameras, the photogram technique was left behind.

After patenting the Calotype process in 1841, Talbot looked for ways of mass reproducing his images and in 1843 started the first printing house for photographic prints. The following year *The Pencil of Nature* was published, according to some "the world's first photographically illustrated book", presumably referring to camera images as opposed to volumes of the botanical Cyanotypes which Anna Atkins had published previously. *The Pencil of Nature* included rural still lives, images of sculptures and views of the city of Paris and Oxford. Talbot continued to develop photographic processes, patenting every small advance. This led to numerous court battles with other practitioners and inventors who found themselves taken to court by Talbot for the use of one or other of his 'patented' ingredients. A final landmark case in 1854 established Talbot as the true inventor of the negative-positive process, but ruled that later inventions, such as the Wet Collodion Plate process,were not covered by his patent. Talbot's stranglehold on photographic patents in Britain was broken.

The German art historian J. A. Schmoll points out that, although Atkins' completed volumes of *British Algae* preceded the first publications by Talbot by a good few months, it is unlikely that they would have competed on that basis.[20] Atkins saw the photographic processes mostly as a means for replication of her botanical specimens and the only means of reproduction at the time. She was largely concerned with documenting and disseminating botanical 'data', but realised the visual and pictorial potential of the way in which her specimens were arranged on the page[21]. She even went as far as using thin strands of seaweed to form the letters of her title pages in *British*

[20] Schmoll, ""Das Nutzlose Bild" Oder Von Technischen Fehlern Zur Künstlerischen Praxis: Experimentelle Fotografie Zwischen 1830 Und 1960," 52.

[21] Batchen suggest that Atkins viewed her output very much as 'data': "invariably differentiated information derived from a master code and disseminated in image form." It would make no sense to call one cyanotype of seaweed 'original' and the other 14 very similar pictures of the same specimen 'copies'. They were all reproductions of a botanical specimen. Batchen, "Photogenics," 158.

Algae.

Talbot's *Pencil of Nature,* on the other hand, represented something very different. It was the result of an invention refined; from the beginnings of the Salted Print process, the ability of stabilizing and 'fixing' the image, through to achieving enough sensitivity for camera use and then producing a positive image from the negative, and ending up with a life-like reproduction.

These were issues that were of no concern to Atkins, who used the Salted Paper and Calotype processes later on, but saw them as another means for the creation of photograms of botanical specimen.

Figure 4: Anna Atkins, *Laminaria Digitata*, Photogenic Drawing, Cyanotype, c. 1854

The reason that Anna Atkins is not even mentioned in influential volumes such as Beaumont Newhall's *History of Photography* could be based on the following:

a) The Cyanotype did not qualify as a photographic process. (The fact that Atkins used the Calotype at a later date, but still received no mention questions the logic of this particular point)

b) Anna Atkins was a woman and therefore initially 'invisible' to historians, given that Talbot's first experiments with 'photogenic drawings' deserved full coverage. Since the 1970s feminist writers and art historians have rescued many a woman artist from historical oblivion. In Larry Schaaf's words "It is a great pity that most of the personal papers of Anna Atkins have perished, for, in common with most women of past centuries, she is underrepresented in official records."[22]

c) Another reason may have been the fact that she was not a photographer first and foremost, but a botanist *using* a photographic process.

d) The early and exclusive use of such a 'simplistic' process as the photogram merits no place in the modernist canon according to Newhall, Gernsheim et al. They chronicle its first emergence in the 1920s, when it was taken up by the Avant-Garde as part of Dadaist and Surrealist practices.

1.2 Rediscovery

While the new medium of photography developed at a great rate, the photogram technique was largely forgotten until Christian Schad (1894-1982), a very early Dadaist, revived the photogram process within the Dada / Surrealist movement in the 1920s. Schad had been participating in Dada

[22] Larry J. Schaaf, *Sun Gardens: Victorian Photograms by Anna Atkins*, ed. Hans P. Kraus Jr. (New York: Aperture, 1985), 23.

events since 1915 and in 1918 experimented with 'Photography without a camera' by placing mostly two-dimensional objects on photosensitive paper and exposing them to light. Schad wrote: "With dada came the idea of freedom without end, of being able to do anything without being weighted down by dry dogmas and tradition, of being able to do anything and use anything."[23]

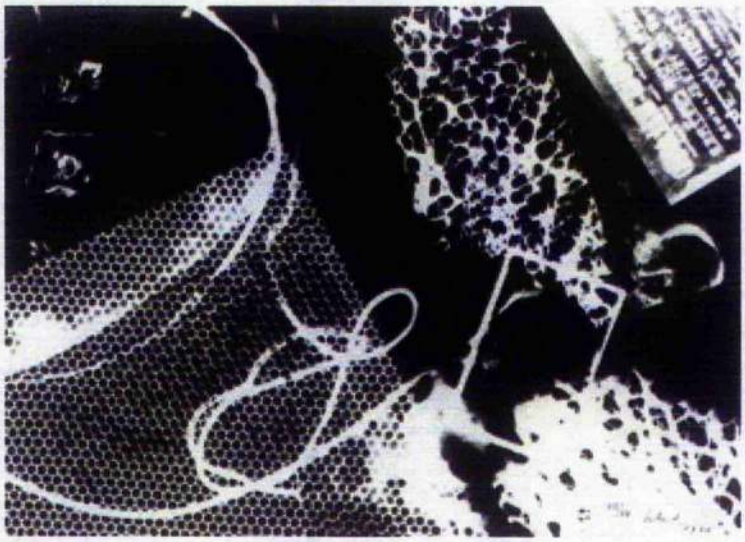

Figure 5: Christian Schad, Schadograph, 1918, from the series *Hommage à Dada*

Schad used the technique pioneered by Talbot, Atkins and others but, instead of using objects to document their 'imprints', he was looking for a different effect. He substituted the botanical specimen with throw-away material of the modern urban society, such as newsprint, ribbon, strings and construction grids. Schad's photograms appear to be collages of disparate objects, maybe as an equivalent to Dada poetry and graphic design. Apart from the fact that they acquired a new and strange presence, due to the tone reversal inherent in the photogram process, the interaction of unrelated materials in one picture plane corresponded with the philosophy of Dada and the modern era per se.

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[23] Jutta Hülsewig-Johnen, Gottfried Jäger, and J.A. gen. Eisenwerth Schmoll, *Das Foto Als Autonomes Bild: Experimentelle Gestaltung 1839-1989* (Stuttgart: Edition Cantz, 1989), 77.

Dadaist Tristan Tzara saw Schad's creations and named them '*Schadographs*'. Merry Foresta explains the Zeitgeist at work:

> In a century dominated by technical innovations that increase the speed of life, much of the experimentation that occupied photographers during the 1920 and 1930's was concerned with the central problem of conveying artistic imagination in the most immediate way possible. "The touch of the artist," and the aesthetic pretenses that went with it, were replaced by a more appropriate collaboration with materials. Imagination was seen as the essential element in any artwork. [24]

Schad's experiments with photograms were known to the local Dadaists, but the technique was not widely known until Man Ray in Paris and Laszlo Moholy-Nagy in Berlin took it up around 1922.

Man Ray (1890- 1976) was born Emmanuel Radnitsky in Philadelphia. A painter, he moved among the avant-garde circles of New York after seeing the Armory Show in 1913, the first large-scale exhibition of European and American modern art. Alfred Stieglitz's *291 Gallery* was a favourite venue, although at the time Stieglitz showed paintings and sculpture[25]. Man Ray's painting style was Cubist and his interest in photography developed through taking pictures of his own paintings.

He moved to Paris and, although he spoke no French, introductions from both Francis Picabia and Marcel Duchamp allowed him to join the literary circle of young Dadaists such as Louis Aragon, André Breton, Philippe Soupault and Tristan Tzara.

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[24] Merry Foresta, "Tracing the Line: Art and Photography in the Age of Contact," *Aperture*, Fall 1991, 19.

[25] Alfred Stieglitz (1864-1946) was an American photographer and chief promoter of the idea of photography as art, disseminated through his journal *Camera Work*. While his own work was initially rooted in the Pictorialist tradition, having initiated the Photo-Secession group, he was later key in promoting 'straight' formalist photography and famously exhibited photography with Modernist painting and sculpture at the *291 Gallery*, *The Intimate Gallery* and *An American Place*.

Man Ray, affiliated with the Surrealists, made a living from commercial fashion photography and eventually became a celebrity portrait photographer, often photographing his friends and acquaintances in the Paris Dada scene. The *Rayographs* began appearing in the spring of 1922.

According to Michel Frizot " An unidentifiable object, or one that does not ask to be identified – subtracted from the image and remaining there as nothing more than an impression – the Rayograph was self-sufficient in that it was a work of light, a work of pseudo-uncertainty. It was self-created, an *objet trouvé*, without a legitimate existence and suitable in every way as a work to change the direction of art, and hence, in the words of Tzara, "pure Dada".[26]

Man Ray himself gave this account of how he 'invented' the photogram technique:

> One sheet of paper got into the developing tray – a sheet unexposed that had been mixed with those already exposed under the negatives...and as I waited in vain a couple of minutes for an image to appear, regretting the waste of paper, I mechanically placed a small glass funnel, a graduate and a thermometer in the tray on the wetted paper. I turned on the light; before my eyes, an image began to form, not quite a simple silhouette of the objects as in a straight photograph, but distorted and refracted by the glass more or less in contact with the paper and standing out against a black background, the part directly exposed to the light... Taking whatever object came to hand: my hotel room key, a handkerchief, some pencils, a brush, a candle, a piece of twine...I made a few prints excitedly, enjoying myself immensely. In the morning, I examined the results, pinning a couple of Rayographs – as I decided to call them, on the wall. They looked startlingly new and mysterious. Around noon, Tristan Tzara came in to see if we might lunch together...He spotted my prints on the wall, and at once became very enthusiastic; They were pure Dada creations, he said, and far

[26] Michel Frizot, "Metamorphoses of the Image: Photo-Graphics and the Alienation of Meaning," in *A New History of Photography*, ed. Michel Frizot (Köln: Könemann Verlagsgesellschaft, 1998), 444.

> superior to similar attempts, made a few years ago by Christian Schad, an early Dadaist.[27]

However, according to historian Helmut Gernsheim, Man Ray was shown some Schadographs by Tristan Tzara in 1922 and proceeded to make similar photograms, his 'Rayographs'.[28]

Historian Graham Clarke finds some difficulty within Man Ray's photograms. For him, it emphasizes the problematic of 'making strange': "In some of his images the concept is reduced to nothing more than a playful attempt to surprise; in others the use of the female is itself problematic in relation to his underlying attitudes and approach, the images existing as little more than the realization of Ray's sexual fantasies. The *Rayograms*, like the 'solarisations' suggest an element of trickery. They relate to very basic processes, but they claim for themselves enormous significance."[29]

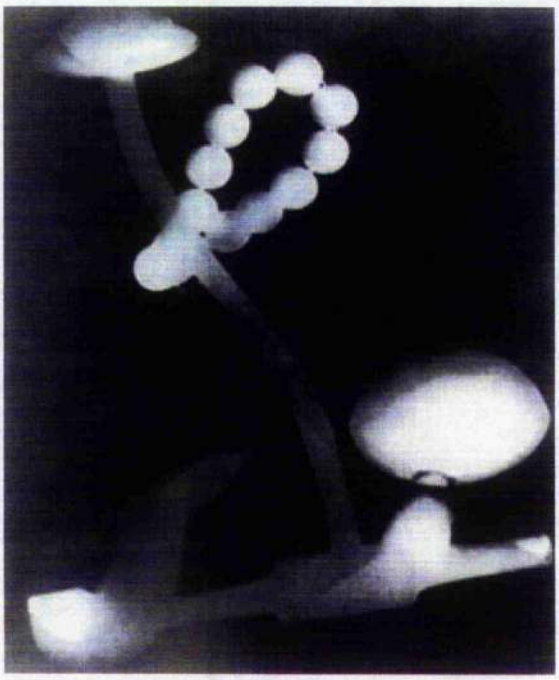

Figure 6: Man Ray, *Rayogram*, 1923

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[27] Ian Walker, "Man Ray and the Rayograph," *Art & Artists*, April 1975, 40.
[28] Gernsheim and Gernsheim, "The Introduction of Photography on Paper," 194.
[29] Graham Clarke, *The Photograph, Oxford History of Art* (New York: Oxford University Press, 1997), 195.

Around the same time in Berlin, the painter Laszlo Moholy-Nagy (1895-1946) started producing what he termed 'photograms'. Just like Man Ray, he claimed to have 'discovered' the process independently. This fact was contradicted by the artist El Lissitski who was in Berlin at that time and maintained that Tristan Tzara told Moholy-Nagy about Man Ray's work. In fact, reading between the lines in this tale of the reinvention of the 'photogenic drawing', Tristan Tzara emerges as the 'carrier' of the photogram 'virus' ever since he encountered Schad's work in Zürich.

When Laszlo Moholy-Nagy and his wife Lucia started producing photograms in 1922 it was in the spirit of discovering what light can do without the help of a camera. According to Michel Frizot, Moholy-Nagy was at the time researching into the idea of a telephone picture with the word 'telegram' in mind.[30] He had not practiced photography to any extent but was drawn to the possibilities of abstract, yet 'real', imagery obtainable in the darkroom alone. Influenced by Schwitters, Moholy-Nagy saw in the photogram a possibility for automated composition and a way of not having to work with instantly recognisable 'signs'[31].

[30] Frizot, "Metamorphoses of the Image: Photo-Graphics and the Alienation of Meaning," 444.
[31] For an account by Moholy-Nagy see: Lazlo Moholy-Nagy, "The Future of the Photographic Process," in *Photography: Essays & Images*, ed. Beaumont Newhall (London: Secker&Warburg, 1929).

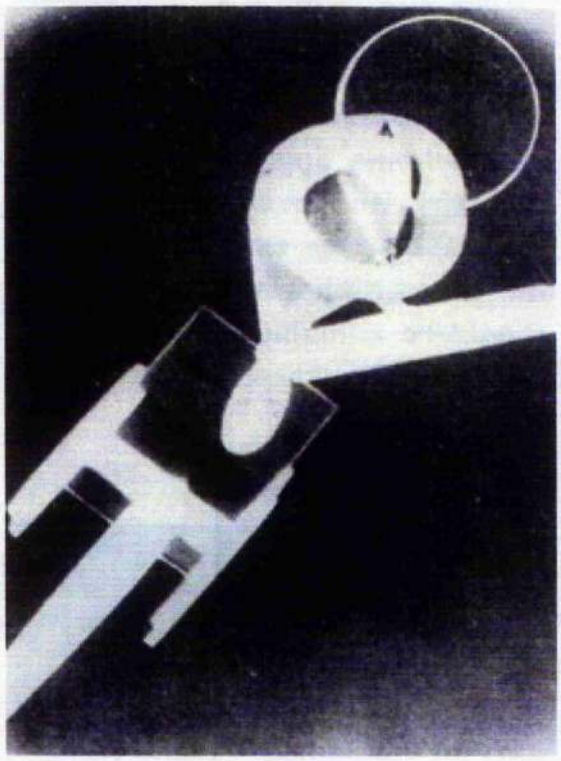

Figure 7: Laszlo Moholy-Nagy, *Photogram*, 1923

Moholy-Nagy was the one artist of that period who literally adopted the photogram and created a concept of 'design with light' around it. This formed the basis of lensless photography as an art form which Moholy-Nagy deemed essential for the modern era.

In the early photograms (fig. 7) Moholy-Nagy and his wife Lucia used objects found in their apartment, much as Man Ray had done. Moholy-Nagy also created photograms in the shapes he used in his paintings previously, overlapping circular and rectangular forms. Whereas man Ray's photograms frequently had a narrative element to them, Moholy was aiming for abstraction and eventually dispensed with objects and paper shapes in favour of pure light. But while Moholy-Nagy was a great supporter and practitioner of *New Vision* photography, where photograms were concerned, he returned to his roots as a painter. Eleanor Hight notes:

> By the time he and Lucia had settled in Weimar his interest in both rendering textures and distorting objects had disappeared. He focused

> his attention on organization of light and dark masses on the picture plane "The light-sensitive layer—plate or paper—is a tabula rasa, a blank page on which one may make notes with light, just as the painter, working on his canvas in a sovereign way, uses his tools, brush and pigment."[32]

Moholy-Nagy taught at the original Bauhaus in Weimar and Dessau [33] and, after emigrating first to London, then to the U.S., was a founder of the 1937 New Bauhaus School, now the Institute of Design in Chicago. Moholy-Nagy encouraged his students to experiment with light and light sensitive materials. Eventually he found himself in charge of what could be called a 'light-lab'[34]. Students constructed all sorts of light-modulators: contraptions and apparati with the sole purpose of bending, diffracting, and otherwise manipulating light before recording the varying phenomena on photographic paper.[35]

Graham Clarke, again, suggests that Moholy-Nagy's photograms served to establish a bridge between Dada and Surrealism[36]. Both influenced his work and the desire to 'picture the subconscious' could be said to emanate from the strange half-life of the semi-abstract photograms. In Moholy-Nagy's creations, the imagination is allowed to freely associate, as opposed to being tied down by the recognisable 'photographic' image produced by the camera.[37]

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[32] Moholy-Nagy quotation from Andreas Haus, *Moholy-Nagy: Photographs & Photograms* (New York: Pantheon Books, 1980), 48. In: Eleanor M. Hight, *Moholy-Nagy: Photography and Film in Weimar Germany* (Wellesley, Massachusetts: Wellesley College Museum, 1985), 51.

[33] The Bauhaus in Weimar closed on April 1st, 1925 and re-opened in a series of purpose-built structures designed by Walter Gropius, Head of the Bauhaus, in June of the same year.

[34] For a detailed account of Moholy-Nagy's experiments with light see: Floris M. Neusüss, T. F. Barrow, and et al, *Experimental Vision: The Evolution of the Photogram since 1919* (Niwot, Colorado: Roberts Rinehart Publishers in association with the Denver Art Museum, 1994).

[35] See Hülsewig-Johnen, Jäger, and Schmoll, *Das Foto Als Autonomes Bild: Experimentelle Gestaltung 1839-1989*, 86.

[36] Clarke, *The Photograph*, 194.

[37] For Moholy-Nagy's own writings on this subject see Moholy-Nagy, "The Future of the Photographic Process."

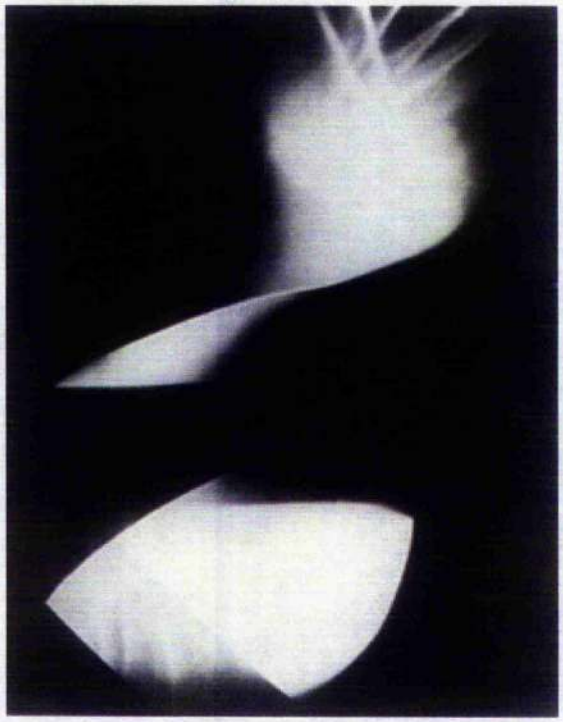

Figure 8: Laszlo Moholy-Nagy, *Photogram*,1926?

While comparing Man Ray's work to that of Moholy-Nagy, Merry Foresta states:

> From the beginning Moholy-Nagy was interested less in the identity of the objects with which he created his photograms than in the abstract compositions they formed. Through improvisation and conscious arrangement he produced a strange world of visions that paradoxically included real elements. Closely related to the geometrical abstractions of his Constructivist paintings, Moholy-Nagy's photograms are as planned and controlled as Man Ray's were (or seemed to be) accidental and automatic. Yet his description of the effect as "sublime, radiant, almost dematerialized" suggested the ephemeral, X-ray quality he was after.[38]

The apparent automatism of the photogram process appealed to the Dada-Surrealist sensibility. Tristan Tzara wrote the following in a short Dada text

[38] Foresta, "Tracing the Line: Art and Photography in the Age of Contact," 17.

entitled *When Things Dream*, accompanying Man Ray's photograms and hinting at their power to aid free association:

> Submarine views, stones of clouds, flights of sharks by waves of applause, retinas of veils, auroras of crustaceans in glass, tables of direction, watches of lightning, crumples papers that trouble the stars and the thousand feathers of resentment, all that which awakens tenderness out of all reason ...[39]

It seemed as if all things were possible within Man Ray's light creations. According to Beaumont Newhall, both Man Ray and Moholy-Nagy started out using small machine parts for their early compositions, which bore resemblance to Francis Picabia's 'automatic' works that were created by dipping small springs, wheels and cogs in ink and pressing them onto paper.[40] Later, however, the works of both men acquired their very own distinct appearances, with Moholy-Nagy using objects as 'light modulators' to produce abstracts where the originators were no longer identifiable. Man Ray chose objects for their evocative value; most were recognisable or arranged to form visual puns or whimsical compositions with sexual connotations (fig. 6).

During this period, as part of avant-garde practice, the nature of art was being questioned continually. Art in general had to be new and address the fast-moving machine-age while, at the same time, it had to be fundamental and sincere. While dismissing the Art for Art's Sake attitude, the Dadaists could not agree on an alternative. Man Ray's Rayographs and Moholy-Nagy's Photograms pointed to another way of working which was in keeping with the Surrealist ethics of automatism, interest in found objects, and making 'invisible' states visible. In the context of twentieth-century visual experimentation, photograms became a new art form: they echoed André Breton's Surrealist poetics while at the same time falling in line with Tristan Tzara's Dada manifesto by sidestepping *both* painting and traditional photography.

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[39] Tristan Tzara, *When Things Dream*, 1934, in: Man Ray, *Photographs by Man Ray, 105 Works, 1920 - 1934* (New York: Dover, 1979).
[40] Newhall, *The History of Photography: From 1839 to the Present*, 199.

Schad, Man Ray and Moholy-Nagy adopted the same process, but for different means. Ian Walker describes the difference in their approach to the medium:

> Schad was intent on the magic inherent in inconsequential material, producing rather limited 'Ghost' versions of Schwitter's *Merz* collages. Moholy moved to an opposite extreme, concentrating on the effect of light itself; his work was nearly always abstract and dematerialized. The Rayographs must be fitted midway between these poles, but moving into each area at certain points. It was always important to Man Ray to keep his activity within any medium as broadly based as possible.[41]

Schad, Man Ray and Moholy-Nagy, especially the latter two, popularised the photogram process, but those kind of collages were later seen as being very much a product of the Dada / Surrealist period.

The German artist and writer on photography, Rolf H. Krauss proposes that it was "in this period of artistic freedom and experimentation with new processes and materials, that art discovered photography. The impetus did not come from the medium of photography as it was previously understood, but for the first time since its invention, photography was utilised to realise conceptual ideas."[42] An indication that it was perceived as such at the time is expressed by the artist Raul Hausmann, who defined the photogram as "a technical form similar to abstract painting that belongs only conditionally to the field of photographic vision."[43]

For Krauss, the photograms created by Schad, Man Ray, Moholy-Nagy et al are proof of the first conceptual use of photography since the medium came into being: the photogram allowed for control to be deliberately relinquished and the connection between the artist's head and hand severed.

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[41] Walker, "Man Ray and the Rayograph," 40.
[42] Rolf H. Krauss, "These 6: Zur Konzeptionellen Photographie," in *Photographie Als Medium* (Stuttgart, Germany: Cantz Verlag, 1995), 58.(my translation)
[43] Floris M. Neusüss, "From Beyond Vision," in *Experimental Vision*, ed. Charles Hagen (Niwot: Robert Rinehart Publishers, 1983), 13.

The American public became aware of the phenomenon of cameraless photography when the Bauhaus was reincarnated in Chicago in 1937. Moholy-Nagy taught there and artists such as Lotte Jacobi, Nathan Lerner, Barbara Morgan and Carlotta Corpron started working experimentally with light and abstraction.

From 1949, Robert Rauschenberg used architechtural 'blueprint' materials to create large-scale photograms in collaboration with his wife Sue Weil.[44] Largely featuring her nude form, these blue-print photograms were part of the exhibition *Abstraction in Photography*[45] and were featured in Life magazine in April 1951. Rauschenberg's experiments with photograms and the human form ranged from the totemic (see fig. 9) to a romanticised notion of the female shape, as his wife is pictured surrounded by flowers, leaves, and other kinds of vegetation.[46]

[44]Walter Hopps and Susan Davidson, *Robert Rauschenberg: A Retrospective* (New York: Guggenheim Museum Publications, 1997), 46.
[45] Museum of Modern Art, New York, 1951
[46]. See Floris M. Neusüss, *Das Fotogramm in Der Kunst Des 20. Jahrhundert: Die Andere Seite Der Bilder - Fotografie Ohne Kamera* (Köln: DuMont, 1990).

Figure 9: Robert Rauschenberg, *Untitled*, ca. 1950

Rauschenberg's totemic image (fig. 9) is not typical of the series from the late 1940s, but it shows a use of the sheet of paper as frame and a certain amount of planning and pre-visualisation which contrasts sharply with Christian Schad's or Moholy-Nagy's approach, while pre-dating Yves Klein's *Anthropometry* series (models' body prints) by a decade.

As part of the advent of conceptual art, the 1960s saw a flurry of photogram activities in Europe, particularly in Germany and Austria, with Floris M. Neusüss as a perennial maker, promoter and publisher of photograms. American practitioners at that time included Robert Rauschenberg and Robert Heinecken, who produced bodies of work using the photogram process throughout the 1950s and 60s and in the 1980s.

More recently, a group of artists in Britain (Susan Derges, Gary Fabian Miller, Christopher Bucklow and Daro Montag) have revived the art of the photogram, this time in colour, as has Adam Fuss in New York.
Derges, Miller and Montag had numerous exhibitions together, due to the fact that they have a similar way of working and a concern for the natural environment. Daro Montag explains:

> In contrast to much contemporary, deconstructive photography, which tends to embrace technological developments and the digitization of images, this group have revived and developed some of the earliest photographic methods. These have included various developments of both photograms and pinhole photography. Unlike previous versions of such images, contemporary cameraless photographs often exploit the permanently vibrant qualities of Cibachrome paper. The images produced by these artists appear more direct and less-mediated than camera images... It is this apparent lack of mediation that has led curators to link the artists together.[47]

[47] Daro Montag, "Bioglyphs: Generating Images in Collaboration with Nature's Events" (University of Hertfordshire, 2000), 42.

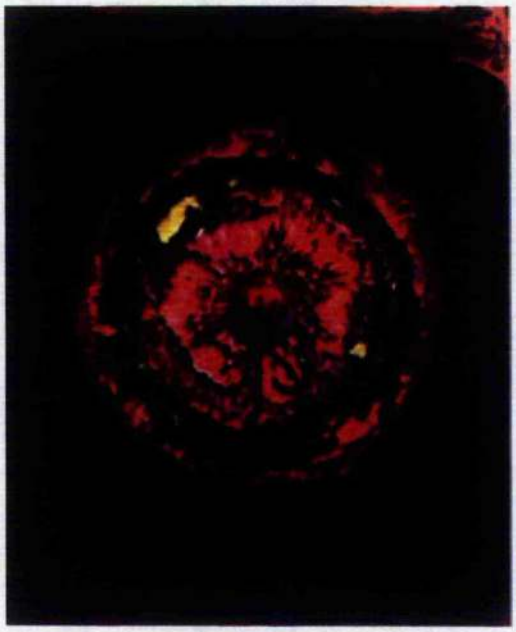

Figure 10: Daro Montag, *K2 VII*, 1997, 5/4 film, Kiwifruit, microbes

With the exception of Adam Fuss, Susan Derges is the artist most well known internationally for the continued use of the photogram as a means of expression rooted in science and documentation. Although widely known for her works with and in – literally – the river Taw[48], looking over her output since the 1980s, a circular motif seems to re-appear on a regular basis. From the *Chladni Figures (1985)*[49], her early experiments with sound waves making patterns of sand particles, and, in *Hermetica (1989)*[50], with mercury, produced more often than not, circular images of sorts, made visible in both still images and videos. Famously, in a body of work entitled *The Observer and the Observed (1991)*[51], Derges used sine waves to arch a jet of water and divide it into separate droplets. Frozen by means of electronic flash, each perfect droplet mirrors the image of a human face – hers -, thereby visually implicating the author in this scientific experiment.

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[48] See Susan Derges, *Woman Thinking River* (San Francisco: Fraenkel Gallery; Danzinger Gallery, New York, 1989). and Susan Derges, *River Taw* (Kent: Michael Hue-Williams Fine Art, 1997).
[49] See Susan Derges, *Liquid Form:1985 - 1999* (Michael Hue-Williams Fine Art, 2000).
[50] Ibid.
[51] Ibid.

Also entitled *Self Portrait*, this would be the first and last time Derges would put herself 'into the picture'.[52]

Figure 11: Susan Derges, from *Vessel*, 1994

The circular motif returned in 1994 in a series of cibachrome photograms entitled *Vessel,* which allowed the viewer to witness the developmental cycle of frogspawn-to-frog by means of observation through the bottom of a jam jar (fig.11). The notion of confinement in a jar as metaphor of cyclical events or even spaces of varying dimensions such as the world at large and the womb[53], on a very much smaller scale, has carried through Derges' work to her most

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[52] During the opening of Derges' exhibition *Azure* at Ingleby Gallery, Edinburgh in June 2006 an informal conversation with her fellow artist and friend, Christopher Bucklow, was arranged. Derges expressed the desire 'to take herself completely out of the work', in a spiritual and Buddhist-inspired notion; for the work to appear 'ego-less'. Whether this is possible in any kind of artmaking is debatable, to say the least. Derges seems to realise her dilemma during an interview in 2004. See Derges wrestling with the issue of authorship in: Kumar, Satish. "Interview with Susan Derges." *Resurgence*, no. 223 (2004): www.resurgence.org/resurgence/issues/derges223.htm

[53] ... also a vessel...

recent photograms in the *Azure* series of 2006 [54]. Returning to landscape photograms 'from below', this time the location is not the riverbed or sea, but what looks like elliptical and round holes filled with water and surrounded by vegetation (fig.12). As if in suspended animation under water, the viewer looks up to the night sky through a frame of black vegetation, looking towards the light as a means from escape from a dark uncertain space. These images are beautiful but threatening at the same time and mark the beginning of a new chapter for Susan Derges in that they elicit a highly emotional response from the viewers who can't help but imagine themselves in a mysteriously claustrophobic place, in suspense, looking up and waiting.

Figure 12: Susan Derges, *Luna*, 2006, Ilfochrome photogram

There is an unseen but very much felt barrier between the realms of above and below, a dimension which is new to Derges' work when compared with

[54] See Susan Derges, *Azure* (Edinburgh: Ingleby Gallery, 2006).

earlier 'under water' work in the river Taw where the skies are visible but not framed.

The issue of surface and division between above and below is very much inherent in the nature of the photogram itself, as well as other touch-related processes. The barrier between above and below will again, albeit in reverse, be evident in Helen Chadwick's installation *The Oval Court*, which I discuss in Chapter Three.

The more recent applications of the photogram, modes of practice and artists employing them will largely be the subject of the remainder of this chapter. Before introducing some artists' work in detail, I conduct a survey of the definition of a photogram, which in itself illustrates a number of approaches to, and ways of thinking about, the process.

1.3 Method Defined

A listing of several descriptions of the photogram process itself will serve to illustrate my argument that a seemingly very simple process is being used to produce artwork with different means and ends. There are a host of different ways of interpreting the role of a photogram and what it can do. The use of language found in photographic source books and amateur how–to instruction manuals[55] determines, in a way, how the process is seen and evaluated. A very simple and straight forward description can be found in the International Center of Photography's *Encyclopedia of Photography.*

Under 'P' for Photogram it states:

> A photogram is a cameraless image created by placing two- or three-dimensional objects on photographic film or paper and exposing the arrangement to light. The developed image shows no exposure effect

[55] This kind of literature addresses the technicist aspect of photography and was a prevalent form of writing on photography before critical and theoretical approaches gained momentum in the 1960s. Today, this genre of photographic output lives on in amateur publications, camera clubs, and coffee-table books about thematic aspects of photography.

> where opaque objects touched the emulsion; tones where translucent objects were placed and where partial shadowing occurred under solid objects not completely touching the surface; and maximum exposure in areas that were completely uncovered." [56]

The *Encyclopedia* presents the reader with an accurate, brief and objective description, although its tone clearly presumes that the reader is not about to leave his or her chair to give it an immediate try in the darkroom. Jerry Burchill, in *Darkroom Art* (a practical handbook), gives a much more enthusiastic description, made to fire up the reader's imagination and try it out for themselves:

> It's easy to make a photogram. All you have to do is go into the dark, place something on a piece of photographic paper, turn a light on and off (any light source can be used), and develop the paper. ... If you make a photogram with a curved object like an egg, the effect you get will vary depending on the amount of light used for your exposure. A short exposure produces a silhouette of an egg. A longer exposure allows the light to bleed around the edges of the egg creating an image with blacks, subtle shades of gray, and white at the point where the egg was in contact with the printing paper. [57]

Although not written for children, Burchill encourages the idea of play and experimentation without getting too technical about it. And indeed, it is easier just to try out some objects and see what happens than to read about possible methods of manipulation within the photogram process. And there are many...

Ian Walker describes the process as part of an essay on Man Ray and the Rayograph. In this period, much emphasis was put on the experimental and what started out as a very simple process was soon being complicated in the

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[56] William L. Broecker, *Icp - Encyclopedia of Photography* (New York: Crown Publishers, 1984), 386.
[57] Jerry Burchfield, *Darkroom Art: How to Create Exciting, Innovative Images in Your Own Darkroom* (New York: Amphoto, 1981), 44.

search for new ways of image manipulation. Walker's description reflects this:

> A piece of photographic paper, exposed to light, will quickly turn black; if however, an object is placed on the paper so that no light can reach the area beneath, that area will remain white. This simple formula may be endlessly varied by changes either in the system of lighting or in the objects and the way they are arranged. Any gradation of grey between absolute black and absolute white may be achieved by only covering an area for part of the short exposure. A directional light will give a sharper edge than a diffused one; the focus can also be changed by the distance of the light from the paper, or by raising the edge of the object, thus allowing some light to creep underneath. The light source may be set at different angles to give variety of 'shadows' thrown behind the objects, depending also on their size and shape. To obtain even greater complexity two differently angled lights may be used to give crossed shadows, or the light moved during exposure to blur the shadow. In the creation of a photogram, any degree of complexity is possible, and with the evident limitations of the medium, effects of surprising subtlety can be achieved."[58]

[58] Walker, "Man Ray and the Rayograph," 40.

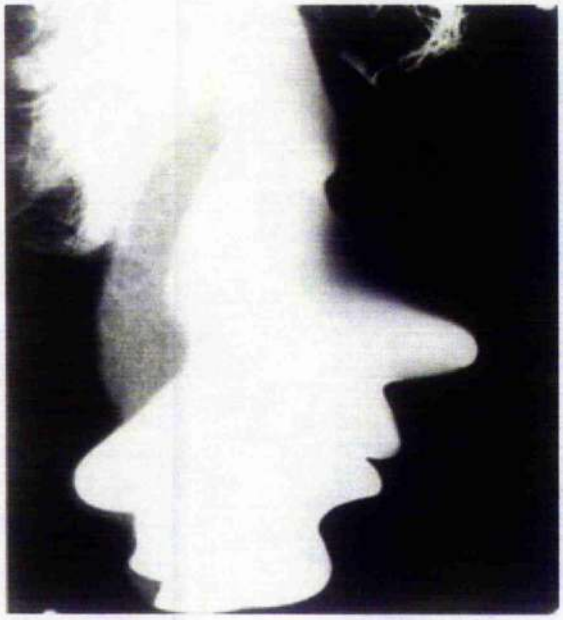

Figure 13: Laszlo Moholy-Nagy, *Self-Portrait,* photogram

Walker's definition and description of process limits itself to just that: the process. In the 1920's, the new age of machines and autonomous art, it was important to emphasise the process and take 'the artist's hand' out of the equation as far as possible, as was demonstrated by Moholy-Nagy's abstract photograms, using only light as the subject.

So far, the descriptions have been concerned with describing the making of a photogram technically: how to go about it and how to achieve certain effects; and what happens when light meets light sensitive surface.

The historian Geoffrey Batchen, however, starts his account of the making of a photogram from a different perspective by considering the relationship of the object to the image and the implications on the part of our perception and for photography as a whole:

> ... The production of a photogram requires real and representation to begin as a single merged entity, as inseparable as a mirror and its image, as one and its other. These objects have to be removed before their photographic trace can be seen. By this means, photography allows objects to be present as image even when they are absent as

> objects. The photogram's persuasive power depends on precisely a lingering spectre of the total entity, a continual re-presentation of this coming together of image and object on the photographic paper. The photogram could be said to mark what is set aside from itself. It is a marker of the space between the object and its image, but also the temporal movement (the space) of this object's placement and setting aside – it speaks to the very condition of its own production. So we're actually talking about a surprisingly complicated manouvre here, a manouvre that simultaneously circumscribes and divides the identity summoned by the photogram. The contact print thereby represents a visible convolution of the binary relationship of absence/presence, past/present, space/time that constitutes the very possibility of photographing of any kind. And the possibility of history too. For what is history but the separation of past and present, the division of time into then and now, an interested demarcation of difference and deferral?[59]

I am quoting Batchen at length since every part of this quotation is relevant in the development of an ontology of the photogram. Batchen puts the production of a photogram into a wider perspective while, at the same time, commenting on the properties of the medium of photography as a whole. The kind of operation Batchen describes here refers less to the photogram operating in the Dada/Surrealist mode than to the days of Anna Atkins and the idea of the imprint of 'the thing itself'. I will discuss the implications and theories surrounding this position in connection with Anne Ferran's work in the following section.

It was my aim to show different ways of approaching the production of a photogram by listing the 'instructions for use' above. However, apart from Batchen's comments, relevant to the whole of my project, this has been restricted to the technique only. As I will describe in following sections, artists use this process, which can appear fairly limited at times, for widely varying ends and, as in the case of Adam Fuss and Anne Ferran, even photograms

[59] Geoffrey Batchen, "Dialogue with the Dead"; *D-Pict*, Oct/Nov 2000.

which look almost identical reveal their makers' ideological positions to be poles apart.

1.4 Where Opposites Meet: Fuss, Ferran and the Christening Gown

Australian artists Anne Brennan and Anne Ferran were asked to undertake a commission by the *Historic Houses Trust of New South Wales,* resulting in an exhibition entitled *Secure the Shadow,* which opened in Sydney in 1995. The Hyde Park Barracks in Sydney were developed as a museum in 1991 and during the renovation a mass of fabric fragments, pins and papers were found under the floor boards of what was at one time in its history an immigration camp and work house for women, similar to, but much smaller than, Ellis Island in New York Harbour. Most items had accidentally slipped beneath the floor boards, some were deliberately hidden there. Rats had made nests with whatever materials they could find in the rooms and dragged them beneath the wooden floor.

Lynn Collins, curator of the *Hyde Park Barracks* sheds some light on the barracks' occupants:

> The immigrant girls stayed only briefly. Orphans from famine-stricken Ireland, wives and families of convicts, distressed needlewomen from crowded workhouses around Britain were the first to come (from 1848). Single unaccompanied females destined to be domestics, farm workers and wives were also efficiently marshaled by matron, clergy and immigration agent for reunions with relations and friends, or indentured to colonists who thronged the barracks as new ships docked. Thousands of people have passed through Hyde Park Barracks during 176 years. [60]

[60] Anne Brennan and Anne Ferran, *Secure the Shadow. Exhibition Catalogue* (Australia: Historic Houses of South New Wales, 1995), 3.

As well as immigrants passing through, many older women returned to the asylum after having been abandoned or having fallen on hard times. All were expected to work: the making of garments of various descriptions was one of the chief occupations of the Barrack's inhabitants.

Anne Brennan, an artist making books, and Anne Ferran, an artist working largely with photography, found themselves faced with piles of boxes containing bags filled with small scraps and dirt. In their own words:

> When you open one the smell is unmistakably of rat. Lift out the contents, awkwardly because of the white gloves you are wearing, and some of the dirt falls out. When replacing the contents you will carefully pour the dirt, as much of it as you have managed to save, back into the bag. It has to be done slowly, bag by bag, so as not to jumble up these pieces of cloth, which – many of them discoloured – look alike, especially after a while; it is important not to return them by mistake to the wrong bag. The way these mute fragments have accumulated is poignant, as though the thousands of daily but long-forgotten words and actions of these completely ordinary women had transformed themselves into showers of pins and snarls of cloth, slipping between the floorboards to be concealed in the margins of the building itself. [61]

Many of the works the two artists produced in response to this commission make reference to the acts of stitching or weaving, or making patterns with strings of words taken from found letters.

One piece of Anne Ferran's contribution interests me in particular because I am reminded of the seaweed used by Anna Atkins and the idea of transmission of data.[62]

Scraps of fabric are scattered on a white background and photographed. The image is not a photogram but, in all its simplicity of presentation, it might as well be.

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[61] Ibid.,13.
[62] See Anna Atkins p.26

Figure 14: Anne Ferran, *Textile Fragments*, 1995

Ferran has arranged these pieces of fabric randomly: no composition or emphasis on form is in evidence here. On the contrary, this oddly shaped image (it looks as though it has been cut to fit some mysterious template) could have been randomly extracted from a much larger field of the same. The shapes themselves, organically visceral and fragile in appearance, have lost all relation to scale and, if nothing of their origin was known, might suggest the microscopic minuteness of strings of viral mutations or, on a larger scale, the discarded husks of some pupating organism. Brennan and Ferran, disarmingly, arrest any expectations of grand discoveries for their project:

> What has happened, in the end? A long time was spent investigating and responding to those investigations. We know more about the women now than at the outset, but not much more, since there is so little to learn. Little in the way of facts and figures, and a lot of

> material evidence that is incoherent. The frayed and knotted ends or the carefully mended page say only how nearly, how casually these things might have been lost. Of the filthy rags in the collection, it turns out, surprisingly, that their muteness and formlessness is their eloquence.
> They tell us finally that there is no "story", only fragments.[63]

The above statement and the account of Brennan and Ferran's access to the evidence suggests that they were at all times aware of their role as 'archaeologists', as well as artists, bridging the gap between the present and the past. The artworks resulting from this commission were true to the origin at all times in using the material to comment on aspects of these women's lives which the 'mute' material was unable to. In this way, Brennan and Ferran added layers of interpretation and understanding which the original artifacts were unable to provide.

I have taken this detour via *Secure the Shadow* in order to establish Anne Ferran's working methods with regards to historical material. Three years after her collaboration with Anne Brennan, Ferran took up an artist-in-residence position at the Round Hill estate in Sydney, which had been owned by the same family since 1813. This time she was not short of historical material to work with since parts of the house had retained their original contents, including 19th century wardrobes bursting with clothes.

Ferran proposed to make photograms of these clothes in a specially prepared darkroom 'in situ'. A photogram is akin to an X-ray concerning any fabric which transmits a smaller or larger degree of light. Subjected to an extended exposure to light on light-sensitive material, such as photographic paper, the fabric will translate into a visual impression of thin gauze while making apparent the 'structure' of the garments: the seams, folds, hidden pockets and any skillfully executed patching and repair to the garment which would not be visible externally. Visually, the garments acquire a ghostly transparence, evoking ideas of both absence and presence of those who once wore them.

On her work with the garments Ferran writes:

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[63] Brennan and Ferran, *Secure the Shadow. Exhibition Catalogue*,14.

> I found I sometimes responded to the separate garments in quite different ways: two identical boy's shirts, for instance, suggested an overlapping double image, whereas the full gathered cotton petticoats seemed to want to overlap the edges of the paper. The images are like other objects but subtly different. The process records certain transient, plastic qualities, the wrinkles and folds and shapes of that moment. … They emphasize, when grouped, the utility and everydayness of the clothing, while accentuating those one-offs, those garments worn only for special occasions, such as the christening gown."[64]

Anna Atkins's comment of the photogram representing 'impressions of the plants themselves'[65] spring to mind and a working methodology which seems to be echoed in Ferran's approach to the creation of these garment photograms. Certain arrangements might 'suggest themselves', but always, first and foremost, it has to be true to the material and its history. Once again, a presentation of data.

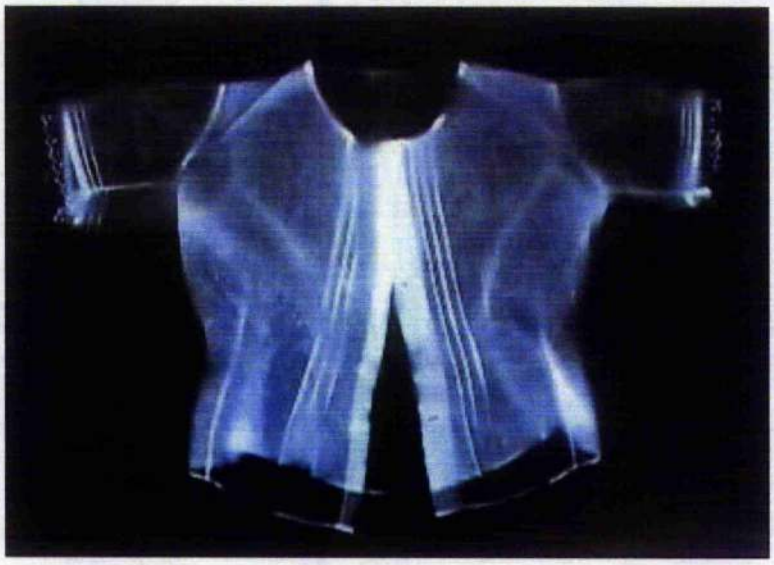

Figure 15: Anne Ferran, *Untitled* (bodice), photogram, 1998

[64] As quoted in: Geoffrey Batchen, "History Remains: The Photographs of Anne Ferran," *Art on Paper* 4, no. 3 (2000): 50.
[65] See section *1.2: Beginnings*, p.21

Nonetheless, Ferran's photograms of articles of clothing function on a number of levels that incorporate tactile elements in a number of ways. Ferran comments:

> When I try to reflect on these images the two things I keep coming up with are these: on one hand the obdurate barrier, like a high wall or a range of distant mountains, of short memory/thin skin; and on the other the longing to close the gap, recover the past, cross touch with sight, or lose them in one another, to press up close to things, cloth against paper, skin against skin.[66]

This evocative statement addresses, or rather – touches upon – an important aspect of the photogram: its tactile connection to the object which created it. I will discuss the tactile implications of the process in depth in a later chapter, but would briefly like to expand on Ferran's account.

The element of touch, integral to these works, seems to spiral and fold over on itself, creating an eerie encounter clothed in a simple shape.

Ferran's antique garments inherently still carry palimpsests of their owners' bodies; patches worn thin at elbows and knees, abrasions where fingers have regularly located pockets and buttonholes: traces of how a body inhabits a piece of clothing. Other interferences by hand make up the mending and alteration of the garments, now made visible by the photogram process. In order for the photogram to come into being, this garment has to make contact with the piece of photographic paper, the light imprint of which we, in turn, can see but might not be able to touch. The resulting image, nevertheless, appears to be three dimensional, as if an unseen body, rendered invisible by some sort of opaque X-ray technology, still inhabits the space inside the piece of clothing, creating folds and wrinkles in the garments which now have taken on the appearance of gauze or very thin muslin. Since these images are 'life-size', our eyes travel across the image assessing the visual qualities of the material, while at the same time imagining how it might feel on the skin.

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[66] As quoted in: Batchen, "History Remains: The Photographs of Anne Ferran," 50.

Thus, the tactile element has been relayed via the retina, but is not 'less real' because of it.

The photogram of a christening gown represents the meeting point of Ferran's work with that of Adam Fuss, who has been working exclusively with photograms for more than 15 years.

Fig.16

Fig. 17

Figure 16: Anne Ferran, Untitled, 1998

Figure 17: Adam Fuss, Untitled, 1999

Fuss has worked on *My Ghost* from 1999 to 2002. The eponymous book is illustrated with daguerrotypes and photograms of christening gowns, columns of smoke and flocks of birds in motion. Text appears in the form of poems and sonnets, which may or may not address the passing of a child. Fuss writes:

> All of the images from the ongoing 'My Ghost' series are part of a larger narrative...but I never start with a specific image in mind, or with a particular story I want to tell. The plot unfolds as I make the images, which is a process that to me is cathartic. If I had to say what the story of 'My Ghost' is, I'd say it's about my story...or, should I say, about my fate ...which is everyone's fate.[67]

[67] Adam Fuss, "Behind the Scenes with Adam Fuss," *Art on Paper* 7, no. 1 (2002): 73.

This comment is fairly indicative on how Fuss views his work. While Ferran is happy to let her 'subjects' speak for themselves, Fuss, despite all his protestations, usually has a certain 'theme' in mind, such as 'life force' in his photograms of babies and snakes. Fuss' works are not usually discussed in terms of subject matter but writers and reviewers tend to concentrate on mysticism, religion and sometimes alchemy and naturism in their discussion.[68]

Adam Fuss grew up in England and Australia, where he studied photography while working as a studio assistant to a commercial photographer. He settled in New York in 1982, initially working as a commercial photographer documenting art exhibitions. He has made photograms since 1988. Fuss says his first photogram was an accident, something he stumbled across while using a pinhole camera. "It let in a bit of light that raked across the film, which was dusty, and exposed it."[69] He thinks it might still be his best picture yet.

In a conversation with Michael Sand, Fuss confesses his attraction to photography "...because it was technical, full of gadgets, and I was obsessed with science. But at some point around fifteen or sixteen, I had a sense that photography could provide a bridge from the world of science to the world of art, or image. Photography was a means of crossing into a new place that I didn't know."[70]

Although Fuss' images are anything but simple, he has spoken about the special properties of the photogram:

> We're so conditioned to the syntax of the camera. We don't realize we're running on only half the visual alphabet. It's so boring, this way of seeing. It's killing us. In their simplicity photograms give the

[68] For a prime example see Eugenia Parry, "Less of a Test Than Earth: The Art of Adam Fuss," in *Adam Fuss* (Santa Fe: Arena Editions, 1997).
[69] Jamie James, "Adam Fuss: Photographer without a Camera," review of Review, *ArtNews* Feb 1995, 98.
[70] Michael Sand, "Adam Fuss," *Aperture*, Fall 1993, 44.

alphabet unfamiliar letters. What is seen has never been in a camera. Life itself is the image. Viewers sense it. They feel the difference.[71]

It poses a challenge to find direct references to the things that create Fuss' photograms, in either his own descriptions or those of others. The idea of touch is lost completely in Fuss' light drawings of the late eighties, where he suspended a penlight above the paper and had it recording ever decreasing motional circles, the effect changing with the addition of coloured gels to the torch. According to Eugenia Parry, these works came out of an otherworldly experience in New Hampshire where, one night, Fuss saw blue funnels in the sky. Allegedly, there were no drugs involved.

Figure 18: Adam Fuss, *Untitled*, 1990, Cibachrome photogram

The critic Stephen Frailey describes these images as "... halos of vivid colour radiating from a central point of light, which seem to pulse with a deep optical ringing. They speak of invisible impulses that imprint themselves on the

[71] Parry, "Less of a Test Than Earth: The Art of Adam Fuss," 14.

nervous system, or vibrations in the air that register under the teeth."[72] In conversation with Fuss, he likens these images to "... an echo, ...a trace of an event that reverberates through time. There is a visual equivalent here in the work, as well as aural connotations." Fuss replies: "An echo is a real good way to describe the photogram, which is a visual echo of the real object. That's why I like to work with the photogram, because the contact with what is represented is actual. It's as if the border between the world and the print is osmotic."[73]

At this point I would argue that a photogram is not a visual, but a *tactile* echo of the real object. A visual echo would be the *photograph*. Fuss uses Cibachrome photographic paper which works, just as photographic slide material does, on a dye destruction principle. It allows light to register as white, whereas on regular light sensitive material it would be registered in dark tones. In other words: a tone reversal.

The photograms of babies and snakes in water first brought Fuss' work to the attention of the New York art world. His comment about the osmotic qualities of the photogram are illustrated by these works in a stronger manner than by many other photograms prior to the *My Ghost* series. Fuss has this to say on the baby photograms, which are entitled *Invocation* (fig.19), *Wish* and *Journey:*

> This is an attempt at creating a classic image: just look in any museum or art history book for a Madonna and Child and you'll understand why I wanted to make images of babies. I placed the baby in a shallow tray of water (in which photographic paper was also placed, below the baby) because water is a metaphor for life and birth itself. It's a simple, life-size composition (simplicity and depiction of images at their true scale are characteristics of photograms), because I wanted it to be iconic and timeless. ...[74]

Fuss' metaphorical approach to creating his photograms is made clear here, even although these works are among the very 'simple', almost minimal

[72] Stephen Frailey, "Thin Air: Adam Fuss' Photographs," *Artforum*, Nov. 1993, 78.
[73] Ibid., 80.
[74] Fuss, "Behind the Scenes with Adam Fuss," 70.

photograms in Fuss' repertoire. Looking at one of the snake images, he comments: "This image prompts another reading of what the snake might represent; it could be seen as a sperm, swimming towards an egg. In the snake-in-water images, there's another layer to the 'life force' theme I often work with." [75]

Fig. 19

Fig 20

Figure 19: Adam Fuss, *Invocation*, 1992, Cibachrome photogram
Figure 20: Adam Fuss, *Untitled*, 1996, Cibachrome photogram

It is no wonder then, that writers on his work tend to throw themselves headlong into metaphorical interpretations, encouraged, no doubt, by Fuss' own remarks about his work.

For Allan Mellor, "Fuss's baby swims like the baptized Christ in the Jordan River in Early Christian representations – that is, almost fully immersed, except for head and shoulders, over which the Holy Spirit hovers."[76] and for Eugenia Parry, his party balloon photograms become "Philosopher's, or cosmic eggs, the egg being another reference to Alchemy…", whereas "… the

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[75] Ibid.: 71.
[76] David Allan Mellor, "By the Light of the Fertile Observer," in *Under the Sun: Photographs by Christopher Bucklow, Susan Derges, Garry Fabian Miller and Adam Fuss*, ed. Jeffrey Fraenkel (San Francisco: Fraenkel Gallery, 1996), 9.

Love photograms feel like a form of intergalactic heraldry, family crests of the great dynastic rabbit families of *The Mens*[77] borne heavenward."[78]

Figure 21: Adam Fuss, *Love,* 1992. Cibachrome photogram

Bearing the title *Love*, the viewer is given the hint that this is not about the rabbits per se; although Fuss has been attacked for slaughtering the animals in order for the fresh entrails to cause a chemical reaction on the Cibachrome paper, thus enhancing the tones of the photogram.

Fuss explains his motives behind *Love*:

"There's a quality of line that's figurative, and a quality of line that's abstract, and I wanted to make a picture where these two worlds were joined, in an intimate way....It came initially from this tension between inside and out, and

[77] The Mens is a wooded area near Fuss' boyhood home.
[78] Parry, "Less of a Test Than Earth: The Art of Adam Fuss," 23.

the place where these things converge."[79]

To a prompt by Stephen Frailey, suggesting a psychological side to *Love* as well as the physical phenomenon, he replies:

> It is becoming more psychological. The rabbits started three years ago with the idea that I would make a picture that combined figurative and abstract elements.
> I began by gutting a fish, then last summer I decided I wanted to do this with a mammal. What informed this was basically personal trauma. So there is a very literal meaning: two people with their guts entwined.[80]

Fuss keeps a studio freezer full of small animals such as finches, lizards and snakes to aid his sometimes very complex compositions.

Jamie James writes on some of Fuss' earlier works: "Stuffed birds and tiny ladders are combined with a fresh egg yolk, for example, which, in a photogram, becomes a perfect image of the sun. "I like the idea of things being as they are," Fuss says. "a photogram can be two things at the same time. It's light passing through the egg yolk: the fact that it looks like the sun is wonderful, but it *is* an egg yolk. It's the perfect metaphor."[81]

The game of distance is the game of near and far

By now it will be obvious that, more often than not, Fuss does not consider the objects that make up his photograms in terms other than metaphorical. Why else construct tiny ladders if not to further the narrative within the work? His statement is therefore a little puzzling, to say the least. It is true that most photograms will evoke some associations other than what they depict, but this could be said for anything of an iconic or indexical nature.

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[79] Sand, "Adam Fuss," 52.
[80] Frailey, "Thin Air: Adam Fuss' Photographs," 81.
[81] James, "Adam Fuss: Photographer without a Camera," 98.

Michael Sand was present when Adam Fuss pre-visualised a potential photogram involving a skeleton, a butterfly and an egg. He already had the meaning mapped out: "You have the dead body, in the dark lunar realm, and the passage of the soul, which is represented by a butterfly. And you have this kind of rebirth or reunion, symbolized by the egg yolk."[82]

By contrast, Fuss's image of the christening gown which started this section speaks of simplicity but, by being part of the *My Ghost* series, gains an added spectre of spirituality and, of course, death.

Hilarie Sheets, reviewing an exhibition of *My Ghost*, reinforces this notion: "...The antique dresses summon another time and invariably the spectre of death, as the body of the child in each is absent..." and " ... the birds in one of the images seem to gather loosely in a ring like angels convening."[83]

Francine Prose on the other hand, writing about the same body of work for Art News at a later date, asks: "Is it instinct or culture that makes us automatically assume that transparency and translucency are properties of the spirit? ...Could it be that what we are seeing is not the ghost of the child but the ghost of the dress? In which case the light is not shining through the dress but from it, not inhabiting or trying to escape it but displaying its glories."[84]

Prose's line of inquiry wrests the raison d'être of the dress away from Fuss's intended metaphor, namely that of death, spectacle, and the spirits of dead children, and restores it to the object at hand. In this sense, we have come full circle to the work of Anne Ferran, whose philosophy lies very much along the lines of Prose's suggestion. Ferran's work inherently makes room for our knowledge of the death of those who once wore the clothes in her photograms, and because of that knowledge the spectre of death cannot be denied. In using the photogram process, she knows that the resulting image will carry a certain suggestion of 'ghostly' appearance, befitting of the fact that the owners of these garments have long since passed away. However, just as Prose suggests,

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[82] Sand, "Adam Fuss," 52.
[83] Hilarie M. Sheets, "Adam Fuss: Cheim & Read," *Art News*, November 1999, 193.
[84] Francine Prose, "A Metaphysical Fashion Shoot," *Art News* 2001, 128.

Ferran's concern is first and foremost about the dress displaying itself and about history being given a 'second airing'.

In this section my aim has been to show how two artists, having produced an almost identical piece of work, could not be more different in their approach to the medium. While Ferran insists on the revival of history through artifacts, and on a retelling of stories previously forgotten, Fuss uses the medium to illustrate pre-conceived ideas, only very occasionally allowing his materials to free themselves from their metaphorical harness and speak of themselves.

If these artists had to be categorised in their use of the medium of the photogram, Fuss would belong to the metaphorical/allegorical camp, while Ferran joins the Documentarists, where Anna Atkins resides. While most work involving photograms would align with either of these positions, there is a third group which I might call Essentialists, which uses the medium of the photogram to inquire into the actions of light.

1.5 Light for Light's sake

> There is a crack,
> a crack in everything –
> that's how the light gets in...
> Leonard Cohen

What if – during the production of the photogram – the object, instead of being the thing depicted, played a secondary role, or maybe no role at all? As I have discussed earlier, Moholy-Nagy explored this territory by using his light-modulators to achieve abstract compositions.

If we were to combine this inquisitiveness about the actions of light 'made visible' with a practical but playful approach to events which create light, we might eventually arrive at bodies of work similar to those by Marco Breuer and Ellen Carey.

Every artist has to start somewhere. Marco Breuer starts a body of work by determining the size of the prints: DIN A4.[85] This in itself suggests a pre-determined mode of working, a standardisation, which immediately is contradicted by the content, the performance on these same-sized sheets. The series began with his move from Germany to the USA in 1993 and, according to Breuer himself, "can never be completed".[86] Breuer calls his photograms *photographic sketches*. What connects them is not so much a visual 'style', but Breuer's approach to making them. They are 'actions', or rather, performances in the dark which result in a trace on light-sensitive paper.

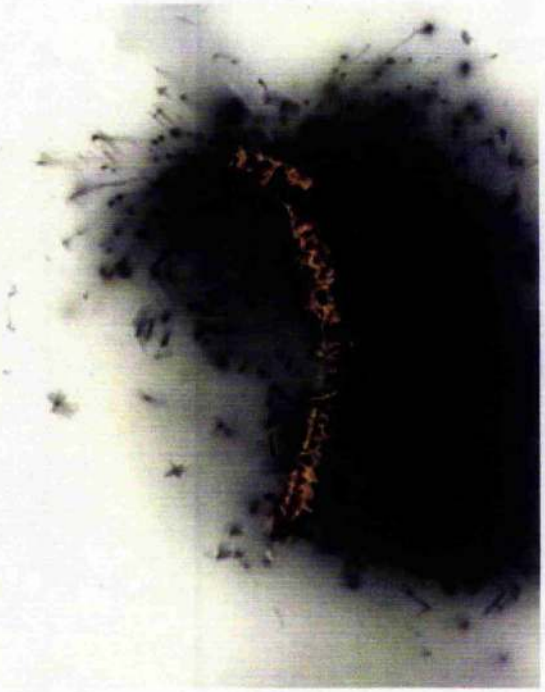

Figure 22: Marco Breuer, *Untitled: (FUSE)*,1995, burned silver gelatin print

In Breuer's 'sketches', physical traces of what created the various smudges or streaks of light, registered as dark stains on the photographic paper, are not

[85] Now just plain A4, the DIN stands for *Deutsche Industrie Norm*, a German government standardising unit.
[86] Marco Breuer, "Alchemy: Notes on Photographic Sketches," *European Photography*, Winter'98/Summer'99 1998.

always all that's there. Scratches, scorch marks and burns on the paper surface itself leave clues for our quest into the cause of the image.

Light also comes in different shapes and sizes for Breuer, who delights in using non-conventional 'light', such as electrical sparks or the heat / light emanations from coals or heating elements. The marks left as the surface of the photographic paper is burnt, mysteriously turn into spots of colour as the monochrome paper is developed.

Jaqueline Brody, writing on Breuer's work describes his working methods:

> He usually works in a darkroom with an old standard red safelight. The screws mark and pierce the emulsion on contact, but these effects remain latent until the image has been developed and fixed in chemical baths. In the same way, when working with a heat force, he may see extreme burns as they happen in the dim light, but the full range of the emulsion's response is revealed only with processing. Although the emulsion has been manufactured to be blind to colour, it responds to heat, turning to various golds and reds before charring.[87]

In Breuer's sketches, the momentary exposure due to an influx of light does not tell the whole story. In some of the works, like *Untitled (fuse)* (fig.22), the coals (fig.23), or the burning of a splash of alcohol on photographic paper, the exposure takes as long as it takes and therefore records a passage of time rather than one brief moment.[88]

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[87] Jaqueline Brody, "Marco Breuer: Counting in Circles," *Art on Paper* 6, no. 1 (2001): 45.

[88] For more examples of Breuer's work look at: Marco Breuer, *Websites*; available from http://www.artistsspace.org/webspace/1997/july97/breuer.html
http://www.essogallery.com/Marco%20Breuer/Breuer.html
http://www.cliffordsmithgallery.com/01febbreuer.html
http://www.sippey.com/traywick/oct00/
http://www.photoarts.com/light/index.html.

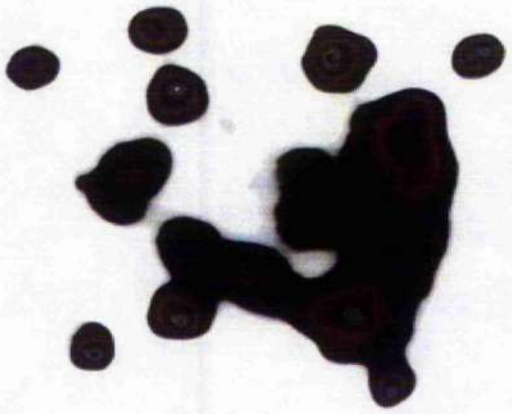

Figure 23: Marco Breuer, *Untitled* (COALS), 1996, silver gelatin paper, burned

The element of touch becomes even more paramount in those works which do not receive their exposure through light per se, but through heat. In order for these 'events' to document themselves, there has to be contact with the 'witnessing' surface, even more so than in a light-based photogram where, as in Fuss's baby photograms, the outline of shapes not in immediate contact with the paper are also recorded.

The act of physical intervention and, as it were, taking tactility one step further, is evident in Ellen Carey's *Pushpin Photograms*. Carey was born in New York and currently teaches at the University of Hartford. While not working with photograms exclusively, Carey's work displays a certain minimalism[89] while addressing issues within the medium of photography itself.[90]

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[89] ...in the sense of sparseness, not the art movement.

[90] For examples of Carey's work see: Ellen Carey, *Websites*; available from
http://www.ellencarey.com
htpp://www.polaroid.com/studio/artists/carey
http://www.vsw.org/exhibitions/recent.html
http://www.findarticles.com/p/articles/mi_m2479/is_5_30/ai_99309225.

Her *Pushpin Photograms* are created by physically pushing the pins through the photographic paper in the colour darkroom. A light source turned on while perforating the paper, or after the pins are in place, introduces light leaks which cast shadows across the print's surface and illustrate this action with unexpected visuals after the print has been developed.

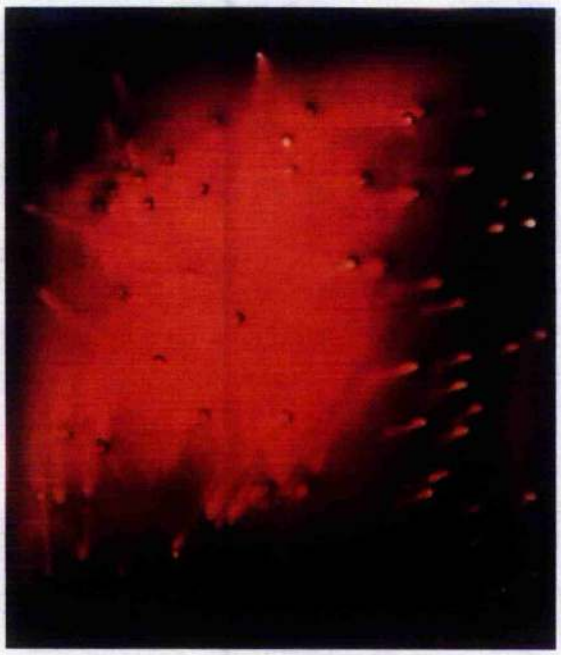

Figure 24: Ellen Carey, *Untitled*: Pushpin Photogram, 2002

In Carey's *Untitled: Pushpin Photogram* (fig. 24) the physical and slightly violent action of pushing the pins through the paper yield a reciprocal but reversed image, where vicious spikes seem to be protruding from an orange coloured entity. Instead of pins intruding the paper surface, the image gives the impression of sharp points straining to pierce the surface from the perceived 'inside' of the print.

As in the work of Marco Breuer, Carey's image is not created in a 'flash', but spans an action of some minutes. Although produced with the use of a photographic process, these works take themselves ever further away from what is commonly thought of as a photograph.

In these works, the notion of the image being grounded in our perceptional reality is slowly but surely slipping away.

Figure 25: Ellen Carey, *Photogenic Drawing*, 1999

In an artist's statement entitled *Photography Degree Zero* Carey writes:

> … I wish to push the parameters of the photographic medium, both to question the process by which a photograph is made and raise the issue of photographic meaning in the absence from the frame of a recognizable representation.[91]

Other images like *Photogenic Drawing* (fig. 25) are reminiscent of distant galaxies and nebulae viewed through a large telescope or the interior microphotographs of tissue, optical nerves and cells. Presumably created with

[91] See her website: www.ellencarey.com/history/As.html

a finer variety of pins, the above image echoes the preceding illustration in terms of what Laura Marks terms *haptic seeing*[92]

Due to the absence of a recognisable image which can immediately be put into context, the retina scans the surface of the print and translates the jabs and bumps into sensations which can almost be felt physically. Carey's *Pushpin Photograms* make a case in point.

Marco Breuer and Ellen Carey's approaches to working with photograms differ greatly from those employed by Adam Fuss and Anne Ferran. While works by Fuss, for example, could easily be recognised as 'photographic', could the same be said for Breuer's *Coals*? The question of distance surfaces once again, but in a slightly different guise: how close is the photogram to the photograph in the approach I have earlier termed Essentialist? What happens when the reason behind the making of an image is not a visual impulse but an action?

I have named three distinct groups and ways of working with the process of the photogram: Documentarist, Metaphorical and Essentialist, while interrogating the practices of contemporary artists working within this 'genre'. It is true, of course, that most work will lie somewhere between these categories. Robert Rauschenberg's totemic body blueprint, for example, might be situated between Documentarist and Metaphorical: as is most of Susan Derges' output. But how have we learnt to 'see' that two bodies have been imprinting themselves on paper; when did we learn to accept white 'shadows' and read absence as presence?

The next chapter explores vision: in particular, vision conditioned by photographic conventions: how we have learnt to 'naturally' interpret what the eye cannot see.

[92] For another example see page 154

2 Observer-Status: On Vision and Photography

The game of distance is the game of near and far has indeed far-reaching repercussions where ontological examination and perceptional oddities regarding vision are concerned.

This section starts with a general survey of sight and seeing: the Cartesian model versus embodied perception. Although it had been proven that perception varies person-to-person, visual spectacles of popular entertainment from the 18th and 19th century are all based on the 'black box' model in one form or another, perpetuating the Cartesian model of vision which encourages the cognitive and physical separation of Observer and the Observed. The conventions of optical seeing, that is, learning to interpret camera conventions, are examined here, as I have collected examples to show how camera-induced perception has become 'second nature'. Finally, I attempt a differentiation of modes of 'looking' and interacting with the world involving distance. Based on literary examples, I highlight the difference between ways of looking which translate into ontological differences between the photograph and the photogram.

According to Situationist Guy Debord, the principle of separation "is the alpha and omega of the spectacle."[1] The principle of the spectacle, then, hinges on the separation of the viewer from the viewed, such as could be said to happen in the space of the camera obscura. Therefore the act of photography carried out with any kind of image-capturing device suits this description[2] as well as the cinema auditorium where the viewer sits in the dark, spatially separated from the real-time unfolding of events. Suren Lalvani argues that, contrary to Jonathan Crary's well rehearsed arguments which locate sight perception

[1] Quoted from *The Society of the Spectacle*, p. 28 in Suren Lalvani, *Photography, Vision and the Production of Modern Bodies* (Albany: State University of New York Press, 1996), 176.

[2] As well as the black space inside the camera, there is also the distance of subject/object and camera to consider as another 'separation'.

within the individual body[3], the Cartesian and perspectival vision has survived almost intact, carried by media such as film, television and photography. Lalvani suggests that the two models of vision coexist, instead of, as Jonathan Crary proposes, one having superceded the other.[4]

In his influential book *Techniques of the Observer,* Jonathan Crary maps the rise and use of the camera obscura as a model for a prescribed 'natural vision'. While film and photography carry on this tradition, Crary describes in an earlier essay entitled *Modernizing Vision*, how in the early 18th century it had already been established that the 'new' body required a more mobile vision and vision apparatus while constructing methods of interfering with 'prescribed' perception:

> By the early 1800s, however, the rigidity of the camera obscura, its linear optical system, its fixed positions, its categorical distinction between inside and outside, its identification of perception and object, were all too inflexible and unwieldy for the needs of the new century. A more mobile, usable, and productive observer was needed in both discourse and practice - to be adequate to new uses of the body and to a vast proliferation of equally mobile and exchangeable signs and images. Modernisation entailed a decoding and deterritorialization of vision.[5]

Crary here refers to Goethe's perceptional experiments in *Theory of Colours*, retinal after-images as examples of embodied vision and nineteenth century experiments with electrical stimulation of the optical nerve, which proved that vision at least partially resides in the body. However, Crary never fully acknowledges the fact that the concept of the camera obscura, the black box syndrome, has never gone away and has now gained the upper hand in the form of the all-pervasive media of photography, film and television.

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[3] See Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge: MIT Press, 1991).
[4] Lalvani, *Photography, Vision and the Production of Modern Bodies*, 173.
[5] Jonathan Crary, "Modernising Vision," in *Poetics of Space - a Critical Anthology*, ed. Steve Yates (University of New Mexico Press, 1995), 52.

2.1 I see – Therefore I Am

> "I see where you're coming from," one woman says to another in a café, "but you'd better watch out, he's bound to see what you're up to." *See for yourself!* the impatient exclaim to disbelievers. After the Bible's first imperative, "Let there be Light" - God viewed each day's toil and "saw that it was good." Presumably, He, too, had to see it to believe it.
>
> Ideas dawn on us, if we're bright enough, not dim-witted, especially if we're visionary. And, when we flirt, though the common phrase sounds quite ghoulish and extreme, we give someone the eye. [6]

It is no wonder that so much of our language refers to the sense of sight. Pressed into use more than any other sense, the act of seeing stands for verification, for solidification of one's understanding. The expressions of *seeing through* someone or *being enlightenend* by something equally do not refer to physical sight, but to understanding and clarification of thought. *I see* stands for *I understand / I know* and the substitution of sight for knowledge is alive and well and prevalent in the medium of photography, where specialist techniques, such as Harald Edgerton' s stroboscopy, enable us to see events previously imperceptible to the human eye.

Cartesian philosophy on vision has been both a benchmark and a bone of contention since René Descartes (1596-1650) first published *La Dioptrique* or *Optics* as part of his *Discourse on Method* in 1637. As part of his wide-ranging theories he believed bodies to be complex machines governed by the mind, which he saw as a totally separate and discreet entity. The mind acts as the 'Ghost in the Machine' by animating the body and interacting with the physical world without being *of* it. A discussion of of Descartes' many theories, famously his six meditations in *Meditations on First Philosophy*, 1641, also known as *Metaphysical Meditations*, is beyond the scope of this enquiry. His theories led him to believe that he could not entirely trust his senses but that his 'system of doubt', whereby he would continually question

[6] Diane Ackerman, *A Natural History of the Senses* (London: Phoenix, 1990), 231.

everything, could lead him to the true state of things. Human senses lack the fundamental certainty that Descartes was looking for, but thought provides it: *Cogito ergo sum – I think therefore I am.* Much like the superiority of thought, Descartes singles out the sense of sight as 'the most noble' of all the senses.

From an evolutionary point of view, the sense of sight would arguably be the most important because, as Ackerman reminds us, physical proximity is mandatory in order to touch your enemy or to taste your food, "but vision can rush through the fields and up the mountains, travel across time, country, and parsecs of outer space, and collect bushel baskets of information as it goes."[7]

Barbara Maria Stafford posits the theory that, certainly since the *Enlightenment* – note the term – there has been a hegemony of the written word over 'pictures'. Yet curiously, from that time onwards, the popular currency of visual material increased enormously, with both private and public dissemination of instructional and recreational works containing pictures and diagrams on a variety of subjects: the works of master etchers Giambattista Piranesi (1720-1778), for example, who specialized in architecture, and the Swiss Jesuit Jean-Jaques Scheuchzer (1672-1733) who published detailed etchings of fossils; both in nature and in diagram form. Interestingly, Scheuchzer ordered the printers of his work on fossils to 'veil' the prints of fossil fish, thus visually transmitting the physical act of excavation, as the viewer has to struggle to assemble the image. The initially faint image would gradually clear with subsequent prints and the act of turning the page would imitate removal of layers of sediment. [8]

At the same time the public interest for private and public 'spectacles' increased.

The subject of vision is vast and a full historical account of its philosophical development is far beyond the scope of my inquiries. I chose to concentrate on the notion of the spectacle by examining some forms of visual entertainment popular in the 18th and 19th century. Central to these spectacles is the

[7] Ibid., 229.

[8] Barbara Maria Stafford, "The Visualization of Knowlege from the Enlightenment to Postmodernism," in *Good Looking: Essays on the Virtue of Images* (Cambridge: MIT Press, 1996), 35.

separation of the observer from the observed, the 'black box syndrome', inherent in the medium of photography.

2.2 Disembodied Spectatorship Pre-Photography

The fascination with spectacle can be traced through the history of mankind: from the shadowy figures of Plato's cave through Da Vinci's fascination with projection in the form of his Bull's Eye Lantern, which preceded the Magic Lantern by about 200 years.

The Italian architect and painter Leone Battista Alberti (1404-1472) invented a scientific device in 1437 that evolved into the popular 'peepshow' entertainments of the eighteenth and nineteenth century.[9] Not much is known about the exact application of those early boxes except their construction, which remained similar throughout. The boxes would vary considerably in size but all had a small viewing hole on the side of the box, fitted with a lens through which a painting or drawing of a landscape or famous landmark could be seen. Early peepshow boxes had no top cover, enabling the inside of the box to be lit. As the peepshows grew more sophisticated, the view could dramatically be changed to night-time simulation as the operator closed the top panel and opened the back, plunging the main scene into darkness. Holes punched into the paper would simulate stars and extra items embroidered onto the back of the viewing screen would suddenly be visible as shadow outline.

[9] See Richard Balzer, *Optical Amusements: Magic Lanterns and Other Transforming Images* (Watertown: Museum of our National Heritage, Massachusetts, 1987).

Figure 26: Traveling Peep Show, Scotland, c.1840

The 18th and 19th centuries played host to a number of these visual entertainments.[10] Many, such as the Peepshow, the Kaleidoscope and the Magic Lantern, were invented as scientific 'instruments' before they gained their entertainment value.

One form of spectacle that could not be said to fit this mould was the Panorama. From the start, Panoramas, Greek for 'pictures without boundaries', were designed for viewing by a large crowd of people at once. According to Richard Balzer, the Irish painter Robert Barker, resident of Edinburgh, had the idea of creating a painting on the inside of a large rotunda and, in 1787, first publicly showed a large painting of Edinburgh seen from Carlton Hill, measuring 300 feet in circumference. Barker's patented invention then traveled to London to great public acclaim and on to France and to America, where it was re-named Cyclorama. Nineteenth century panoramas featuring views of land and sea battles often proved to be most popular, followed by views of exotic and familiar places.

Panoramas were conventionally entered via a tunnel from beneath, up a small staircase, where the viewer would find him/herself on an elevated platform at

[10] See Ibid.

the centre of the room. The ground was not level, but fell away sharply toward the painting and strategic lighting ensured that the connection of ground and painted surface was invisible, thus again creating a discreet space. This denied the spectator an exact location of the viewing plane, thereby enhancing the spectacle, much like attendance at a Magic Lantern show or viewing a diorama from a dimly-lit space.[11]

The German Jesuit priest Athanasius Kircher (1601-1680) first fully described the workings of the Magic Lantern in his 1646 *Ars Magna Lucis et Umbra* (The Great Art of Light and Shadow) and published a lantern diagram in the second edition of *Ars Magna* in 1671.[12] I will return to Kircher and his invention in the following section.

The early lanterns were intended as a scientific invention, but soon became a popular form of public entertainment. Although initially the strength of their projection capabilities was limited, they provided a living for scores of traveling showmen. Their repertoire ranged from simple painted slides, humorous or informational, to elaborate shows, staged under the enticing name of 'Fantasmagoria', by the Belgian showman Etienne Gaspard Robertson (1763-1837). At the end of the eighteenth century Robertson was the first to attempt what would nowadays be described as back-projection, thus hiding himself and his apparatus behind the projection screen.

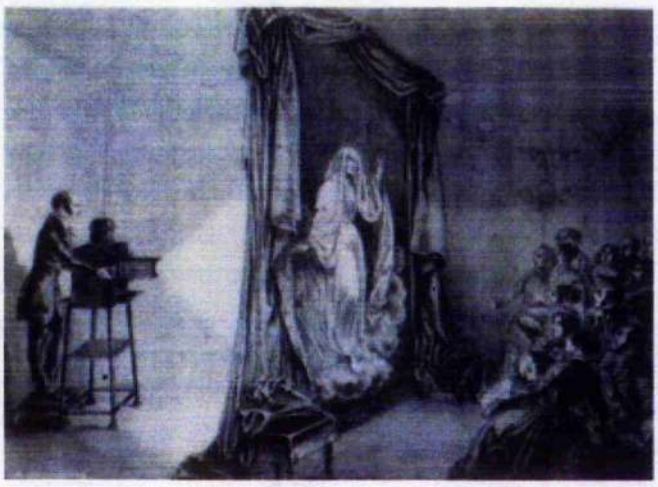

Figure 27: Fantasmagoria – Le Magasin Pittoresque, France, 1845

[11] See Ibid.
[12] For a detailed account of the 'life and times' of the Magic Lantern see Ibid.

Robertson's Magic Lantern was also mounted on a movable support, enabling him to change the size of his projections and to combine them with shadow projections from other light sources behind the screen.

During the nineteenth century, the strength of projection of the Magic Lanterns improved, allowing for larger audiences, as did the technique of creating ever more impressive spectacles. Lanterns with two and three lenses mounted vertically allowed a simulation of movement and various 'tricks' such as changing a daytime view into night or a body into a skeleton.

From the mid-nineteenth century, photographic lantern slides started to appear. Often educational in character, the photographic shows drew large crowds to see and marvel at exotic foreign places. Lantern slides still operated in early movie theatres, filling gaps between programs just as we can still see slide adverts in smaller, non-globalised cinemas today.

The methods and levels of sophistication of the spectacle may have changed over the centuries, but the black box syndrome, linking the earliest Camera Obscura via communal black spaces such as cinemas and theatres right to the latest in digital cameras, remains. All of these reinforce the notion of a disembodied spectatorship and are based on distance between the observer and the observed.

2.3 Old Meets New

Occasionally, artists strike up dialogues and connect back through time with those now long-gone forms of popular entertainment. What one might think would result in a nostalgic enterprise can often throw up new twists and astonishing links with current practices, even extending into cyberspace. I would like to cite two examples: That of Sanford Wurmfeld's *Cyclorama* and Calum Colvin's *Mundus Subterraneus*.

The artist Sanford Wurmfeld installed his modern-day Cyclorama at the Talbot Rice Gallery in Edinburgh in the summer of 2004. Instead of presenting the traditional painted view, the colourfield painter almost

imperceptibly blended small patches of spectral colours to create an effect "as though you are standing at the heart of the rainbow"[13]. In Wurmfeld's accompanying catalog, Duncan McMillan, curator of the Talbot Rice Gallery, notes:

> What Barker (the inventor of the Panorama) had done with his cylindrical painting was to put the spectator quite literally at the centre of the picture. The painting which surrounds him or her becomes pure sensation and implicitly this arrangement abandons the conventional posture of objectivity, the separation of the viewer from the thing viewed into subject, the observer and object, the observed.[14]

McMillan's proposal sounds almost plausible, as if, because of the peculiarity of the space, we might somehow transcend our observer status and – then what?

As I explained earlier, the nineteenth century panoramas were constructed in such a way as to visually and physically separate the viewer from the scene. This was done by confinement of the viewer in the centre of the room as well as through the employment of directional lighting so as not to draw attention to the picture's boundaries in space. My point here is that the position *in midst* the imagery, even though it encompasses 360 degrees, does not somehow make the spectator part of the picture, nor does it alter the mode of perception. The distance to the screen and disembodiment of the experience remains.

Wurmfeld's *Cyclorama* installation works in a slightly different way to the traditional models in that the floor in the rotunda is flat and visibly connected to the picture plane. There is no central viewing platform and fellow visitors frequently appear in the line of vision, which gives the impression of viewing a large piece in a gallery. To me it did not feel like standing inside a rainbow, although some stunning perceptual experiences can be created by walking very quickly very close along the colour plane, focusing past the immediate

[13] Duncan McMillan, "Magical Decorations: Sanford Wurmfeld's Cyclorama," in *Sanford Wurmfeld: Cyclorama* (Edinburgh: Talbot Rice Gallery, 2004), 7.
[14] Ibid., 8.

surface of the piece, so as to soften the joins, and 'experiencing' the colour change[15].

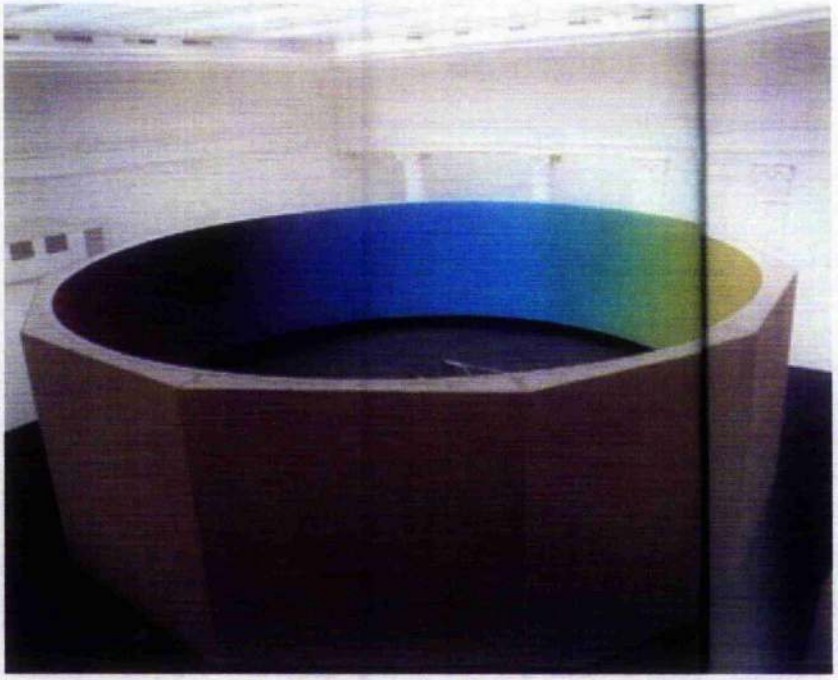

Figure 28: Sanford Wurmfeld, *Cyclorama*, Budapest, 2002

Wurmfeld has used the formula of the panorama as a suitable vehicle for his colour-field experiments. Apart from the physicality of the construction, it seems to have little in common with its 18th and 19th century ancestors in a visual sense. Although the method of viewing and perceiving the piece has changed completely due to the flat floor and the ability to walk freely within its space, it still retains the aspect of the spectacle: to be completely surrounded by an image.

Covering a time span of more than 300 years, the Scottish artist Calum Colvin created a body of work in 1996 which links the inventor of the Magic Lantern,

[15] It is recommended to wait until the rotunda is empty before attempting this! Alternatively, one could go and see a number of works by James Turrell for an 'immersion in colour' experience, where, more often than not the viewer starts his or her approach to the 'piece' from a darkened room, thus removing any sense of position of one's body in space.

Athanasius Kircher, with the photographic process and reaches all the way into the digital age.

The Jesuit priest Athanasius Kircher (1602-1680), as already indicated, has often been compared with Leonardo Da Vinci. A prolific inventor and writer on almost everything[16], he practiced his own unique brand of science. In the seventeenth century, the boundaries between science, art and religion had yet to be drawn, resulting in 'scientific' theories freely combining facts and fictions. Kircher himself rejected Alchemy as fiction, for example, but firmly believed in the existence of Noah's Ark and the Tower of Babel, while dating the creation of the world to 4053 B.C.[17]

One of the central experiences of Kircher's life was his presence at the eruptions of both Mount Etna and Stromboli in 1638. In the year after the eruptions, he had himself lowered into the crater of Mount Vesuvius to investigate how these phenomena might occur.

Fascinated by unseen forces manifesting themselves in nature, Kircher first came to the attention of the scientific community through his writings on Magnetism which, he proposed, held the core of the earth together. His lavishly illustrated, two-volume work *Mundus Subterraneus* was published in Amsterdam in 1664/5. It was the first printed work on Geophysics and Vulcanology.

[16] Kircher was a contemporary of Descartes and a number of parallels can be drawn concerning their writings on science and natural history.

[17] For a selection of sites on the life and works of Kircher see: Athanasius Kircher; available from www.stefan-etzel.de/HOME/bios/kircher.htm
www.faculty.fairfield.edu/jmac/sj/scientists/kircher.htm
www.mjt.org/exhibits/Gmundus.html
www.geocities.com/neveyaakov/electro_science/kircher.html
www.strangescience.net/kircher.htm.

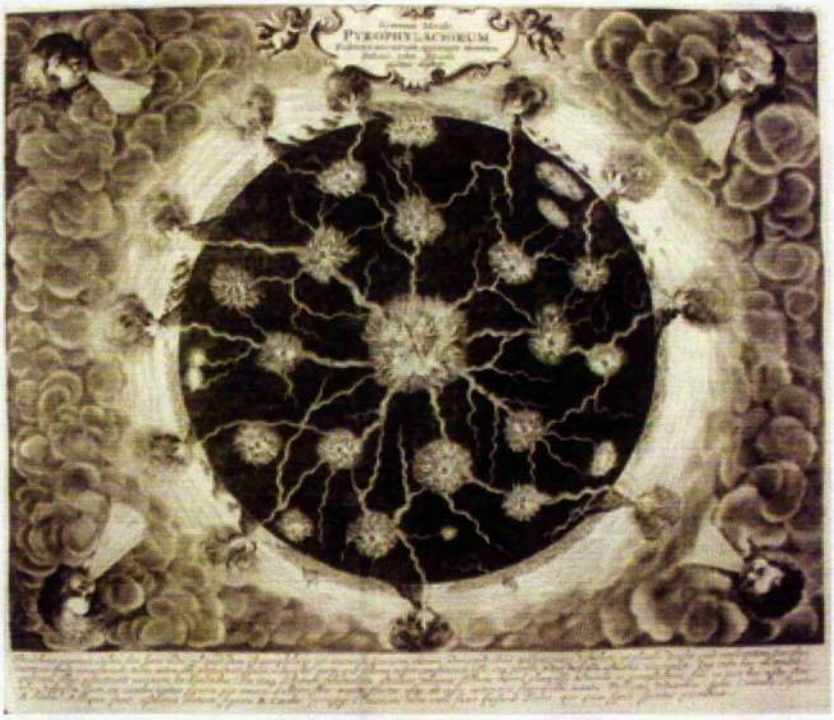

Figure 29: Athanasius Kircher, Mundus Subterraneus (1664/65):

"Systema Ideale PYROPHYLACIORUM Subterraneorum, quorum montes Vulcanii, veluti spiracula quedam existant"

Kircher proposed the highly unusual theory that there might be fire underneath the earth and the presence of a vast network of underground springs and reservoirs. The publication marked the first serious effort to describe and explain the workings of the earth, combining elements of physics, geology, chemistry and geology. His sometimes dark descriptions of the subterranean world inspired the artist Calum Colvin to name five photographs of a body of work entitled *Pseudologica Fantastica* after Kircher's opus.[18]

Mundus Subterraneus I, III, IV, IX, and *XI* convey Kircher's dark atmospheric vision with alien leaden skies which suggest interior space but not light. As if inspired by the vision of filmmaker Terry Gilliam, surreal, futuristic, or possibly retro, scenarios are played out in an inhospitable terrain of strange geologic matter littered with Colvin's trademark 'junk'.

[18] Calum Colvin, "Mundus Subterraneus Ix," *Portfolio* 1996.

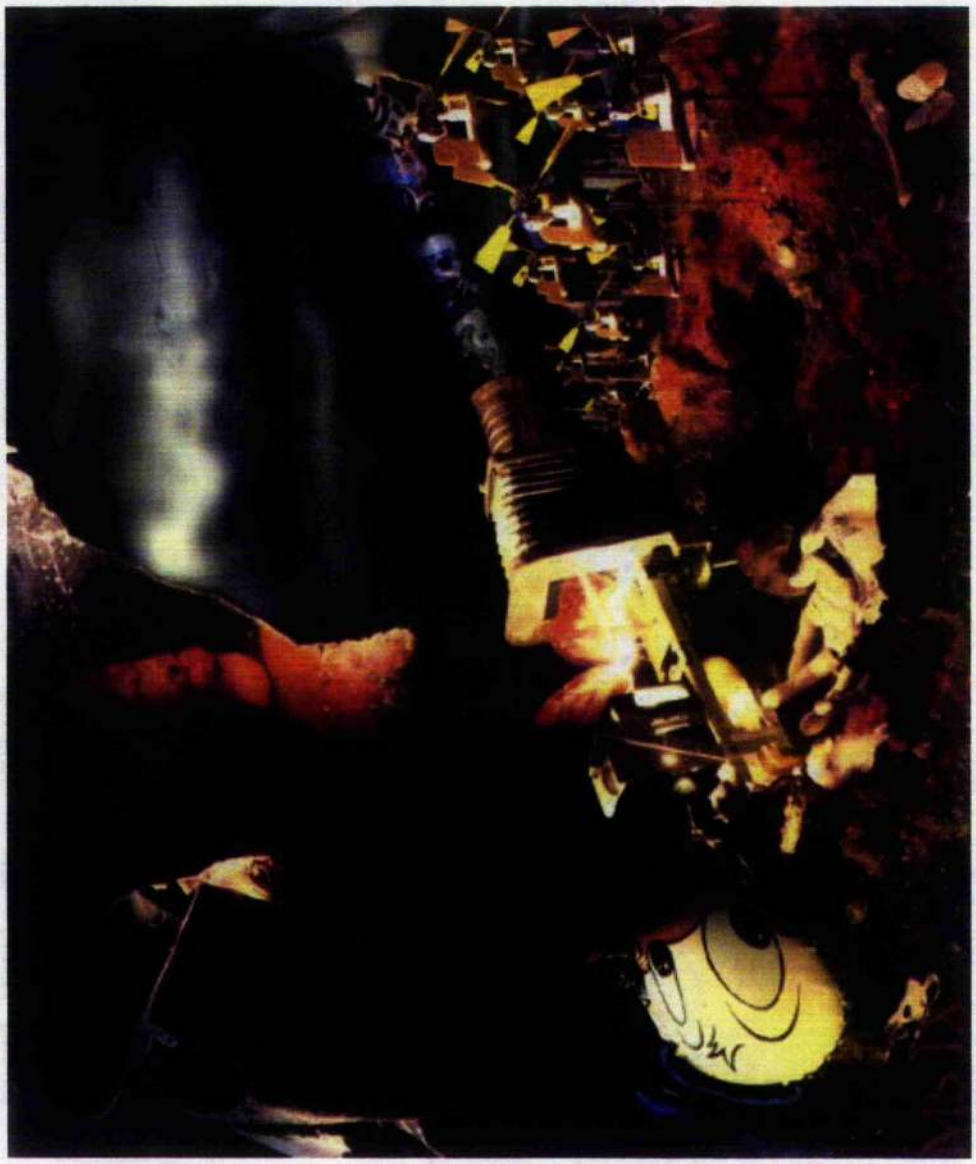

Figure 30: Calum Colvin, *Mundus Subterraneus IX*, 1996

(please rotate 90° clockwise for viewing)

In *MS IX*, Colvin meets Kircher not only in terms of the title of his work but via the conscious inclusion of the Lantern Slide apparatus, Kircher's invention of 1646. In Colvin's version, however, what is projected turns out to be neither painted nor photographic slides. Instead, what emerges is a stream of digitally distorted photographic imagery, more lava-lamp than life-like. A butterfly sits in the projecting chamber of the apparatus suggesting a possible transformation or metamorphosis of the imagery in line with its own life cycle. Athanasius Kircher would have had his own theories on the life stages of this butterfly which looks like it has just escaped the fragmented model hand underneath. Engraved with the lines of Palmistry, the hand refers back to the golden age of the 'map'-orientated proto-sciences such as Phrenology, Astrology and even Alchemy, the discipline which Kircher so violently opposed.

Colvin has since abandoned the use of digital imagery, but comments on it in a British Council publication:

> We will never be so sure of the integrity of the image as a document rooted in a definite time in our history. The impassive nature of photography will be gone. What we see may or may not have happened. The telling details in the image could, for all we know, be completely artificial. Is this all a bad thing? Is photography dying?[19]

These are the concerns of much of the photographic community at a time when manufacturers abandon the production of conventional photographic materials and head for digital markets.

Yet, as Colvin's *MS IX* indicates, the way we perceive images has not changed. It is merely the methods by which we record those images, which changes. Digital photography only represents yet another way to manipulate imagery. Even as Colvin voices his concerns, in *Pseudologica Fantastica* his use of digital manipulation is so overt that we are not misled for a second: we can't help reading them as digital constructions. To an artist who exclusively

[19] Colvin in Photography, Art and New Technologies, Impressiones – British Council magazine, Spain, Spring 1998. see: http://www.calumcolvin.com/

photographs constructed spaces, the realm of the artificial, no matter what technological shape it comes in, should represent familiar territory.

2.4 Traversing Black Space

At a very basic level, to photograph something, anything, means to distance oneself from the flow of events. It means the insertion of a space between the photographer and the photographed, both mentally and physically. The physical act of lifting a camera to the eye at once marks the photographer, who, a second ago may have been a 'player', as an observer; by distancing viewer from subject, the camera turns the depicted person into an object. The photographer thus becomes the author of the 'controlling gaze' which implies a certain amount of power over those in front of the lens in the sense that the captured moment is not just a brief unobserved moment in the flow of events, but can be shared at will with any number of potential viewers thereafter.
As Susan Sontag points out:

> The camera doesn't rape, or even possess, though it may presume, intrude, trespass, distort, exploit, and, at the farthest reach of metaphor, assassinate - all activities that, unlike the sexual push and shove, can be constructed from a distance, and with some detachment. [20]

In the next section, with the aid of literary examples, it will become clear that the photogram, as opposed to the photograph, can be said to represent the 'sexual push and shove' addressed by Sontag, due to the requirement of contact as a necessary condition for its creation.

But first, in addition to the physical removal from the flow of events caused by picking up a camera, I would like to examine the *black box syndrome*, the psychological removal from reality by looking through a black space.
This phenomenon started with the model of the Camera Obscura, or even, it could be argued, in Plato's cave. Uses of the Camera Obscura were already recorded in antiquity. Aristotle first referred to it in the fourth century B.C. in

[20] Susan Sontag, *On Photography* (New York: Farrar, Straus and Giroux, 1973), 13.

relation to the observance of eclipses. Those early *cameras* were actual rooms with a hole in one wall, projecting the image onto the opposite wall, albeit in a reversed fashion.

Long before the Camera Obscura was ever associated with photography as a process, it was used first by astrologers, then by artists as a labour-saving device to capture nature, architecture and figures perfectly in accordance with the single-point perspective. The Neapolitan philosopher Giovanni Battista della Porta first officially described the Camera Obscura in his book 'Natural Magic' in 1553, recommending it for portraiture in particular. Artists used it extensively, including, famously, Vermeer.
The image reflected by means of the Camera Obscura came to stand for human vision itself, promoted, especially by Descartes, who is said to have used the Camera himself.

By the 18th century it had firmly established itself as the model of vision per se: the dualism of inside and outside, the perceiving subject/eye and the world at large; until, around 1800, this mode of perception came in for severe criticism and had to give way to notions of 'embodied' perception. As Aaron Scharf tells us:

> ... Hogarth, for example rejected the camera on the grounds that it subjugated the vision of the artist to the imitation of a lifeless, rather than animated nature. By direct observation alone he proposed to store his memory full of a variety of natural forms and gestures, thereby minimizing the dependence on the conventional forms of pictures by earlier masters. [21]

Still, from the sixteenth to the nineteenth century an amazing number and variety of drawing devices came on the market, all based on the original camera model: from walk-in chambers that, resting on poles, had to be carried by 2 men or more, through various sizes of 'portable' boxes with or without lenses or mirrors, to the very small 'traveling' Camera Lucida which consisted of a baseboard, metal bracket and a glass prism. It was while using one of

[21] Aaron Scharf, *Art and Photography* (London: Penguin Books, 1968), 20.

these in a very unsatisfactory manner[22] at Lake Como, Italy, in 1833, that Talbot claimed to have had the idea of permanently 'fixing the shadow', which led, in 1839, to the invention of photography as we know it.

Geoffrey Batchen addresses the conundrum Talbot faced when trying to define this new thing called photography

> ... Talbot spoke of the new medium as a peculiar articulation of temporal and spatial coordinates. Photography is apparently a process in which "position" is "occupied" for a "single instant", where "fleeting" time is "arrested" in the "space of a single minute". It seems that he was able to describe the identity of photography only by harnessing together a whole series of binaries: art and shadows, the natural and magic, the momentary and the forever, the fleeting and the fettered, the fixed and that which is capable of change. Photography was, for Talbot, the desire for an impossible conjunction of transience and fixity. More than that, it was an emblematic something/sometime, a "space of a single minute" in which space becomes time, and time space.[23]

This account does suggest that Talbot realised that, although he was working with an apparatus derived from the model of the Camera Obscura with all its inherent characteristics, he was not dealing with, or at least did not accept, the 'static entity' which had been taken for granted for much of the Camera Obscura's existence. Clearly, for Talbot its possibilities already vastly superseded that of a mere *window on the world.*

As photography struggled to define itself in those early days, there was a belief that the photographic image came about by 'magic' or that objects drew themselves. In 1843, Lois Daguerre's invention, the Daguerreotype, was described in the Edinburgh Review as "...self-painted by the rectilinear

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[22] Talbot described his efforts as "traces on the paper melancholy to behold". Quoted in Roberts, Gray, and Anthony, *Specimens and Marvels: William Henry Fox Talbot and the Invention of Photography*. See p.7 for a reproduction of one of Talbot's Lake Cuomo drawings.
[23] Geoffrey Batchen, *Burning with Desire: The Conception of Photography* (Cambridge: The MIT Press, 1997), 91.

pencils of light, every object transfers its mimic image to the silver tablet."[24] Talbot himself also believed that "The building had drawn its own picture"[25]. It was not until later that the machinistic aspect of the camera was emphasised and the 'natural magic' premise was laid to rest.

Both Thomas Alva Edison and Lumière for example, regarded the camera and its output as a scientific instrument. This had been the case with a great number of optical devices before, but this one was different: due to the short exposure times, things became visible that had never before been recorded. In an attempt to capture the 'real', people like Edweard Muybridge and Etienne-Jules Marey, who specialized in motion studies of both humans and animals, went beyond vision with the aid of the camera.[26] Although it could not be verified by eye, the results were declared as 'real' as if they were verified visually. It was this connection with the scientific, and arguably truthful, image that helped cement photography's link to 'reality' and eventually embedded the notion of 'photography as reality'. And, as Ron Burnett suggests with regard to the moving image:

> ...newsreels were not accidentally named. The play on the words reel and real reflected the need to constantly assert truth, in a sense to force truth into and onto the image. To produce truth meant to duplicate reality, that is to replace projection with reproduction.[27]

Photography's link to scientific imagery as well as the genres of journalism and documentary helped to maintain the status of the 'real', The stroboscopic flash images of Harold Edgerton, a latter-day Marey[28], were popular from the

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[24] January 1843 The Edinburgh Review, "An Exerpt," in *Photography in Print: Writings from 1860 to the Present*, ed. Vicky Goldberg (New York: Simon & Schuster, 1981), 56.
[25] Talbot, "Some Account of the Art of Photogenic Drawing," 28.
[26] Muybridge caused a sensation when his motion studies of a galloping horse showed a point at which the animal has no contact with the ground whatsoever. This particular study influenced the way horses were painted from this point onwards, especially horses in motion and in battle scenes.
[27] Ron Burnett, "Camera Lucida: Roland Barthes, Jean-Paul Sartre and the Photographic Image," *Continuum: The Australian Journal of Media & Culture* 6, no. 2 (1991).
[28] Edgerton re-created all of Marey's chronophotographic experiments using his stroboscopic technique.

late 1930s. Most people can recall the image of a drop of milk creating a perfectly round crater while the rim of the crater, crown-like, forms little droplets itself. His balloon just having been pierced by a bullet is another image with staying power. Edgerton produced his first sequential flash device at the Massachusetts Institute of Technology in 1932. He soon added a camera to his 'stroboscope' where, with each rapid flash, a picture was exposed. According to Marta Braun, "... in his 1939 book *Flash* and his popular film *Quicker 'n a Wink*, Edgerton's photographs were seen by millions of people who, even if they knew nothing of particle hydrodynamics, could smile with recognition at a picture of the coronet made by a drop of milk."[29]

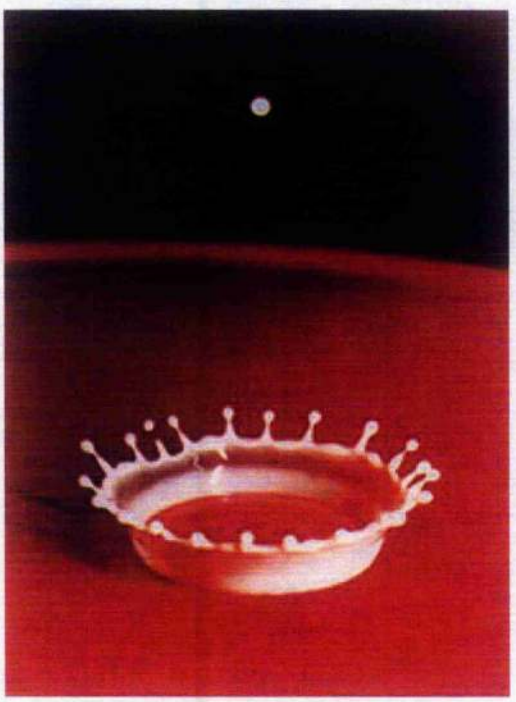

Figure 31: Harold Edgerton, *Milk drop coronet*, 1957

Edgerton's photography showed processes unperceivable by the human eye and helped, in a way, to confirm the notion of 'sight-as-knowledge' through the medium of photography. However familiar we may be with this kind of

[29] Marta Braun, "The Expanded Present: Photographing Movement," in *Beauty of Another Order: Photography in Science*, ed. Ann Thomas (New Haven: Yale University Press, 1977), 184.

imagery, however seamlessly we assimilate the understanding of its creation, it helps to occasionally review our relationship to what may be called *received perception*.

2.5 Camera Conventions

William Ivins, who held the post of curator of prints at the Metropolitan Museum of Art in the mid-twentieth century, observed the fact that, as the photographic image was increasingly seen by the public, there was a great deal of talk about *photographic distortion*: "Inescapably built into every photograph were a great amount of detail, and, especially, the geometrical perspective of central perspective and section."[30] According to Ivins, the term became rarer and rarer and eventually ceased completely because 'photographic seeing' became the norm and the world at large had been conditioned to see through the filter of photography's conventions.[31]

Numerous stories are in circulation describing the encounters of photographers and film makers with freshly discovered tribes around the world. For the most part these people, who had never been exposed to any kind of image-making device had little or no problems recognizing themselves on film, but were unable to recognise a photograph, a non-moving 'slice' taken out of a world which the tribes had only ever experienced as a flowing, moving entity.

Considered in this way, there is something deeply 'unnatural' about the way photography shows us the world, just as vision is said to have undergone changes, and not only through photography. It does make a point about the

[30] William M. Ivins, Jr., "Prints and Visual Communication, 1953," in *Photography in Print: Writings from 1860 to the Present*, ed. Vicky Goldberg (New York: Simon & Schuster, 1981), 391.
[31] See also Partick Maynard's exploration of camera specific conventions in: Patrick Maynard, "Photo Fidelities I: Photographic Seeing," in *The Engine of Visualization: Thinking through Photography*, ed. Patrick Maynard (Ithaca: Cornell University Press, 1997).

way that the photographic image has become 'second nature' in terms of our assimilation of its conventions.

Although we don't see like a camera, we have learnt to read and interpret its conventions, such as reading blur as motion and separating unconnected objects; the lamp post growing out of someone's head is an example. Unlike the brain, the camera lens in most cases does not filter information[32]. It is this phenomenon that Ivins addresses above, commenting on 'excessive detail' and an emphasised single-point perspective that is most pronounced as the camera points up at something or down from an elevated height.

In a less familiar example of seeing in terms of camera conventions, Wolfgang Schivelbusch observes an interesting phenomenon of seeing which, maybe more than any other, translates directly into the perception of the photographic image. Schivelbusch proposes that the view from a moving train turns into a panorama of a strip of perceptional 'sharp' landscape stretching from the middle ground of the view to the horizon. The foreground remains a blurred zone - increasingly so as the train speeds up - which serves to sever all sense of the viewer being a part of, and moving within that very landscape. Schivelbusch writes:

> Panoramic perception, in contrast to traditional perception no longer belongs to the same space as the perceived objects: the traveler sees the objects, landscapes, etc. through an apparatus which moves him through the world.[33]

Thus, the blurred zone forms a barrier to direct perception, to imparting a sense of the body in location, which is precisely what happens when viewing a photograph or watching a film. Due to our constant exposure to films and photographic imagery, we do not even notice this as something out of the ordinary. In fact, it invites comparison to the eighteenth and nineteenth century panoramas, which featured a physical barrier by means of a viewing

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[32] The tele-photo lens, as well as compacting space, will render the foreground and the background of the chosen subject in an out-of-focus fashion, the degree of which depends on the aperture employed.

[33] Wolfgang Schivelbusch, *The Railway Journey: Trains and Travel in the 19th Century* (New York: Basil Blackwell, 1997), 66.

platform. Instead of the blurred foreground of a train window, the Panorama spectacle made use of finely judged lack of lighting to visually promote disconnectedness.

The 1920s spawned *New Vision* and *New Photography*, with photographers exploring the faster and smaller cameras' portability by making images using these 'unusual' perspectives. Alvin Langdon Coburn, Laszlo Moholy-Nagy, Alexander Rodchenko and André Kertész, among others, exploited this particularity of the photographic image. At this time, the notions of form, space, and functionality were being reconsidered both in science, architecture and the visual arts. Experimentation was mandatory and often carried out in a playful spirit.

The Soviet artist-turned-photographer Alexander Rodchenko used shadow extensively as a structuring device for his vertigo-inducing angles of buildings and other architectural structures. These photographs introduced a new way of seeing to the general public and, according to Frances Butler

> ...the high viewpoint exploited a mode of play called the Helix by Johan Huizinga in his pioneering work, Homo Ludens. Helix games consist of moves that result in vertigo, or dizziness. The vertigo game is an individual sport, although groups of individuals can indulge in it, and it emphasises individual power over the potential loss of spatial control. [34]

As well as taking structural photographs from odd angles, Rodchenko eventually focused on the human form from above, as did Moholy-Nagy and Andrè Kertesz, whereby in early morning or late afternoon light, the human shapes were decipherable from their shadows only. This new way of seeing, termed *New Vision*, in the USSR also linked to the 'revolutionary project', was symptomatic of the speed and rush of the machine age and influenced generations of photographers to come.

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[34] Frances Butler, "Shadow in the Visual Arts," *American Craft*, Feb/Mar 1985.

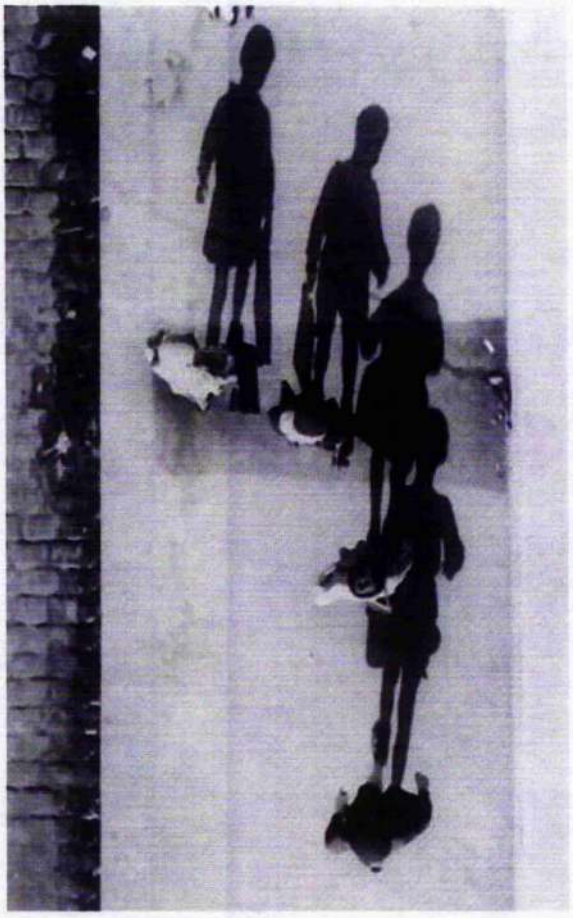

Figure 32: André Kertész, *Shadows, Paris* , 1931

New Vision grew out of an era that had seen enormous innovations in a relatively short period of time: atomic theory, relativity theory and quantum theory all cast doubt on the field of science as a whole. Confidence in the future as a technical age soared with innovations such as electricity, travel by plane, cinematography, and of course, the X-ray.

According to the artist and art historian Floris Neusüss, artists in the years between 1910 and 1920 started to look for 'objective' methods of representation, given that much of human perception had proven unreliable and imperfect in the light of recent inventions:

> Because they felt that painting tends to communicate inner moods, they turned to 'automatic' reproduction processes like photography or assembled pictures from 'materials'. Once they were no longer listening to their inner voices, they became aware of the

> expressiveness of the material itself and sought to allow its inherent liveliness and language to unfold in their work. [35]

In 1929, the Surrealist poet Robert Desnos gave voice to the deep disappointment felt by the modernist / avant-garde project as the human sense perception proved to be fallible:

> Our only exploration of the Universe has been with the aid of senses corrupted by prejudice. Our vision of the world when reduced to its minimum is the same as that of the most primitive missing link: doubtless the blind fish in the depths of the ocean constructs his mythology among the aromatic sea-weed inspite of the entire collection of gods which man strives to force from matter. With the awakening of our senses we have decreed that chaos has been dispersed. But there are other forms of chaos surrounding us and we have no way of dividing these into water, air, earth or fire. There is an infinity of senses which we lack. [36]

With Moholy-Nagy as one of its chief promoters, the *New Vision* centred on photography in particular, with an emphasis on stylistic formulas made easier by smaller cameras and film with fast exposure times. The *New Vision* images explored the close-up, extreme high and low angles and a fragmentation of the subject bordering on abstraction.[37] Whereas a few decades earlier there were complaints about photographic conventions not conforming to regular vision, as in, for example, the overwhelming presence of detail and sharpness (see Ivins at the start of this section), the *New Vision* welcomed unfamiliar angles, fragmented ways of seeing and especially aspects of speed, as described by Laszlo Moholy-Nagy in 1929:

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[35] Neusüss, "From Beyond Vision," 8.
[36] Robert Desnos, "The Work of Man Ray," in *Photography: Essays & Images*, ed. Beaumont Newhall (London: Secker & Warburg, 1980), 228.
[37] For an overview of New Vision and New Photography see Andreas Haus and Michel Frizot, "Figures of Style: New Vision, New Photography," in *A New History of Photography*, ed. Michel Frizot (Köln: Könemann, 1994).

> A new feeling is developing for the light-dark, the luminous white, the dark-grey transitions filled with liquid light, the exact charm of the finest textures: in the ribs of a steel construction as well as in the foam of the sea—and all this registered in the hundredth or thousandth part of a second.[38]

And Ferdinand Léger enthuses about cinematic values:

> New men are needed—men who have acquired a new sensitiveness toward the object and its image. An object for instance if projected 20 seconds is given its full value—projected 30 seconds it becomes negative.[39]

Dziga Vertov's 1929 film *The Man With The Movie Camera* is the embodiment of Moholy-Nagy's and Leger's sentiments. Subtitled as "an exerpt from the diary of a camera man", this silent movie is accompanied by a score by the Alloy Orchestra, written by Vertov himself. It was a bold experiment in cinematography and warranted the following disclaimer:

> For viewers' attention:
> This film presents an experiment in the cinematic communication of visible events without the aid of subtitles, without the aid of a scenario. This experimental work aims at creating a truly international absolute language of cinema based on its separation from the language of theatre and literature.[40]

The film starts with static footage of empty city streets, sleeping children and idle typewriters. Filmed from above, a car pulls into a courtyard and picks up the cameraman who mounts his camera on the back of the car. From then on,

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[38] Lazlo Moholy-Nagy, "The Future of the Photographic Process (1929)," in *Photography: Essays & Images*, ed. Beaumont Newhall (London: Secker & Warburg, 1980), 239.
[39] Ferdinand Léger, "A New Realism—the Object: Its Plastic and Cinematic Value," in *Photography: Essays & Images*, ed. Beaumont Newhall (London: Secker & Warburg, 1980), 231.
[40] Translated from Russian subtitles.

movement begins to build up with trains rushing past, close-ups of machine parts moving and the camera panning alongside people in cars and carriages.

No doubt, these techniques were revolutionary at the time as the idea of speed and movement is emphasised both by camera technique and soundtrack. In light of what was discussed above, Vertov repeatedly superimposes an eye on the lens of the camera, the closing of the eye coinciding with the shutting of the aperture. This obvious analogy becomes less obvious when street-corner scenes with heavy traffic are interspersed with extreme close-ups of trams rushing past, creating a set of blurred patterns that have nothing in common with human vision per se. Feeling the need to emphasise the difference between the still image and the 'speeding film', Vertov directs us to a film-editor's cutting bench. The editor stops the film - we see a still image - she starts the film and we see a blurred strip rushing past.

Vertov's infatuation with speed is palpable: industrial machines spin and whirr in close-up, factory workers try to match the speed on conveyer belts, pedestrians rush everywhere and every now and then water rushes over a weir in close-up, presumably an indication of the force of nature as well as the force of man.

In contrast to Vertov's experiments with speed and distance in film-making, the following section concentrates on distance in vision induced not by optical apparati, but by intent and attitude on part of the observer.

2.6 To Walk or Not to Walk...

> Photography first comes into its own as an extension of the eye of the middle-class flâneur, whose sensibility was so accurately charted by Baudelaire. The photographer is an armed version of the solitary walker reconnoitering, stalking, cruising the urban inferno, the

> voyeuristic stroller who discovers the city as a landscape of voluptuous extremes.[41]

This quotation by Susan Sontag clearly expresses something most of us have experienced at one time or another: the role of the 'stalker' brought about by the use of a camera. 'Armed' (and possibly dangerous) implies a certain mental distance from the perceived 'prey' and it is degrees of this distance that I will discuss, using the *flâneur* and varying examples of *flânerie* as a metaphor for sight and to differentiate between ontological aspects of photographs and photograms.

Walter Benjamin has frequently written on the theme of the flâneur, using Charles Baudelaire as a starting point, but refining the latter's initial concept. Baudelaire describes the requirements of the flâneur as such:

> ... The crowd is his element, as the air is that of birds and water of fishes. His passion and profession are to become one flesh with the crowd. For the perfect flâneur, for the passionate spectator, it is an immense joy to set up house in the heart of multitude, amid the ebb and flow of movement, in the midst of the fugitive and the infinite. To be away from home and yet to feel oneself everywhere at home; to see the world, to be at the centre of the world, and yet to remain hidden from the world - impartial natures which the tongue can but clumsily define. ...
>
> ...Thus the lover of universal life enters into the crowd as though it were an immense reservoir of electrical energy. Or we might liken him to a mirror as vast as the crowd itself; or to a kaleidoscope gifted with consciousness, responding to each one of its movements and reproducing the multiplicity of life and the flickering grace of all the elements of life.[42]

It is interesting to note that Baudelaire here uses optical devices, a mirror and a kaleidoscope, as a description of the flâneur's heightened state of awareness.

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[41] Sontag, *On Photography*, 55.
[42] Charles Baudelaire, *The Painter of Modern Life* (New York: Da Capo Press, 1964), 9.

In Baudelaire's definition, the flâneur 's passion is to 'become one flesh with the crowd', while at the same time, stepping back intellectually to observe. Benjamin's flâneur, however, is a slightly different animal. The mental detachment becomes a physical manifestation: Benjamin's flâneur likes to watch from the sidelines, preferably sitting in a café or strolling in a less crowded situation while still enjoying an ever changing view:

> There was the pedestrian who would let himself be jostled by the crowd, but there was also the flâneur who demanded elbow room and was unwilling to forgo the life of a gentleman of leisure. Let the many attend to their daily affairs; the man of leisure can indulge in the perambulations of the flâneur only if as such he is already out of place.[43]

Apparently, Benjamin equates the pedestrian with the *badaud*, clearly a lower form of life than his idea of the *flâneur* who never identifies with the milieu he surveys and to whom the very idea of 'becoming one flesh with the crowd' would be anathema.

Benjamin's *flâneur*, according to Susan Buck-Morss, was already somewhat of a nostalgic figure in Benjamin's time as the ideological notion of flânerie went into decline:

> On the boulevards, the flâneur, now jostled by crows and in full view of the urban poverty which inhabited public streets, could maintain a rhapsodic view of modern existence only with the aid of illusion, which is just what the literature of flanerie – physiognomies, novels of the crowd – was produced to provide.[44]

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[43] Walter Benjamin, "On Some Motifs in Baudelaire," in *Walter Benjamin: Illuminations: Essays and Reflections*, ed. Hannah Arendt (New York: Schocken Books, 1968), 172.

[44] Susan Buck-Morss, "The Flaneur, the Sandwichman and the Whore: The Politics of Loitering," *New German Critique* 13, no. 3 (1986): 103.

Benjamin's disapproval of the *badaud* versus the *flâneur* becomes palpable when discussing Edgar Allen Poe's short story *The Man of the Crowd* [45] which Baudelaire had translated into French.

In Poe's story the narrator sits at a large bow window in a Coffeehouse in London, watching the crowds go by, his first time out after a bout of illness.

> ... two dense and continuous tides of population were rushing past the door. At this particular period in the [early] evening I had never before been in a similar situation, and the tumultus sea of human heads filled me, therefore, with a delicious novelty of emotion. I gave up, at length, all care of things within the hotel, and became absorbed in contemplation of the scene without.
> At first my observations took an abstract and generalizing turn. I looked at the passengers in masses, and thought of them in their aggregate relations. Soon, however, I descended to details, and regarded with minute interest the innumerable varieties of figure, dress, air, gait, visage, and expression of countenance. ...
>
> ... With my brow to the glass, I was thus occupied in scrutinizing the mob, when suddenly there came into view a countenance (that of a decrepit old man, some sixty-five or seventy years of age) - a countenance which at once arrested and absorbed my whole attention, on account of the absolute idiosyncrasy of its expression. ...
> ... Then came a craving desire to keep the man in view - to know more about him. Hurriedly putting on my overcoat, and seizing my hat and cane, I made my way to the street, and pushed through the crowd in the direction which I had seen him take; for he had already disappeared. With some difficulty I at length came within sight of him, approached and followed him closely, yet cautiously, so as not to attract his attention. ...

It is at this point in the story that the departure from Benjamin's notion of acceptable behaviour for the flâneur occurs. While still within the boundaries

[45] Edgar Allen Poe, *Man of the Crowd*, 1840 ; available from www.pambytes.com/poe/stories.

of Baudelaire's parameters, no Benjaminian flâneur would brave a throng of people in order to satisfy his curiosity, because his curiosity would never stay with anyone or anything for more than an instant. But the tale continues:

> ... It was now fully night-fall, and a thick humid fog hung over the city, soon ending in a settled and heavy rain. The change of weather had an odd effect upon the crowd, the whole of which was at once put into new commotion, and overshadowed by a world of umbrellas. The waver, the jostle, and the hum increased in a tenfold degree. For my own part, I did not much regard the rain - the lurking of an old fever in my system rendering the moisture somewhat too dangerously pleasant. Tying a handkerchief about my mouth, I kept on. For half an hour the old man held his way with difficulty along the great thoroughfare; and I here walked close at his elbow for fear of loosing sight of him. ...

In Poe's story the narrator does not stay aloof, but develops a physical relationship with the crowd – the very entity he distanced himself from earlier.

To Benjamin, an acceptable, if somewhat unusual, form of flânerie is described in E.T.A. Hoffmann's short story *The Cousin's Corner Window.* [46] The narrator's cousin has lost the use of his legs and lives 'high above the street' in a corner house overlooking the Gendarmenmarkt in Berlin, a busy market place during the week. The year is about 1815. Significantly, he describes the cousin's room as very small with a remarkably low ceiling, which invites comparison with the Camera Obscura.

Having been a writer, the cousin has now taken up watching people in the market below and encourages Hoffman to take up position on a small stool in front of the window:

> The view was indeed strange and surprising. The entire market seemed like a single mass of people squeezed tightly together, so that one would have thought that an apple thrown into it would never reach the ground. Tiny specks of the most varied colours were gleaming in the

[46] E.T.A. Hoffman, "The Cousin's Corner Window," in *The Golden Pot and Other Tales* (London: Penguin Books, 1992).

> sunshine; this gave me the impression of a large bed of tulips being blown hither and thither by the wind, and I had to confess that the view, while certainly very attractive, soon became tiring, and might give over-sensitive people a slight feeling of giddiness, like the not disagreeable delirium one feels at the onset of a dream. I assumed that this accounted for the pleasure my cousin derived from his corner window, and told him so quite frankly.

But this turns out not at all to be the reason of the cousin's involvement in the act of spectatorship:

> Cousin, cousin! I now see that you haven't the tiniest spark of literary talent. You lack the first prerequisite for treading in the footsteps of your worthy paralysed cousin: an eye that can really see. The market down there offers you nothing but the sight of a motley, bewildering throng of people animated by meaningless activity. Ho, ho my friend! I can derive from it the most varied scenery of town life and my mind ... dashes off a whole series of sketches, some of them very bold in their outlines. Come on, cousin! Let me see if I can't teach you at least the rudiments of the art of seeing. Look directly down into the street - here are my field-glasses....

E.T.A Hoffman, the narrator, was under the impression that the visual experience was supposed to take in the whole scene and to be overwhelmed, possibly even elevated or humbled by the sight of the teeming masses while occupying the birds-eye point-of-view. What the cousin had in mind was something entirely different: he was creating 'tableaux' by focusing in on a few people at a time; something he could be in charge of while still remaining passive and undetected as the spectator:

> ...A couple of old women sitting in low chairs, with all their odds and ends displayed in a fair sized basket in front of them: one is selling brightly coloured cloths, mere fal-lals, calculated to dazzle stupid people's eyes, the other has a vast store of blue and gray stockings, wool, and so on. They are bending towards each other and whispering in each other's ears. One is enjoying a cup of coffee; the other,

> completely absorbed in the subject of the conversation, seems to have forgotten about the glass of schnapps which she was about to swallow; indeed a couple of striking physiognomies! What a demonic smile! What gesticulations with their withered bony arms!

As well as creating these 'still lives', which can be imagined as sepia-coloured calotype photographs in an album by the Scottish pioneer photographers Hill and Adamson, the cousin also follows certain characters on their trips through the market and has compiled a great deal of information on them based on purchases made on frequent visits.

As indicated earlier, if Benjamin's flâneur is the equivalent of the model of disembodied vision, then Hoffman's cousin can be equated with a stationery voyeur, equipped with a telephoto lens, taking 'tableaux' and snippets out of a much greater whole to serve as entertainment both for the moment and at a later date. In other words, any ordinary photographer.

Susan Sontag's quotation which opened this section describes the photographer as flâneur, almost a stalker, 'grabbing' the odd glimpse or impression and moving on to the next. Susan Buck-Morss suggests that the notion of the flâneur has disappeared in today's society because "the perceptive attitude which he embodied saturates modern existence, specifically, the society of mass consumption." [47]

In other words, we all have, to some extent, become flâneurs. Since, in our age, pedestrians have largely given way to cars, the remaining flâneurs in the Benjaminian sense are being "cordoned off on reservations, like tigers or pre-industrial tribes, preserved within the artificially created environments of pedestrian streets, parks, and underground passageways." [48]

The genre of flanerie has evolved from being a purely visual public activity into something more defined by its perceptual peculiarities than its practice.

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[47] Buck-Morss, "The Flaneur, the Sandwichman and the Whore: The Politics of Loitering," 104.
[48] Ibid.: 102.

As early as 1939, in his *Radio Physiognomik*, Adorno points out a form of 'aural flanerie', indicated by station-hopping on the part of the listener.

The television remote control comes to mind as a natural extension of this behaviour, as does surfing in cyberspace. Buck-Morss makes the link from television to tourist industry:

> In our time, television provides flanerie in an optical, non-ambulatory form. In the United States in particularly the format of television news programs approaches the distracted, impressionistic, physiognomic viewing of the flâneur, as the sights purveyed take one around the world. And in connection with world travel, the mass tourist industry now sells flanerie in two and four week packets.[49]

Bus tours and cruises would be the prime example of this kind of activity: to be 'shown' glimpses of places every day from the safety of a stationary base. Interaction with the places themselves and the notion of 'immersion' is kept to a minimum, which takes us back to the Benjaminian flâneur in the roadside café.

Susan Sontag's initial quote compares the activities of the flâneur to those of the photographer, gathering 'impressions' as he/she goes or pursuing a subject in more depth, suggested by her use of the word 'stalking'.

While this may be a fair description, I would also equate the operations of the flâneur as a metaphor for disembodied sight; because the flâneur is not really interested in retaining his multitude of impressions, he is, first and foremost, interested in cultivating intellectual distance.

ETA Hoffmann's cousin, on the other hand, forms a prime example for the motivated photographer-as-voyeur, not content to just briefly observe or to take in the 'grand view', but to create his own 'enlargements' by means of a telephoto lens from the safe space of his stationary Camera Obscura.

What about Poe's *Man of the Crowd*, who seems to satisfy Baudelaire's idea of the flâneur, but not Benjamin's?

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[49] Ibid.: 105.

The narrator has abandoned the notion of distance in order to physically pursue his object of desire, but even while he never quite catches up with the *Man of the Crowd* himself, there is the chance that, in the crush of the crowd, he leaves his body imprint on a freshly plastered wall.

That would be the Photogram. ...

In this section I have used literary examples to explore modes of visuality by comparing the proximity of the body to the subject of attention. Vertov's *Man With A Movie Camera* may have started out as a distant observer, and switches back and forth occasionally, but on the whole Vertov's *Man* is, just as Poe's *Man of the Crowd,* in close, even physical, contact with his subjects. The abstractions caused by a close-up viewing of movement reach back to the convention of 'photographic' or 'filmic' seeing, but the loss of perspective suggests an instant of *embodied perception* or *haptic seeing*: an effect of images made at close contact, which I explore the next chapter.

3 The Pop-Diva's Posterior and Other Tales of Close Contact

Nicole Appleton, member of all-girl pop-band *All Saints* and wife of Liam Gallagher, sits on a Xerox machine in an otherwise empty top floor of an urban open plan office. As the camera moves closer, it appears that she is photocopying her backside and has done so for a considerable amount of time, judging by the stacks of paper beside the machine. With the words "when you get to the top it's good to give something back" she throws stacks of copies out of the window (the camera films from below), showering presumed hordes of fans with images of her bare posterior; the image inferred, but never seen.[1] While not memorable in terms of mobile phone networks, this advert raises issues of modes of representation and degrees of intimacy.

What might the message be if Appleton, instead of photocopies, distributed photographs of her bottom? This prospect seems somewhat bizarre, implausible and far less 'personal'. Maybe the notion of immediacy forms part of the appeal of the process of 'photocopying' but more importantly, as I will argue, it is the aspect of touch, of direct contact, and therefore intimacy, which makes it special. In this way, it represents something entirely different than a 'photo(graphic)copy'.

This chapter is dedicated to the exploration of the ontology of the photogram, especially its relation to the sense of touch. In the course of this investigation, related practices such as the photocopy, also named Xerox, and the X-ray are touched upon since they share the aspect of close contact as means of origin.

The artist Helen Chadwick certainly recognised and utilised the element of touch and its significance in her work *Of Mutability* (1986), created largely with a photocopier.

The notion of the shadow also permeates this chapter; not just because a photogram is created by something 'shadowing' the light from the light

[1] This television advert for the 'One-to-One' mobile phone network ran from Autumn 2001 to early 2002.

sensitive material during the creation of the image, but also because of a case of role-reversal of the function of shadow and light occurring in photography and in the photogram.

3.1 Half-Life: Helen Chadwick's *Pool*

In 1986, Helen Chadwick's exhibition entitled *Of Mutability* was shortlisted for the Turner Prize. Back then, the Turner Prize was a relatively low profile award and the fact that she was the first woman ever to have been nominated slipped by almost unnoticed.

Born in London in 1953, her career was tragically cut short in 1996 when she suffered a heart attack. Chadwick's work more often than not took the shape of installations comprised of sculpture and photography in order to address issues concerning anatomy, beauty, science and myth. From the 1970s she began to use her own body as a means of investigating the subject of human identity. Her imaginative and perturbing use of unusual materials included lamb's tongue, fur, flowers, meat, urine, chocolate, household cleaning fluids and hair gel.

My primary interest in Chadwick's *Of Mutability* is a piece commonly called *The Oval Court* (fig. 33), but referred to by Chadwick herself as *The Pool*. *The Oval Court* comprises a rectangular room with artworks both on the walls and on the floor. Fantastically ornate columns, hand-drawn or printed onto lining paper, interrupt the wall space every four feet or so. Near the top of the wall between each pair of columns are images of the artist's face, weeping. The material of her tears turns out to be vegetation: leaves of various trees, which divide into two increasing streams headed for the top of each column. The overall impression is that of very ornate arches, 'headed' by Chadwick's weeping face.

The floor piece, which I will refer to as *The Pool* (since the *Oval Court* also includes the wall pieces) is comprised of a blue, angular, oviate platform and a host of blue photocopies of female nudes cavorting with animals, both of land

and sea. Five large golden spheres of diminishing size are placed along the central line of the piece.

Figure 33 Helen Chadwick, The Oval Court, ICA London, 1986

In an interview with Chris Blackford, Helen Chadwick described *The Pool* thus:

> To put it simply, the main part of the work is a blue surface that is supposed to stand as a metaphor for a pool, and resting on it are 12 figures made by using photocopies. Each of those 12 is an exploration for me of some kind of physical sensation, or some aspect of desire. So I used my body to make them directly; so they're partly autobiographical, but they're also great fictions and portraits, because they actually come from my body. They are also very much a way of picturing something you can't see, because it's to do with an impulse, something internal. The gold spheres on the surface of the pool act as a counterpoint to all the changing, floating, swimming images of myself

> in all these aspects of desire. I wanted to give the sense of immutability, something never changing, something eternal.[2]

Why photocopies? As an artist who had extensively used photographic self-portraiture in the past, photography would have been one of her first considerations. In the same interview she provides an explanation:

> Yes, 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 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.[3]

Chadwick's reasoning seems plausible but not altogether convincing. Even in the mid-eighties the process of photocopying could hardly be thought of as hi-tech. Photography would have been an even more hands-off process, short-circuiting the 'artist's hand'[4]. If this was meant at all to be about relinquishing control, something that might be inferred in Chadwick's statement, it could not be further from the truth. Helen Chadwick was not the sort of person to ever relinquish control. It is my theory that Helen Chadwick used this process because of the aspect of touch and contact. Much like the advert I described at the start of this chapter, the photocopy appears to be a much more intimate medium than a mere photograph.

The Xerox process can be seen as a hybrid state between the photograph and the photogram. Its imagery is more representational that that of the photogram, though not quite like a photograph, yet it retains the closeness to the sensitive surface. The sensitive surface, in this case, is a beam of light which, again, is reminiscent of photography, yet it only produces a

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[2] Chris Blackford, *The Burden of Physicality - Interview with Helen Chadwick*, 1986; available from www.btinternet.com/~rubberneck/chadwick.html.
[3] Ibid.([cited).
[4] Which, by the way, is visible in a number of the 'cameos', detached from Chadwick's body and seemingly playing a role not implicit in the script.

recognisable image when the object is in touch with the plate of glass underneath which the light beam operates. As in the photogram, the subject is pictured from underneath, not from the perspective as seen when resting on the copier.

Used for anything else than two-dimensional documents, the Xerox process produces an image which is removed from reality because of the lack of photographic clarity and depth-of-field, yet retains the aspect of the positive image and detail where the subject / object touches the glass.

For *The Pool* Helen Chadwick used a copier which produced a blue image tone, thereby referencing the cyanotype process. Although in stasis, some arrangements of figures and vegetation give an overall impression of movement and play. My personal impression is that of a thin sheet of ice covering the surface where the viewer just perceives the goings-on immediately underneath as the subject matter floats up and touches the surface. This effect may be induced by the image tone darkening considerably wherever there is less contact.

Figure 34: Helen Chadwick, The Pool, detail, 1986

In the above image, Chadwick directly alludes to water as the element of immersion by having shells emanating from her mouth like air bubbles. While this image appears to reference death rather than life, some cameos imply action such as the detail below where Chadwick appears to be gorging herself on fruit.

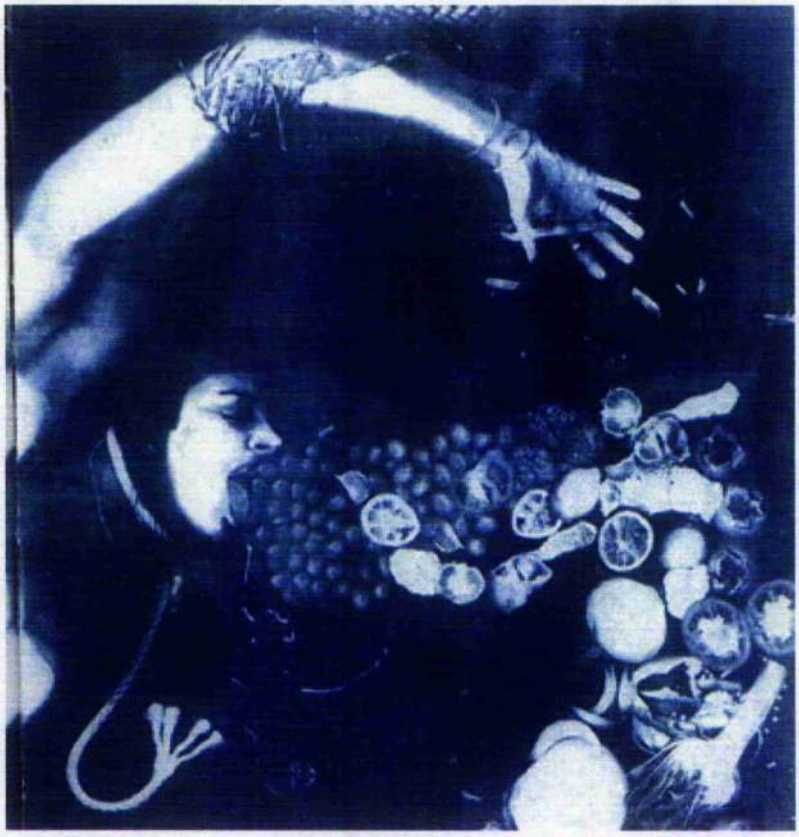

Figure 35: Helen Chadwick, The Pool, detail, 1986

Marina Warner examines this work in light of the genre of vanitas painting which, like the still lives of *The Pool*, communicate plenitude at the height of ripeness, just before or at the point of decay setting in.[5] Chadwick, according to Warner, casts herself in the role of the lover, playfully cavorting with

[5] See Marina Warner, "In the Garden of Delights," in *Enfleshings*, ed. Mark Holborn (New York: Aperture Foundation, 1989). Also in: Helen Chadwick, *Of Mutability* (London: ICA, 1986).

animal life and vegetation "in a rococo spirit of giddiness and rapture", thereby subverting the 'usually glum convention' of vanitas painting.[6]
In an introduction to *Of Mutability* Chadwick wrote:

> ...Out of the copier, no longer separate from other things, I am now limitless. The essential elementary self is gone, evaporated into a vigorous plurality of interactions. I discharge myself, time and again, in a discontinuous flow, a passage of impossible states leaping into successive configurations.
> ...The boundaries have dissolved, between self and other, the living and the corpse. This is the threshold of representation, not quite real, not exactly alive, but the conscious implicate depth of reflection.[7]

I believe that Chadwick was looking for a medium to visualise this state of 'not quite real, not exactly alive' and choose this particular mode of representation; a state of half-life which visually addresses its debt to the sense of touch. Marina Warner comments on the same phenomenon, albeit with a different agenda:

> In 'Of Mutability' Helen Chadwick invents the reflections in a pool of love, like the pond in which Narcissus saw himself, by using an actual glass, the reproductive reflector of the photocopier. The images she produces reach towards the state of the simulacra, because they do not imitate corporal reality but copy it directly off her body and other forms. Yves Klein took prints off models when he dragged them across canvas or paper in his 'Painting Ceremonies'; George Segal cast in plaster from life. Helen Chadwick's photocopying achieves a similar frisson to Klein and Segal's experiments with simulacra because, as with reflections in a mirror, as with echoes off water, the imprint is taken from life, the original must be there in the first place: in the Oval Court's Elysian Fields, all things are real. – Real, but not alive.[8]

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[6] Warner, "In the Garden of Delights," 44.
[7] Helen Chadwick, *Enfleshings*, ed. Mark Holborn (New York: Aperture Foundation, 1989), 29.
[8] Ibid., 56.

Warner's last statement refers to the vegetation and animals Chadwick used in her cameos. The freshly killed goose, rabbits, lamb, all fish and seafood, all drapery and vegetation were, after they had been photocopied, placed in a columnar glass tank. This piece, entitled *Carcass* was, as part of *Of Mutability*, exhibited alongside the Oval Court in a small adjacent room.

Carcass, maybe more so than other pieces in the show, lived up to the idea of mutability as it visibly decayed, fermented and eventually sprang a leak, making an olfactory as well as visual contribution, while leaving a lasting impression on the visitors who witnessed its expansion and eventual explosion.[9]

Considering Warner's comments about Chadwick's copying process above, a few points merit closer examination. Warner's apparent definition of simulacra as something which "do not imitate corporal reality but copy it directly off her body and other forms" must mean that a medium which has the *look* of reality, such as photography, does not qualify. What qualifies for Warner are seemingly touch-orientated processes such as Klein's models' body prints and Segal's casts, alongside Chadwick's photocopies. To then compare these processes with "reflections in a mirror or echoes off water" is confusing to say the least, considering that Chadwick's, Klein's and Segal's processes leave visible traces behind which, unlike a reflection, do not 'mirror' our visual reality.

In a piece entitled *Soliloqui to Flesh*, Helen Chadwick acknowledges a certain tactility for what I can only assume is photography at large and her work with the photocopied images in particular:

> ... Photography is my skin. As membrane separating this from that, it fixes the point between, establishing my limit, the envelope in which I am. My skin is image, surface, medium of recognition. Existing out there, the photograph appears to duplicate the world, disclosing me within its virtual space.

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[9] See also Waldemar Januszczak, *Invading Your Space - Interview with Helen Chadwick* (The Guardian,Nov. 18, 1987); available from www.guardian.co.uk/arts/turnerpeoplespoll/story/0,13945,1058018,00.html.

> The eye reads these signals in the cool far retinal distance. Yet they occurred and are still in the knowing realm of touch. Intimate events of the moment of contact, happening once, are continually secured in place. This is not just light falling onto film, but tactile photography, the very sensitising of surface itself. The vital interface is here, where substance quickens to sensation in the eros of the moment. I graze the emulsion and by a process of interpenetration am dynamically returned: echoes of my falling onto picture are irradiated back as me again. ...[10]

Chadwick's text demonstrates a desire to be seen and felt at the same time, bringing together elements of touch and vision and mixing them up until "Inside is Outside". The medium of visual reproduction she chose goes a long way toward realising this seemingly conflicting state.

The game of distance is the game of near and far.

As I have shown through discussion of Helen Chadwick's *The Pool*, the photocopy shares some of the same qualities of the photogram, especially where the tactile aspects are concerned. The Xerox in this context stands as a hybrid between the photograph and the photogram.

Do the values of light and dark operate similarly in the photograph and the photogram? The next section investigates how we read tonal values and the values assigned to them which has implications on our perception of monochrome photographs and photograms. Each, in their own way, undergoes a reversal of tones in terms of perception.

[10] Chadwick, *Enfleshings*, 109.

3.2 Upside Down and Inside Out

> Visual Perception (which is never limited
> to the visual alone) is not a sort of picture
> that another picture could reproduce,
> just as knowledge is not the copy of a world
> already given.
>
> Maurice Merleau-Ponty

Shadow and light are the defining elements in photography, monochrome photography in particular. We tend not to give a thought to how we read these images and the function of tones within them. This section looks at the function of light and dark in photographic depiction and goes on to compare this function to the workings of the photogram.

Jean-Claude Lemagny, Art Historian and Keeper of the Prints and Photographs at the *Bibliothèque Nationale* in Paris, proposes a perceptional role reversal for shadow and light in the case of monochrome photography. In an essay entitled '*Is Photography a Plastic Art?*' Lemagny acknowledges the dialectical system on which photography is based as one of positive and negative, light and dark and – obviously – values of grey in between.

But the inconsistencies arise when he compares the function of light and shadow in 'real' life to those values transposed into a photograph:

> How are light and shadow opposed? Light is a natural phenomenon; shadow is the absence of this phenomenon. Shadow is negative. Shadow is nothing, absence, a black hole. It operates like a foil, as empty reveals what is full. The bottle appears half-full because it is half-empty. ...
>
> In reality, what is first, what is living, what is vibrant, what is positive, is light. Light moves, because light arrives, cones down, bounces back. Shadow is only its absence; shadow is passive; it is only negation.
>
> In photography, in the picture, things are the other way around. What is first, what is material, what provides structure, what has the qualities of surface and matter, what gives the impression of thickness, what is living, what is vibrant, is shadow. Shadow functions by its

receptiveness, its openness, or its resistance to light. The shining of light, its movement, only stands out because of the profound substantialness of shadow. ...[11]

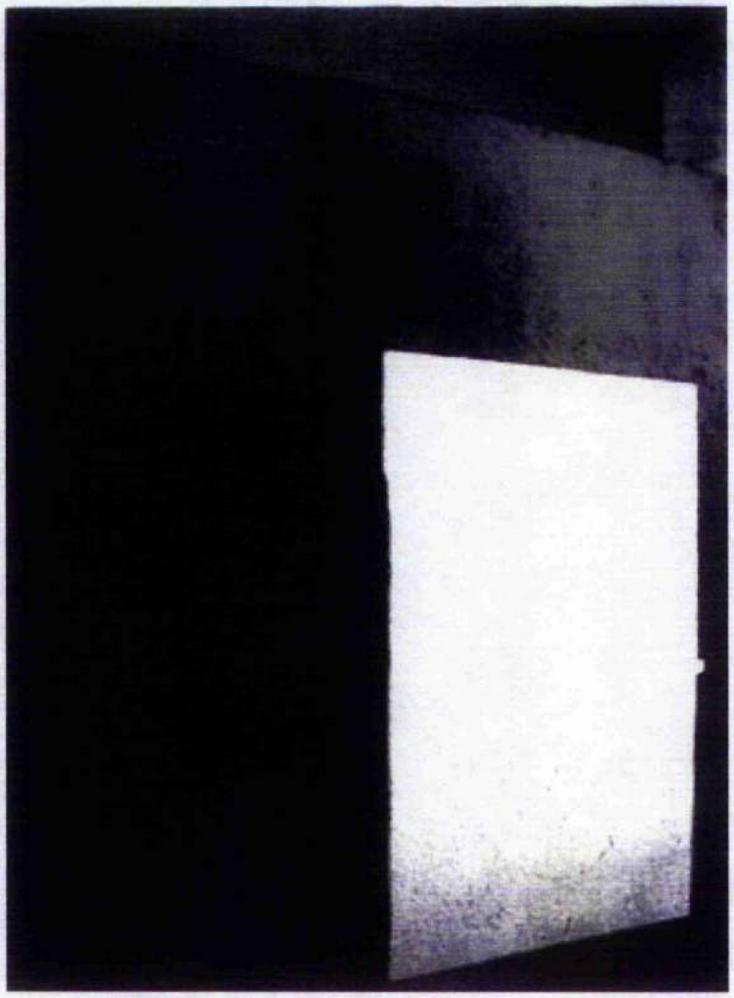

Figure 36: Paul Maassen, Untitled, 1980

In the photograph above, the German photographer Paul Maaßen photographed a wall with a patch of sunlight on it, albeit in the shape of a doorway. Although the subject is perfectly obvious, there appears to be something strange about it. This strangeness does not reside in the subject

[11] Jean-Claude Lemagny, "Is Photography a Plastic Art?," in *Poetics of Space - a Critical Photographic Anthology*, ed. Steve Yates (University of New Mexico Press, 1995), 139.

matter, but in the way we read tonal values in photographs. In the photographic process of developing the print, it is the shadows which become visible before anything else. They soon darken to form the mass, the substance around which the mid tones and highlights create the rest of the image.

Lemagny proposes that "Photography has body - its shadows. In the final analysis, a photograph is made up of the tactile values of its shadows." and: "Photography is the art of making a concrete substance out of the nothingness of shadow. Its liberty resides in the infinite number of ways one can proceed."[12] Here Lemagny mentions tactility as a concept on which he then enlarges to form the argument that all photography has a tactile element to it, stemming from the sense of vision itself:

> Sight is itself only a modification and a variation of the sense of touch. Physiologists have taught us that the retina is a bit of skin which is able to touch light. The experience of people born blind who one day begin to see for the first time and who believe that the objects are rubbing against their eyes is a striking illustration. ...[13]

A similar argument permeates the medium of photography which by now is embedded into our very perception of what photography is – namely an 'imprint of the real'. Light is portrayed as the 'touching' factor which connects the surface of the subject with the light sensitive surface of the recording medium, that is, the film. The idea of this 'indexical' connection is an all-pervasive theory rooted more in myth than in fact, but for now I would like to assign the properties of tactility to the photogram in particular; touch, without which there would not be an image.

Having just seen the role reversal of shadow and light in photographs, the photogram then presents a 180 degree switchback, in that its values are reversed again from those of a photographic print. Any object with any opacity whatsoever will appear lighter than the background, or photographic material, it is resting on.

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[12] Ibid., 140.
[13] Ibid., 142.

Figure 37: Susanne Ramsenthaler, from *Transitaria*, 2004

In order to show the difference between light areas in a photograph, which are most likely illuminated by bright light but interpreted as less substantial than the shadow areas, and the light areas in a photogram, which signal the once-presence, but now-absence of the object, I am using one of my photograms from the series *Transitaria* (fig. 37). This photogram was created by placing a small medusa on a sheet of photographic paper. If a photograph were taken the moment this photogram was made, it would show an opaque medusa resting on a white piece of paper. Clearly, the values of light and dark are reversed once again, accounting for the fact that photograms look similar to photographic negatives.

Ulrich Raulff explains the difference by examining the function of subject matter, or the 'referent' according to Roland Barthes.[14]
Barthes' referent, the object/subject to be photographed, *reflects* light, which is being recorded by the camera. The subject matter in a photogram, on the contrary, does not record reflected light, but *deflects* it to varying degrees in order to form the image. Seen in the traditional 'photographic' way, the referent becomes an obstruction rather than the thing being recorded per se.

The game of distance is the game of near and far

Therefore, what is visible in a photogram differs greatly from what a photograph of the same scene would show. While the photogram above may not give an accurate picture of the creature, its sections and pattern as seen from above, it nevertheless documents the imprint: the moment of touch having taken place. Moreover, it operates from another perspective entirely; the perspective of the support it rests on. In a photogram, therefore, we see things from 'underneath', from the perspective of what is being touched, in a way, a view through the back of what we would normally view from the other side.

The conundrum of the photogram lies in the fact that things are being recorded as absent in terms of degrees of tones and visibility, but their very presence is paramount to the creation of that 'absence'. These issues of presence / absence and close proximity as a requirement of image making must necessarily entail the haptic, as I move on to exploring the connection between sight and touch.

[14] Ulrich Raulff, "Ein Etwas Oder Ein Nichts," in *Das Fotogramm in Der Kunst Des 20. Jahrhundert: Die Andere Seite Der Bilder - Fotograpie Ohne Kamera*, ed. Floris M. Neusüss (Köln: DuMont, 1985), 409.

3.3 Between a Rock & a Hard Place: The Visual and the Haptic

The photogram operates in a space which is visual and haptic at the same time: without physical contact in the act of creation, there would be no image. On the border between direct touch and vision, it makes the contact visible. The question of distance re-emerges and the difficulty in easily deciphering that which is almost too near. Given that vision is a sense that operates at a distance, as does our ability to read photographs, photograms, which could also be described as *pictures without distance*, fall into another register of perception: namely that of traces. A trace is something left behind on something else. It makes no pretense to a three-dimensional representation but challenges the viewer instead to conjure up an image of what made the imprint. Seen in this way, the photogram is far less accessible than a photograph, distant by cognitive means, but it carries within itself the certainty of a point of contact having been made.

The photogram shares with the photograph the physical process of rendering the image visible, but differs greatly in the way it visualises the encounter of subject matter and sensitised surface.

As I have mentioned earlier, Floris Neusüss, a German artist and art historian, has had a special interest in, and prolific output of, photograms since the 1960s. Born 1937 in Lennep, he studied Photography in Munich and Art in Berlin. In 1954 he produced his first photograms at his grammar school, the (aptly-named) Röntgen Gymnasium. He made his first body-prints, photograms featuring full sized bodies, at the Berlin Art Academy in 1960. In his writings on the history of the photogram he notes how little interest there has been by photographers in working with this particular process.[15] The

[15] In my own experience, whenever I mention photograms and explain the process, people equate it with classroom experiments and introductions to light sensitive processes: "I remember doing this kind of thing at school, with the hand print on the paper." Photograms appear to be perceived as a stepping stone to the 'real photography', something much more technical, involving cameras, film and enlargers.

artists who revived the process in the early 20th century, namely Schad, Man Ray and Moholy-Nagy, were primarily artists who used it precisely because it did *not* represent reality, nor did it necessarily resemble the item which it was in contact with during its creation. Neusüss makes an important point concerning the perception of photograms:

> The viewer tries to equate the appearance of objects in a photogram with reality, but this attempt at literal translation is doomed to failure. The photogram includes an action as part of the image, therefore indicating a kind of reality which is not as 'given' as we tend to expect, but potentially changeable. [16]

Not only is it potentially changeable but often wholly unpredictable, as Neusüss has shown in a series of photograms made in the 1980s, entitled *Nachtbilder*. As the title indicates, the image is created at night by leaving a sheet of photographic paper outside on the ground or attached to a wall somewhere. During the exposure, which can take a good number of hours (depending on the ambient light), much can happen in terms of leaves and various blown detritus resting on the surface for a while before being moved on, rain falling, or even the whole sheet being blown to a different location.

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[16] My translation from German: *Der Betrachter nimmt die fragmentarisch festgehaltenen Objekte im Fotogrammbild als Zitat der Realität wahr, seine Wahrnehmung wird aber gehindert, sich and das Abgebildete zu kleben, weil das Bild als entscheidenden Hinweis eine Handlung mit einschließt, einen Umgang mit der Realität, der sie nicht als gegeben, sondern als potentiell veränderbar erscheinen läßt.* In :Floris M. Neusüss, "Fotogramme - Die Lichtreichen Schatten," in *Fotogramme - Die Lichtreichen Schatten*, ed. Ditmar Albert (Kassel: Edition Fotoforum Kassel; Universität Kassel, 1983), 80.

Figure 38: Floris M. Neusüss, Nachtbild, 52 x 54 cm, Kassel, 1987
Night, Garden, Photographic paper

Unpredictability is only half the story with this process. In the same way in which a pinhole photograph operates in (the sometimes outer reaches of) realistic depiction [17], the photogram, more often than not, condenses stretches of time into a single image. In the case of Neusüss's *Nachtbilder*, a night out on the lawn, a lightning storm or a rain shower becomes something presented to us in a single entity. It is a near impossibility for us to imagine a long stretch of time in anything we might consider a photographic image. Our conditioning to read photographs as instantaneous is just too powerful.

[17] The pinhole camera provides a 'realistic', but somewhat soft image with unlimited depth of field. Depending on the size of the hole or camera body, the exposure can take anything from seconds to days. It is at these lengthy exposures that crowded places are emptied of people and traces of the sun's movement across the sky can be recorded.

Neusüss describes his *Nachtbilder* as "giving insight into real spaces which are only made visible in conjunction with the light sensitive paper. They cannot be described because they do not conform with any optical principle or anything which equates to our mode of perception."[18]

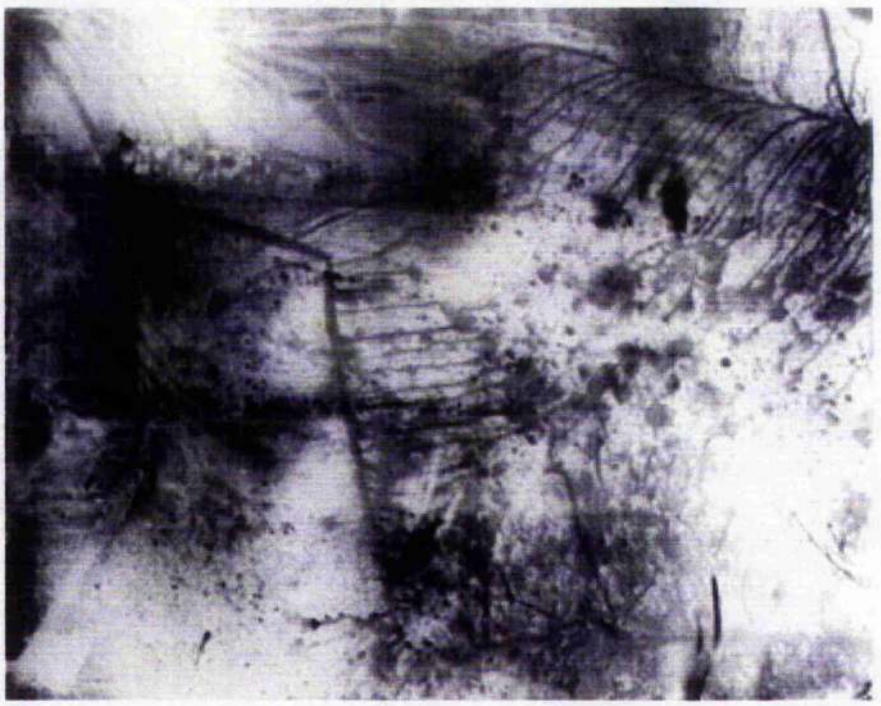

Figure 39: Floris M. Neusüss, Gewitterbild, 106 x 90 cm, Kassel 1984
Lightning, Rain, Plants, Photographic Paper

Apart from the time factor, it is also the concept of space which is altered in photograms. As there is no perspective, the image cannot be said to conform to the principles of Cartesian vision, nor can it be said to have an original point of view or perspective. Dimensional pointers such as up and down, front and back, figure or background are non-operational. In Neusüss's night photograms, we recognise the occasional outline of vegetation which serves as an anchor for our imagination, but the actual space or the circumstances of their creation remain wholly mysterious.

[18] My translation in: Neusüss, *Das Fotogramm in Der Kunst Des 20. Jahrhundert: Die Andere Seite Der Bilder - Fotografie Ohne Kamera*, 367.

Although Neusüss' printed output and research on the history of the photogram concentrates largely on developments from the 1920s, he does acknowledge the roots of the technique and, in 1978, traveled to Lacock Abbey to make a life-sized photogram of Talbot's *Latticed Window taken with the Camera Obscura, 1835*. In order to capture a 'sharp' imprint, Neusüss worked at night. He covered the inside of the window with photographic paper and exposed it from the lawn outside using an industrial-sized flash powered by his car battery.

Figure 40: Floris Neusüss, *Hommage à William Henry Fox Talbot*, 1978

The Dadaist Raul Hausmann used the technique of the photogram in the 1920s, but in his mind the photogram operates in a separate space. He describes the photogram as "a technical form similar to abstract painting that

belongs only conditionally to the field of photographic vision."[19] He wrote about the process in 1968 and dubbed it *Melanografie*, largely due to its involvement with shadows:

> When I move the [exposing] light bulb the shadows lose their significance; they denote *a* thing which is not *the* thing anymore, suggesting something other than itself.
> The transformation by light is evidenced through the shadows by turning the object into a non-representational image.
> Through the process of *MELANOgrafie* I gain insight into the secret language of signs which have ceased to signify the object in a manner recogniseable to me. [20]

Shadows in the photogram do not function in the same way as they do in photographs. Urs Strahel comments on this fact while discussing the work of Adam Fuss: "...The photogram does not adhere to central perspective, that one-eyed perspective of lens photography. Instead it offers a kind of parallel perspective of things; it opens up an unfamiliar pictorial space." [21]

Undoubtedly, this was part of the attraction for the Dadaists, Surrealists and Constructivists who chose to work with the photogram.

In photography, much like in the real world, shadow functions to give definition to a scene, objects or people. Observation of shadows usually tells us much more than merely which object they emanate from; the depth of shadow informs us about the type and location of light source causing them,

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[19] Neusüss, "From Beyond Vision," 13.
[20] My translation from German: *Wenn ich die Glühbirne bewege, sprechen die SCHATTEN nicht mehr von Bedeutung, sie geben das Bild eines Dinges wieder, das nicht mehr Ding ist, das etwas anderes als das Ding evoziert. Die Zersetzung durch das Licht spricht nur durch die SCHATTEN, sie verändert das Ding in ein ent-deutetes Bild.Durch die MELANOgraphie erfahre ich den geheimnisvollen Charakter der Zeichen, die nicht mehr das bezeichnen, was das Ding bedeuten will.* In: Raoul Hausmann, "Melanographie," in *Das Fotogramm in Der Kunst Des 20. Jahrhundert: Die Andere Seite Der Bilder - Fotografie Ohne Kamera*, ed. Floris M. Neusüss (Köln: DuMont, 1990), 320.
[21] Urs Stahel, "Adam Fuss: Reversible World," *European Photography*, Winter 1999/2000, 40.

weather conditions and time of day (if daylight) and the shape and texture of the ground they fall on.

In the photogram, shadows have a different function: part reversal of light and part unexplained phenomena, as expressed by Hausmann above. Yet some 'shadows' in photograms are not of either origin, as Ulrich Raulff claims:

> The Photogram is not a pure shadow-art. It is impure because it is corporeal: it has adhered to a body or object. It bears the traces of the contact....it falls into the realm of the plastic, the three-dimensional without ever leaving two-dimensionality behind.[22]

The notion of contact and trace is ever-present when examining the nature of the photogram and I have made the case of differentiation from the photograph on these grounds. Depiction and Manifestation are two terms which I believe illustrate my argument perfectly.

3.4 Depiction versus Manifestation

In a collection of short writings named *Untitled Fragments from the End of the World,* Pavel Büchler remarks on a case of someone's fingerprint accidentally appearing in an antique photograph. Büchler observes in passing "...it might be that the finger-print so clearly present here is asynchronous with the photographic image."[23]

My immediate thought is how the fingerprint always stays on the surface: even though we may be able to briefly immerse ourselves in the photographic three-dimensionality of the scene on offer, the fingerprint forces the eye back to the surface any time the eye scans it. But this is only part of the story here. My point is that the photograph marks a moment in time to be looked at and possibly re-imagined or to be scrutinized for details yielding further stories. The fingerprint, which by now, for the sake of my argument, will be obvious

[22] My translation from: Raulff, "Ein Etwas Oder Ein Nichts," 406.
[23] Pavel Büchler, *Ghost Stories: Stray Thoughts on Photography and Film* (London: Proboscis, 1999), 74.

as an incarnation of the photogram, presents an intervention, both to our perception of the photograph and as an alien intruder into the imagined reality of the photograph.

The fact is that photographs and photograms exist in different perceptional spaces. The fingerprint, addressing the aspect of touch in a very direct way, speaks of presence. Presence which, while defying classification as to its age and circumstance, proves to be powerful and undeniably 'real'. It does not give us a clear picture of the hand from which it originated, but it possesses an authenticity which is immediately understood.

According to Patrick Maynard, Talbot referred to his first 'photogenic drawings' as well as his later 'calotypes' of lace, fern, oats, leaves - made by "intercepting the action of light" on photosensitive paper by placing a flat object directly upon it - as "impressions," "representations," "images," and also "pictures" of those objects.[24]

Figure 41: William Henry Fox Talbot, *Lace*, c.1841, Photogenic drawing negative

Talbot's lace is deceptive because it is so easy to read as a depiction, that is, as a positive photographic image. White lace on a dark background would be what we might expect a photograph to look like; this photogram was much

[24] See Maynard, "Photo Fidelities I: Photographic Seeing," 161.

admired for its authenticity and 'life like-ness' at the time.
Maynard again:

> ...the "impressions' produced by Talbot - or by a child with a photo printing kit today - no more incites this kind of imagining than do the marks that autumn leaves deposit on wet stone or concrete, or the prints of hands, fingers, and feet on surfaces. Photographic or not, imprints of many kinds, as surface markings, frequently carry information about the things that made them - including, as with foot and tire tracks, the action of their being made - without thereby inducing us to imagine that seeing them is the seeing of the things or actions that made them. They are veritable paradigms for the one use, the detective use, but nor for the other, the depictive.[25]

In our reading of photographic images, the 'depictive' is always the first expectation. It is universally understood that, in photography, what is depicted has been photographed and is there for us to view, albeit presented in two-dimensional form.

It is for this reason that photograms tend to be not instantly deciphered and, as I have indicated, cognitively distant. It is a case of making the leap from, for example, expecting to see a leaf (the shape in the photogram is reminiscent) to the realisation that a leaf was present in the making of the image, but is now absent; allowing us to see the trace it left, but not the visual representation of the leaf itself. The point is not the visual appearance of the object, but its once-presence having had contact with the surface in question.

This absence / presence aspect of the photogram, the notion of 'imprint', necessarily conjures up the famous example of the Turin Shroud.

Although the visible imprint on the Turin Shroud in no way represents a supposed image of Christ's body, it literally 'embodies' something much more powerful: the implication of direct contact and all the fetishistic and auratic connections implicated therein.[26]

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[25] Ibid.
[26] See p. 132 for discussion of the Benjaminian fetish.

In the example of the Turin Shroud, a great deal of its power relies on faith on the part of the observer, a desire to 'see' and therefore a problematisation of 'objective' vision. Georges Didi-Huberman describes the reaction of some of the Faithful when confronted with the cloth, which shows not much more than a series of stains: "We tried to see something else," the spectator goes on to say," and little by little we could see."[27]

But it was only through photography that the imprint on the cloth became visible:

> When Secondo Pia immersed in the chemical bath his last attempt to produce a clear photograph of the holy shroud - his earlier attempts had all been underexposed- this is what happened: there in the dark room , the moment the negative image took form (the inaugural glimpse), a face looked out at Pia from the bottom of the tray. A face he had never before seen on the shroud. A face that was, he said, *unexpected*. And seeing it he almost fainted. The event took place during the night of the 28th to the 29th of May, 1894.
> It was after this "amazing' occurrence (just as the negative coalesced) that the pattern of stains on the Shroud of Turin took on a recognizable form. The photographic negative revealed what one had never hoped to see on the shroud itself. As the photographic "evidence' objectified an aspect of the shroud, it became proof of a miracle. Not only did it sanction an unprecedented sort of expository value for this relic heretofore hidden from view, it reestablished the aura of the shroud, investing the object itself with a counterpart to its semiotic status.
> The holy shroud became the *negative imprint* of the body of Christ, its *luminous* index miraculously produced and miraculously inverted in the very act of resurrection, henceforth to be conceived of in photographic terms.[28]

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[27] Georges Didi-Huberman, "The Index of the Absent Wound (Monograph on a Stain)," in *October: The First Decade*, ed. Krauss et al Mitchelson (Cambridge, Mass: MIT Press, 1987), 41.
[28] Ibid., 44.

Although commonly referred to as a 'photograph', it seems we are once again putting depiction before manifestation. The facts that the image appeared as a *negative* and that Huberman uses the word 'luminous' point to the image as a photogram or, maybe even more so, an X-ray, in that the image builds up densities akin to being 'shone through' with light (photogram), rays or even extreme radiation; as was the case with victims of the Hiroshima and Nagasaki bombs, whose outlines were 'painted' against walls and other surfaces by thermonuclear flash. But more about X-rays later.

Staying with the Turin Shroud for the moment, Didi-Huberman suggests that its authenticity relies on a lack of figuration, because a lack of figuration means that contact has taken place. This notion of non-figuration through (authentic) contact certainly echoes Geoffrey Batchen's earlier description of the production of the photogram.[29]

When contemplating the function and ways of signification of the photogram, the absence of the object becomes a significant part, the absence being indicated by the image itself, while signifying that there was presence in the form of contact. Yet we are blind to this contact since we cannot experience it from the perspective of the light-sensitive surface. Seen in this way, we occupy the blind spot and can only bear witness via the trace which has been left.

In *Memoirs of the Blind*, Jaques Derrida addresses a condition of the invisible inhabiting the visible which seems to me to be pertinent and fitting for the modus operandi of the photogram:

> ... In order to be absolutely foreign to the visible and even to the potentially visible, to the possibility of the visible, this invisibility would still inhabit the visible, or rather, it would come to haunt it to the point of being confused with it, in order to assure, from the specter of this very impossibility, its most proper resource. The visible *as such* would be invisible, not as *visibility*, the *phenomenality or essence* of the visible, but as a singular body of the visible itself, *right on* the

[29] See Chapter 1, p. 48/49

> visible—so that, by emanation, and as if it were secreting its own *medium*, the visible would produce blindness.[30]

What could be more pertinent to the 'visible' resulting in 'blindness' than the object leaving a trace which so obviously speaks of its absence: a state where we can not see it, merely indicated by a 'spot' where it has been, or *allegedly* has been. This very trait takes the photogram into the territories of the fossil and the fetish, as well as the aforementioned working of religious relics.

The game of distance is the game of near and far.

The photogram image could be said to possess blindness where detail is concerned, since only the layer in immediate contact with paper will show any kind of detail: the subsequent dimensions appear softer and in most cases darker due to the influx of light around the edges. It has this softness in common with traditional X-rays, which can penetrate all but the densest of objects but have no clear point of focus.

By its very nature, the photogram cannot give a factual record of the surface appearance of the object, which is something the photograph excels in. According to Laura Marks, this necessary aspect of touch, or contact, classifies it in terms of fetish and Deleuze's notion of the fossil [31]. It restores, as I am arguing, an auratic presence which has famously been deemed to be absent from photography by Walter Benjamin, based on the notion of photography's infinite reproducibility and lack of 'the Original'.

In fact, Benjamin credits Adolphe-Eugène Disderi (1818-1889), a photographer and successful businessman who made a fortune through the mass-production of *carte-de-visites* as a pioneer in the photograph-as-commodity stakes. Benjamin notes:

> He had the shrewd idea of acquiring the state monopoly on the reproduction of works in the Louvre's collection. Since then,

[30] Jaques Derrida, *Memoirs of the Blind: The Self-Portrait and Other Ruins* (Chicago: The University of Chicago Press, 1993), 51.
[31] In Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*, 81.

> photography has made more and more segments of the field of optical perception into saleable commodities. It has conquered for commodity circulation objects which up to then had been virtually excluded from it..[32]

Benjamin's much quoted definition of aura in *The Work of Art in the Age of Mechanical Reproduction* as "the unique phenomenon of a distance however close it may be" [33] has been made more accessible through the addition of a new footnote in a recent edition of *Selected Writings*, where the whole essay acquires a more contemporary tone and, most significantly, has been renamed *The Work of Art in the Age of its Technological Reproducibility*[34], *a more accurate translation of the original German title.* At the passage quoted above, a new footnote sees the editors interpret the German translation and enlarge on Benjamin's concept:

> "Einmalige Erscheiniung einer Ferne, so nah sie sein mag." At stake in Benjamin's formulation is an interweaving not just of time and space—*einmalige Erscheinung*, literally "one-time appearance"—but of near and far, *eine Ferne* suggesting both "a distance" in space or time and "something remote," however near it (the distance, or distant thing, that appears) may be.[35]

I hardly need to point out the Blanchotian connection, but it seems certain that any spatial distance of the auratic object is overridden by its inherent, perceptional unavailiability. The definition footnote in the older version adds: "Distance is the opposite of closeness. The essentially distant object is the

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[32] Walter Benjamin, "Letter from Paris (2)," in *Walter Benjamin: Selected Writings 1935-1938*, ed. Michael W. Jennings (Harvard: Belknap Press, 2002), 240.
[33] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Walter Benjamin: Illuminations*, ed. Hannah Arendt (New York: Schlocken Books, 1968), 222.
[34] Walter Benjamin, *Walter Benjamin: Selected Writings 1935-1938*, ed. Michael W. Jennings, vol. 3 (Harvard: Belknap Press, 2002).
[35] Ibid., 104 / 23.

unapproachable one." And "Unapproachability is indeed a major quality of the cult image."[36]

It is not always clear whether Benjamin mourns or celebrates the demise of the auratic object – the essay contains elements of both and can be interpreted either way. The re-naming of *The Work of Art*, however, points to an evolutionary state of affairs: With the advent of the Technological, as opposed to the Industrial Age, processes such as analogue photography and film ironically seem to be edging toward the place of Benjamin's aura-imbued original, as the continuing barrage of digital imaging technologies leave us with a hankering for 'tactile proof' such as negatives and reels of super eight film.

Although Laura Marks seems to ascribe fossil-like qualities to the whole of photography, I would suggest that, while these attributes unquestionably apply to photography in general, they are even more pertinent to touch-orientated processes such as the photogram:

> ...Fossils acquire their meaning by virtue of an originary contact. A fossil is the indexical trace of an object that once existed, its animal or vegetable tissue now become stone. Consider the similarities to the photographic process. Fossils are created when an object makes contact with the witnessing material of earth. Photographs are created when light reflected by an object makes contact with the witnessing material of film. In both cases, this contact transforms the material's surface so that it becomes a witness to the life of the object, even after the latter has decayed.[37]

In terms of power to conjure up memory, Deleuze's concept of the fossil functions in a similar manner to Benjamin's fetish, which definitely requires a certain type of original contact in order to successfully function as such. The notion of the fetish is particularly powerful because it constitutes a physical, rather than mental, contact between objects; it is not a metaphor. In fetishism, as Laura Marks suggests, "power does not inhere in beings or objects but

[36] Benjamin, "The Work of Art in the Age of Mechanical Reproduction," 243.
[37] Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*, 84.

flows among them". Fetish objects can encode meanings that become buried in the process of temporal displacement but are volatile when reactivated by memory. As with the fossil, fetishes get their power not by representing that which is powerful but through contact with it:

> ...Benjamin's fetish and Deleuze's fossil have in common a disturbing light, an eerily beckoning luminosity. In the fetish it is called aura, in the fossil it is called radioactivity. Aura is what makes the fetish volatile, because it incites us to memory without ever bringing memory back completely. Similarly, when a fossil is "radioactive' that is because it hints that the past it represents is not over, it beckons the viewer to excavate the past, even at his or her peril. ...[38]

This experience corresponds to Benjamin's examination of Proust's *mémoire involontaire*, where he clearly compares it to his definition of the aura, very similar to his words in *The Work of Art* discussed earlier:

> ... These data...are lost to the memory that seeks to retain them. Thus they lend support to a concept of the aura that comprises the "unique manifestation of a distance." This designation has the advantage of clarifying the ceremonial character of the phenomenon. The essentially distant is the inapproachable: inapproachability is in fact a primary quality of the ceremonial image.[39]

Benjamin's insistence on auratic presence requiring a degree of distance and inapproachability is once again reminiscent of Blanchot's writing in *Le Pas Au-Delà*.

Geoffrey Batchen has written about those scenarios where photography interacts with objects of a *fossil* or *fetish*-like nature. Apparently, Batchen has become an avid collector of antique photographic *Memento Mori* assemblages. He does not admit this passion in writing, but confessed all when he gave the keynote speech at a conference in Brighton in 2002.[40]

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[38] Ibid., 81.
[39] Benjamin, "On Some Motifs in Baudelaire," 188.
[40] Brighton University, April 2002: *Photography, Philosophy, Technology*

These memorial objects, largely from the Victorian era, come in all shapes and sizes but have a definite pattern in that they combine a photograph of the deceased with three dimensional objects, some made by relatives, some belonging to the deceased themselves. The messages, usually embroidered, can range from economically stating the initials of the person to *At Rest* and the also very popular *In Memoriam*. Others may impart information about the person's lifespan, their roles and positions while amongst us, special messages to them, and even information as to their current whereabouts: *In Heaven*.

Often spectacular objects in themselves, the more ornate box-framed creations must have taken a long time to make. Batchen reminds us that "Until the advent of a professional 'death industry' in the late nineteenth century, women were expected to prepare the body of the deceased for burial and to lead the family in its often-elaborate grieving rituals".[41]

The Victorian obsession with handicrafts as suitable and often necessary occupations for the female members of the household found an outlet in ever more elaborate techniques and ingredients for the remembrance case. Nineteenth century books on handicrafts instructed women in the creation of wax flowers, chiefly for inclusion with embroidery and memorial collages. The book *Elegant Arts for Ladies* from 1856 also devotes a chapter to "Weaving or *Plaiting Hair Ornaments*, including subsections on *Plaits for Rings, Lockets and Brooches* and on *Mourning Devices*."[42]

Wax flowers featured prominently in this genre of remembrance 'icons', the metaphor of flowers being universally understood; once beautiful, but short-lived beauty, indicating universal immanence. Their colourless appearance (being made from white wax) also speaks of life, now faded to a resemblance, but never the full impression of its former self.

For larger pieces, and those family members who had access to a taxidermist, doves were a popular item. Usually staged as a pair, they alluded to the whereabouts of the soul: having been borne toward heaven. White gauze was

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[41] Geoffrey Batchen, "'Fearful Ghost of Former Bloom': What Photography Is," in *Where Is the Photograph*, ed. David Green (Manchester: Cornerhouse Publications, 2003), 15.
[42] Footnote in Ibid., 16.

a favourite ingredient of the more elaborate settings, often used to frame other objects within or to create a curtained 'stage' on which to play out the tableaux of fetishism. I am using fetish in the Benjaminian as opposed to the Freudian sense: an object which is connected to a person or event by means of contact or touch.

This tactile connection would often be signaled by the inclusion of a glove or a ring formerly owned by the deceased. It is interesting to note here that both those objects signal tactility and connection by means of the hand and not by merely being adjacent to the body - as with a scarf, for example. The glove which once enveloped the hand bears its traces on the inside, much like the ring, both signaling close contact with the hand.

The hair art mentioned above also played a large part in these assemblages, braided and wrought into ornamental shapes. The hair connection operates on a slightly different level from the objects connected to the hand, but proves to be equally or even more powerful in forming a connection to the deceased. Hair has always been used as a keepsake, almost a stand-in for a person's body. Being of the body and very slow to disintegrate, it will, along with teeth and bones, outlast all cosmetic appearances connected with the outer 'shell' of the body. Hair is historically a powerful medium, proven by its status in tribal ceremonies, voodoo sessions and the like. Unlike bones and teeth, hair is readily available to give and take.

Faced with objects so powerful in conjuring up the memory of a person, where does that leave the photograph? A head-and-shoulders type portrait usually takes centre stage within the arrangement, although it is usually not very large. Given the status of the visual over the tactile in our society, the assumption must be for the photograph to be the most important thing.

But, as in Deleuze's *fossil* and Benjamin's *fetish*, it seems that memory resides in the tactile rather than in the visual. The auratic presence of an object which once belonged to my long dead grandmother, for example, has more meaning to me than a photograph of her.

The photograph in the memorial pieces seems to me to play a supporting role, but a vital one. It forms the visual focus, something to home in on initially,

before the connection with the other, ultimately more powerful 'cast members' is made. Batchen notes:

> ... They all enact a practice that breaches the virtual walls of the photographic image, forcing us to simultaneously project our mind's eye back and forth, into and out of, the photograph they incorporate. They punctuate the 'chafed reality of time', for Barthes the *noeme* or essence of the photographic experience, with the more immediate and tangible realities of physical space. They collapse looking into touching, and history into memory, and, by making their photographs relatively minor, if never incidental, elements of a larger ensemble, they refuse to privilege a pure photography over other types of representational experience.[43]

Possibly it depends on who is looking at the pieces; to a stranger, the photograph becomes the chief communicator, whereas to a close relative it will be the hair or glove.

Placing a photograph in a 'sculptural' setting like the memorial case necessarily changes its status. Normally, when we look at photographs we look at them in isolation. More often than not, we do not stop to think about them as two-dimensional representations of past 'slices of time', but tend to immerse ourselves straight away in the photographic 'space'.

The photograph, although usually centre stage in the display case, becomes an object among objects. This slightly shifts our perception of the photograph and the context in which to consider it. Having lost its dominant status, the focus shifts from the image and the way we are used to reading photographs to the meaning drawn from its interaction with other items on display.

In this combined scenario, Batchen observes a reversal of Roland Barthes' assertion which implies the projection of a future death in every photograph of life:

> Barthes starts from the photograph, from what once was life, and then looks forward, like a seer to a future death ... But here, with this

[43] Ibid., 26.

> framed object, we must start with the fact of this man's death, a fact signified by all the insistent iconographic paraphernalia arrayed around him, and then we look back (literally, into the depth of the object, as well as back through time) to a moment when he was still alive. It is the exact reverse of Barthes' temporal narrative, and thus allows for a different outcome, for a celebration, rather than a shuddering. By shifting the pall of death from the photograph to its surrounds, this object declares that Life, rather than Death, is the 'eidos' of its photograph. The photographed subject is still a ghost of his former self, but here that ghost haunts with the comforting presence of an eternal life rather than with the morbid reminder of a perpetual death.[44]

Nowadays, even the most comforting presence of anything resembling an indication of death has been banned from our homes. Modern society deems death unacceptable or, at least, nothing to be celebrated or remembered by means of wall displays. In our homes, photographs of the dead share space on the mantelpiece with photographs of the living, with no obvious indication of their status to viewers 'unfamiliar' with the circumstances, thus putting Barthes' theory into operation once again.

I am not suggesting a total division between vision and the sense of touch, but clearly, in these assemblages of remembrance, the photograph is not enough. Although it may seem ghoulish to include belongings or hair of the deceased, there is something comforting about this non-visual manifestation of presence. And even though the hair does not look as it may have when it was 'attached', so to speak, unbraided and not assuming ornamental shapes, we still know it is the real thing when we look at it in its artificial state.

There is a certain amount of crossover where the senses are concerned and it has been said that we touch with our eyes. Much of our understanding of how photography operates has been built around this theory, much of it exaggerated, as I will discuss further in the next chapter.

Also described as haptic seeing, I am pointing out a condition whereby we can ascertain, for example, the texture of a wall by looking at it. Mostly, this is

[44] Ibid., 19.

based on our experiences of what we have seen and felt before: the texture of silk, suede, sandpaper.

What about being able to visually identify textures of which we have no knowledge though? The television programme *Charlie and the Chocolate Factory: Behind the Scenes Special*[45] showed the construction of the sets and special effects of the popular Warner Brothers film. Apparently one of the most challenging tasks was to create the chocolate river and, in particular, the chocolate waterfall. Although none of us have ever experienced a chocolate river, there seems to be a common idea of what its consistency would have to be, if there were such a thing.
Reproducing the colour was no problem but the speed of the flow, the movements of the pools and eddies within all proved tremendously challenging in terms of getting the consistency right. Where does our template for these things originate? Even more difficult: the waterfall. The chocolate had to drop down into a pool and, later on, cascade over a dam. Special effects people laboured for weeks to create a substance of the right consistency, thickening it, thinning it down again, until it *looked right.*

Strangely enough, right appears to be universally right. Considering that no one has ever had experience of the real thing, how can we be so uniform in our perception of what *feels* right? Clearly, there must be a connection between sight and touch or – in this case – the oral sensation of melting chocolate.[46]

A similar, yet slightly different, correlation between vision and touch occurs regularly and most memorably when watching violent scenes in the cinema and on television. Most people experience a jolt or sensation in their bodies when watching something that they consider to be very painful, as if vision serves as a transmitter for extreme haptic sensations, as well as moods such as sadness, empathy or happiness. One possible explanation for this phenomenon is addressed by Jennifer Fisher:

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[45] Aired on STV on July 31st 2005
[46] The phenomenon of synethesia may come to mind here, but whereas synesthesia features a connection between, for example, musical notes and colour, which differ with each individual, the chocolate example I describe above stands out because of its communal perception.

> In a scientific vein, experiments in brain research have shown that the act of imagining an action activates the same processes in the brain as actually enacting it. In this sense, then, to "imitate' or simulate touch might in fact provoke a tactile experience as far as brain synapses go ... that the haptic and visual senses are not in fact isolated, but rather, are implicated in each other. The issue is not to replace the visual with the tactile, but to explore the complexity of the senses in aesthetic experience. [47]

Fisher explores the interaction of the visual with the haptic by looking at art works, in particular the installation of Mona Hatoum's *Deep Throat* in a New York coffee shop in 1997. The installation was set up at a table near the entrance: an inconspicuous table setting, a dinner plate, cutlery and a glass. Diners waiting for a table would queue in this area, thus often encountering the art work involuntarily. On closer inspection, the bottom of the plate was not made of china, but a video screen enabling views and journeys into Hatoum's interior. Medical probes fitted with cameras and fibre-optic lights were shown to be performing an endoscopy and colonoscopy, maybe as an indication of the journey that the food to be ingested by the diners would shortly embark upon.

[47] Jennifer Fisher, "Relational Space: Towards a Haptic Aesthetics," *Parachute* 87 (1997): 11.

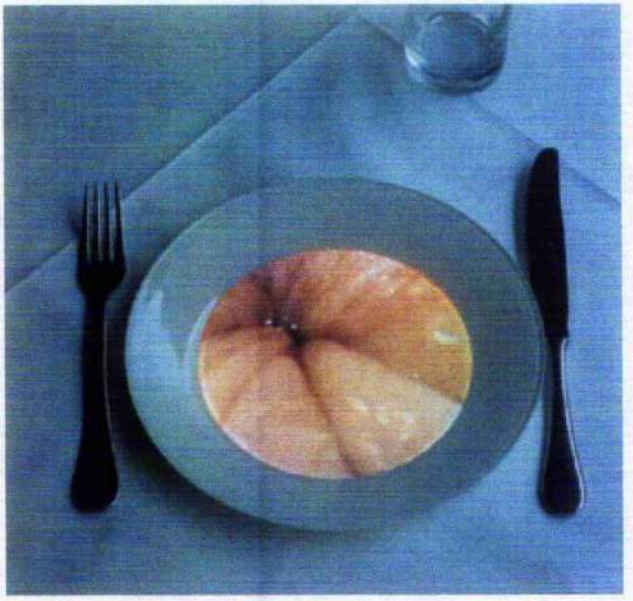

Figure 42 Mona Hatoum, *Deep Throat*, 1997

Fisher observes:

> *Deep Throat* implicates interoceptive aspects of haptic perception in some quite fascinating ways. Interoception encompasses awareness of movement and intensity within the body, including the gurgles, and shifting of our innards. To the viewer, the feeling of 'being full' after a large meal, or feeling pangs of hunger entail haptic perception. With Hartoums *Deep Throat*, viewing what is normally only *felt* by individuals within their own bodies, can be shocking and quite possibly nauseating when actually seen. ...The fibre-optic view does not permit a visual field: no figure, no ground, no discernable object. In the body's negative space verticality and horizon line are indiscernible: there is no perspective except that of constant movement. [48]

Reflecting on the recording techniques for this video piece it must be said that, while visually implying touch and possibly claustrophobia, it was made with a

[48] Ibid.: 7.

camera and therefore carried the – somewhat distant – visual baggage of the camera obscura and its tradition of separation and distance.

The lack, as Fisher describes, of a discernible horizon line and possible visual orientation qualifies this piece for what Laura Marks has called 'haptic seeing' or 'visual embodiment'.

The following chapter presents an exploration of the sense of touch in a variety of implementations, both visually and theoretically, and investigates how touch operates with vision as well as with other senses.

4 Tactare – (con)Tact – Touch

> … Touch fills our memory with a detailed key as to how we're shaped. A mirror would mean nothing without touch. We are forever taking the measure of ourselves in unconscious ways: idly running one hand along a forearm, seeing if our thumb and forefinger can bracelet our wrist or if we can touch our tongue to our nose or bend our thumb all the way back, … nervously twisting a strand of hair. But, above all, touch teaches us that life has depth and contour; it makes our sense of the world and ourself three-dimensional. Without that intricate feel for life there would be no artists, whose cunning is to make sensory and emotional maps, and no surgeons, who dive through the body with their fingers. …[1]

In this section I want to explore the sense of touch and its relevance to the field of vision. As the necessary element in the production of a photogram, the sense of touch is often related to sight in ways unaccredited by a society largely fixated on sight as the predominant sense; I have discussed this at length in Chapter Two. The sense of sight must have distance in order to function, thereby detaching the observer from the observed. Touch, on the other hand, needs closest proximity, physically uniting the toucher and the touched.

The game of distance is the game of near and far.

[1] Ackerman, *A Natural History of the Senses*, 96.

4.1 Haptic Emanations

Touch serves to confirm what sight brings to notice, occasionally contradicting and correcting assumptions made by sight. An example of this is being caught out by the weight of certain things as opposed to the way they look.

In 1921, Marcel Duchamp produced the commissioned piece *Why Not Sneeze Rose Sélavy?* It consists of a rectangular birdcage filled with 152 pieces of what look like sugar cubes, a thermometer and a cuttlefish bone (fig.40). For my purpose, the interesting fact about Duchamp's piece is, that the sugar cubes are cut from marble, taking by surprise anyone who might try to lift the assemblage. "It weighs a ton", said Duchamp in a later interview on French television, "and that was one of the elements that interested me when I made it ... It is a Ready-made in which the sugar is changed to marble. It is a sort of mythological effect".[2]

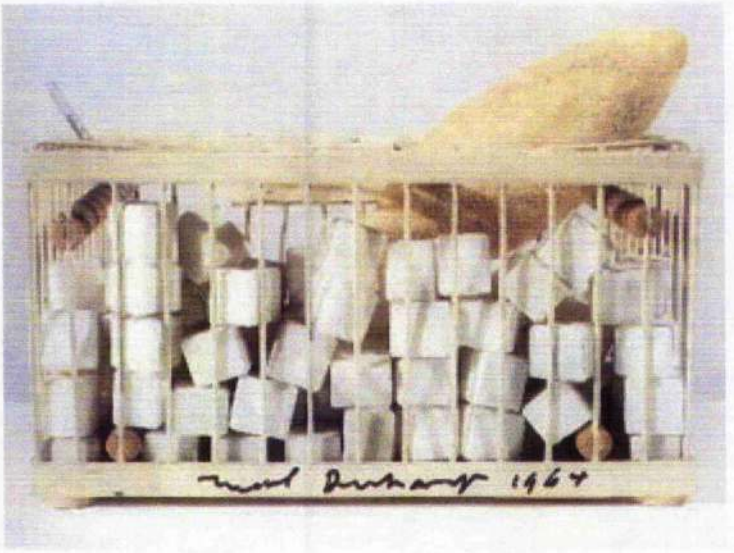

Figure 43: Marcel Duchamp, *Why Not Sneeze Rose Sélavy?*, 1964, National Gallery of Australia

[2] See the National Gallery of Australia site:
http://www.nga.gov.au/International/Catalogue/Detail.cfm?IRN=49307

The Australian National Gallery's version is from an edition of eight replicas produced in 1964 under the supervision of Duchamp. Two further examples of this edition were reserved for Duchamp and Arturo Schwarz, with a third inscribed to the Museum of Modern Art, New York. It is ironic that these pieces, now exhibits in museums, will never be handled by anyone other than museum staff. Duchamp's game with the interaction of sight and touch, presumably a large conceptual aspect of *Sneeze*, is therefore rendered useless.

The sense of touch is said to be the most trustworthy of the senses, the one least susceptible to deception. Touch comes up against an object and signals to us, whatever else our perception tells us about its shape, – a sensation of authenticity.

In 1921, the Dadaist Raul Hausmann issued a short manifesto in the Dutch art publication *De Stijl* proposing to elevate touch, *Haptismus*, the *haptic* sense, above the sense of sight. In a true Dada piece of writing, partially abstract and non-sensical in spelling and capitalising of letters, Hausmann attacks and condemns his fellow countrymen's tendency toward conservative art, "chocolate-box art" in his words, and demands a demotion of the sense of sight in order to celebrate *Haptismus*:

> Down with the lumpiness of the German soul!
> Let us refine the most important sense given to us: long live the haptic emanation![3]

The Austrian Alois Riegl (1858-1905) was one of the founders of art history as a discipline and the first exponent of 'haptic' seeing in art, a more modern term for which would be 'embodied perception'. He was the first to address the connection between vision and touch in art, which has been enlarged upon in the writings of Deleuze and Guattari and Jonathan Crary.[4]

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[3] My translation from German. Raoul Hausmann, "Présentismus - Gegen Den Puffkeïsmus Der Teutschen Seele," in *Das Fotogramm in Der Kunst Des 20. Jahrhundert: Die Andere Seite Der Bilder - Fotografie Ohne Kamera*, ed. Floris M. Neusüss (Köln: DuMont, 1990). The original article appeared in *De Stijl*, 4.Jg. Nr.9, Leiden, Sept. 1921

[4] For Crary et al, see section on vision.

Riegl formulated the concept of variations in our perception when viewing objects or paintings after reading an influential essay by the sculptor Adolf von Hildebrand in 1983, entitled *The Problem of Form in the Visual Arts*. As Margaret Iversen notes, "Riegl's term 'haptic' and 'optic' are closely related to what Hildebrandt called the 'near' and 'distant' views. One mode of vision, the near or haptic, is analogous to the sense of touch in the way that it must synthesize mentally a number of discontinuous sensory inputs. The distant, or optic view, on the contrary, takes in a synoptic survey of objects in space."[5] In an article written in 1902, Riegl explains his decision to replace the term he previously used, *tactile*, with *haptic*:

> It has been objected that this designation could lead to misunderstandings, since one could be inclined to comprehend it as a borrowed word from the Greek, quite like the word 'optical' which is used as its opposite; and my intention has been drawn to the fact that physiology has long since introduced the more fitting designation 'haptic' (from haptein — to fasten). This observation seems to me justified and I intend henceforth to use this proposed term.[6]

Riegl's argument proposes two modes of perception in the 'optical plane': the *optic*, in which things are viewed from a distance and make sense in perspective although they are pictured in ever-decreasing scale[7], and the *haptic*, where, in Riegl's words " things seen at close hand stand side by side in tangible height and breadth."[8] Riegl's haptic plane, therefore, implies a flattening of space, a lack of three-dimensional pointers such as perspective and shadows which would allow the viewer to enter into space. One example regularly cited by Riegl is of the hollow reliefs within Egyptian Art, where the figures are lower than the surface plane.[9]

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[5] Margaret Iversen, *Alois Riegl: Art History and Theory* (Cambridge, Mass: MIT Press, 1993), 9.
[6] Ibid. footnote 8
[7] See experiments with the blind p. 142
[8] Iversen, *Alois Riegl: Art History and Theory*, 117.
[9] Ibid., 78.

The term *haptics* nowadays encompasses a broad array of cutaneous senses, such as locating movement in space, gauging shapes and making judgements based on temperature, all largely subconscious.

According to David Prytherch and Mairghread McLundie, "the mechanisms by which we feel and perceive the tactual qualities of our environments are considerably more complex in structure than, for example, our visual modalitiy. There is considerable experimental evidence that touch and vision are perceptionally linked and informing of each other."[10]

Constance Classen notes that touch may be the "hungriest sense of postmodernity" since all media are consumed by the eyes and ears, but visual imagery appeals insistently to the sense of touch while denying the viewer the gratification of touch itself.[11] Certainly, many television advertisers employ imagery which falls into the category of 'haptic seeing' on a regular basis. This is most noticeable where detailed textures fill the screen completely: the makers of *Galaxy* chocolate have us immersed in a sea of swirling chocolate, whereas one hair product manufacturer lets us experience visually the smoothness and flowing qualities of swathes of pink satin.

This interplay between vision and touch must also be responsible for *Charlie and the Chocolate Factory*'s chocolate waterfall, as described in the last chapter. While, most likely, we will have never experienced the sight of molten chocolate dropping into a pool from a great height, we have a good idea of the texture of melting chocolate in our mouths. This tactile sensation, translated back into the visual, must be what drives the perception of authenticity of an entirely fictional scenario such as the chocolate waterfall.

The artist Ed Ruscha used chocolate as a silkscreen medium in his 1970 installation *The Chocolate Room* at the 35th Venice Biennale. Three hundred and sixty shingle-like sheets of paper covered the walls in the American Pavilion and made for an aromatic experience. The installation was bought by

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[10] For a discussion of studies and experiments see David Prytherch and Mairghread McLundie, *So What Is Haptics Anyway?* (Research Issues in Art Design and Media, Issue no.2, Spring 2002; available from http://www.biad.uce.ac.uk/research/riadm/.

[11] See discussion in Constance Classen, "Fingerprints," in *The Book of Touch*, ed. Constance Classen (Oxford, New York: Berg, 2005), 3.

the Los Angeles Museum of Contemporary Art and shown again from October 2004 to January 2005, presumably as a visual experience only since the fragrance vanished long ago.[12]

In a similar vein, the artist Helen Chadwick installed a chocolate fountain at the Sepentine Gallery in London in 1994. While probably not one hundred percent chocolate, it had a thick and creamy texture that cascaded down the central column and elsewhere formed patterns of bubbles rising up from the depths of the pool, not unlike the thermal mud-holes which frequently accompany geysers. Ironically, the installation was surrounded by 'Do Not Touch' signs and a seated invigilator close by made sure that nobody gave in to the temptation to sample.

Figure 44 Helen Chadwick, *Cacao* (detail), 1994

[12] artnews, *Chocolate Room : Ed Ruscha at Moca* (2004 [cited); available from http://www.artnews.info/citynews.php?city=Los%20Angeles.

Chadwick's installation, while obviously visual and tempting to touch, appealed to an additional sense - and over a fair distance. As I entered the gallery, the sweet smell of chocolate was all-consuming and became stronger en route to the fountain. Initially the smell was wonderful, but soon became invasive and, after a while, nauseating. For Chadwick, this would have been a deliberate strategy since many of her works incorporate the attraction / repulsion mechanism. In the end, I was glad to leave the gallery, a luxury not afforded to the invigilators who would have been cured of any addiction to chocolate after a day or two.

With the rise of the Enlightenment and its emphasis on sight, as Constance Classen notes, terms descriptive of mental agility shifted to the field of sight, as in 'bright' and 'brilliant' from the more tactile terms of 'smart' and 'sharp as a tack': "The sense of touch, like the body in general, had been positioned in opposition to the intellect, and assumed to be merely the subject of mindless pleasures and pains."[13] The fact that understanding is often expressed in tactile words such as grasp, ponder, comprehend, or ruminate indicate that touch is not too far removed from thought.

The alliance of the intellect with the sense of sight is being called into question over the act of writing itself, which is self-evidently tactile. Classen states that, because the etymological meaning of the verb 'to write' is to scratch, it "makes writing like an inscription on skin (for what do we scratch more frequently?) – an analogy supported by the fact that the parchment once used for writing in Europe was made out of animal skins."[14]

Two things come to mind here concerning skin: Ulrich Raulff's observations on being tattooed and its inherent sight / sensation dichotomy, and Jaques Derrida's observation on writing in the dark.

Ulrich Raulff explores the immediacy of touch and its clash with the sense of sight in the tattoo parlour:

> I am being tattooed – images are starting to appear on my skin. I look at them and am at once distanced from them and my skin. I close my

[13] Classen, "Fingerprints," 5.
[14] Ibid., 9.

> eyes: once again I am in my skin – I *am* my skin. I look – I am at a distance; I feel and I am one. What is the 'am'? Where is the 'I'? [15]

Maurice Blanchot's *Game of Distance* comes to mind again, this time in the shape of two senses giving differing accounts of the same act while placing the "I' in differing dimensions: inside / outside, receiving body / spectator.

The game of distance is the game of near and far.

In a similar but slightly different vein, Jaques Derrida in *Memoirs of the Blind* describes what happens when he jots down ideas while driving, knowing that they are aides to memory rather than legible data:

> By accident and sometimes on the brink of an accident I find myself writing without seeing. Not with my eyes closed, to be sure, but open and disorientated in the night; or else during the day, my eyes fixed on something else, while looking elsewhere, in front of me, for example, when at the wheel: I then scribble with my right hand a few squiggly lines on a piece of paper attached to the dashboard or lying on the seat beside me. Sometimes, still without seeing, on the steering wheel itself. These notations – unreadable graffiti - are for memory; one would later think them to be a ciphered writing. … At once virtual, potential, and dynamic, this graphic crosses all the borders separating the senses, its being-in-potential at once visual and auditory, motile and tactile. Later. Its form will come to light like a developed photograph. But for now, at this very moment when I write, I see literally nothing of these letters.[16]

In Derrida's case, it can be said that the 'runes' on paper are merely an aide memoir to the sense of touch that made them 'unseeingly'. It is the memory of

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[15] My translation from German. See original in Neusüss, *Das Fotogramm in Der Kunst Des 20. Jahrhundert: Die Andere Seite Der Bilder - Fotografie Ohne Kamera*, 408.

[16] Derrida, *Memoirs of the Blind: The Self-Portrait and Other Ruins*, 3-4.

physically making these marks – since they do not resemble recogniseable script - which connects the marks to the memory of what was going through his mind at the time.

In 1749, the philosopher Denis Diderot wrote his controversial *Letter on the Blind for the Use of Those Who See*, which sought to attack the primacy of Cartesian vision and to elevate the sense of touch.[17] Whereas previously the senses had been treated as separate entities, Diderot emphasised their interplay and the interdependency of sight and touch in particular. He was strongly opposed to the idea of Cartesian dualism and his insistence on perception through the body makes him the predecessor of Maurice Merleau-Ponty and, by extension, Jonathan Crary. Diderot tells of experiments with the blind, whereby a simple picture drawn in the palm of a blind man's hand could be deciphered or 'seen', thereby substantiating his claim that perception resides within the body.

More recently, experiments have shown that touch can, in a way, simulate vision. A television camera was connected to a field of 400 small vibrating points installed on the back of a chair.[18] The blind subjects exposed their backs to the vibrating screen and could immediately recognise simple shapes. Recognising faces took more practice, but what came as a surprise to the subjects who had never experienced sight, and therefore perspective, was that a difference in size denoted distance in space. The subjects also quickly got used to 'seeing' what was in front of them through, or with, their backs.

Touch operates even in such sight-dominated places as churches and cathedrals[19]. While built to be visually and acoustically impressive, the sense of touch is deeply implicated in the history of relics. Nowadays relics tend to be enclosed in glass or gilded wrought-iron cages, but they used to be accessible to worshippers to touch, for reinforcement of their prayers or confirmation of devotion. Patrick Maynard traces the history of relics:

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[17] For a discussion of Diderot's many projects see Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Los Angeles, London: University of California Press, 1993), 97+.
[18] See Constance Classen, *The Colour of Angels: Cosmology, Gender and the Aesthetic Imagination* (London, New York: Routledge, 1998), 148.
[19] For a history of non-secular Christian architecture see Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, 34+.

> ... Relics had early currency, free of the Exodus ban. Byproducts of relics (brandea)—perhaps things that had contacted them or were associated with them in various ways-then acquired some of the functions of the originals. These byproducts included surface transfers, where possible, by mechanical means (acheiropoiteos) such as rubbing, some of which were considered *images* of relics ... although not in the way of our modern interpretation of image, which describes a true visual representation.[20]

The need to touch, connected with rituals, religious or otherwise, can still be witnessed by shiny areas on statues of various descriptions, rubbed for blessings, good luck and a general mix of religious and superstitious beliefs.[21]

It is the practice of making 'rubbings' which I want to highlight in this context. Formerly a practice to replicate relics, it is still possible to make impressions of Celtic headstones on the island of Iona or three-dimensional objects in a number of ancient religious sites and places of pilgrimage.

A rubbing, be it by means of a pencil and translucent paper or a thin sheet of brass, will only imprint the outlines and any raised areas. Making a 'rubbing' of the surface of a three-dimensional object is even more challenging. The result does not necessarily resemble the object it originated from, but that is not the point. The rubbing, just like the photogram, was created by close contact with the object itself, and just like the photogram, the resulting image may need some interpretation. Both qualify as an example for the Benjaminian *fetish*, in that these images acquire their power not by faithful visual description of the original, but through their immediate contact with it.

According to Constance Classen, touch has come in for criticism, by Rudolf Arnheim in particular, for being a 'sensory snail', giving up information bit by

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[20] Patrick Maynard, "Photo Fidelities II: Manifestation and Participation," in *The Engine of Visualization: Thinking through Photography*, ed. Patrick Maynard (Ithaca: Cornell University Press, 1997), 239.

[21] Usual worn spots would be the feet of statues on pedestals, but I have observed a shiny small figure of a boy amid a crowd of patina'd burghers on a plaque on the Charles Bridge in Prague, a worn bare breast on a woman in Vienna and a bright golden snout on an otherwise black boar at one corner of the Old Marketplace in Brussels.

bit as opposed to literally 'seeing the big picture'. Classen finds a visual equivalent for this mode of perception:

> The assumption is that tactile exploration is a tedious, time-consuming activity compared to the ease and speed of visual scanning. Yet if touch is slower than sight, it can afford greater pleasure of discovery, of making sense of something not all at once, but in stages. It is this delight of anticipation and gradual revelation which leads us, for example, to wrap presents in paper, perhaps concealing a smaller box inside a larger one, rather than displaying them as they are, to be immediately apprehended by sight.[22]

This kind of gradual or proximal vision, which translates into the slow scanning of surfaces, is what tactile, or haptic visuality is all about.

Laura Marks explores this kind of perception through the medium of experimental film and video. Haptic sensations in film can be achieved by speeding up footage, enlarging grain, throwing images out of focus or moving over them in extreme close-up. In other words, denying the viewer penetration of three-dimensional space. For her, the 'snail' mode of visual perception is often closely related to memory, which is much more likely than space perception to cause a surfacing of *mémoire involontaire*.[23]

> In the sliding relationship between haptic and optical, distant vision gives way to touch, and touch reconceives the object to be seen from a distance. Optical visuality requires distance and a center, the viewer acting like a pinhole camera. In a haptic relationship our self rushes up to the surface to interact with another surface. When this happens there is a concomitant loss of depth—we become amoebalike, lacking a center, changing as the surface to which we cling changes. We cannot help but be changed in the process of interacting.[24]

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[22] Classen, *The Colour of Angels: Cosmology, Gender and the Aesthetic Imagination.*
[23] See previous chapter p. 133 and Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses.*
[24] Marks, *Touch: Sensuous Theory and Multisensory Media*, xvi.

The perception of three-dimensional space is the crucial factor. As long as there is no third dimension to enter into, haptic visuality is in operation as the eye 'grazes' the surface. However, as soon as there is an opportunity to visualise three-dimensional space, Marks' pinhole scenario takes hold; perception becomes distant, closer to disembodied sight and away from tactile proximity.

The haptic, or close-up, scanning mode of images must necessarily contain an erotic element, a close-up exploration of surface. This eroticism does not depend on image content but exists because of the close relationship between viewer and surface and the intense scanning required on the part of the viewer to 'read' the image. Marks again:

> Haptic images invite the viewer to dissolve his or her subjectivity in the close and bodily contact with the image. The oscillation between the two creates an erotic relationship, a shifting between distance and closeness. But haptic images have a particular erotic quality, one involving giving up visual control. The viewer is called on to fill in the gaps in the image, engage with the traces the image leaves. By interacting up close with an image, close enough that figure and ground commingle, the viewer gives up her own sense of separateness from the image.[25]

[25] Ibid., 13.

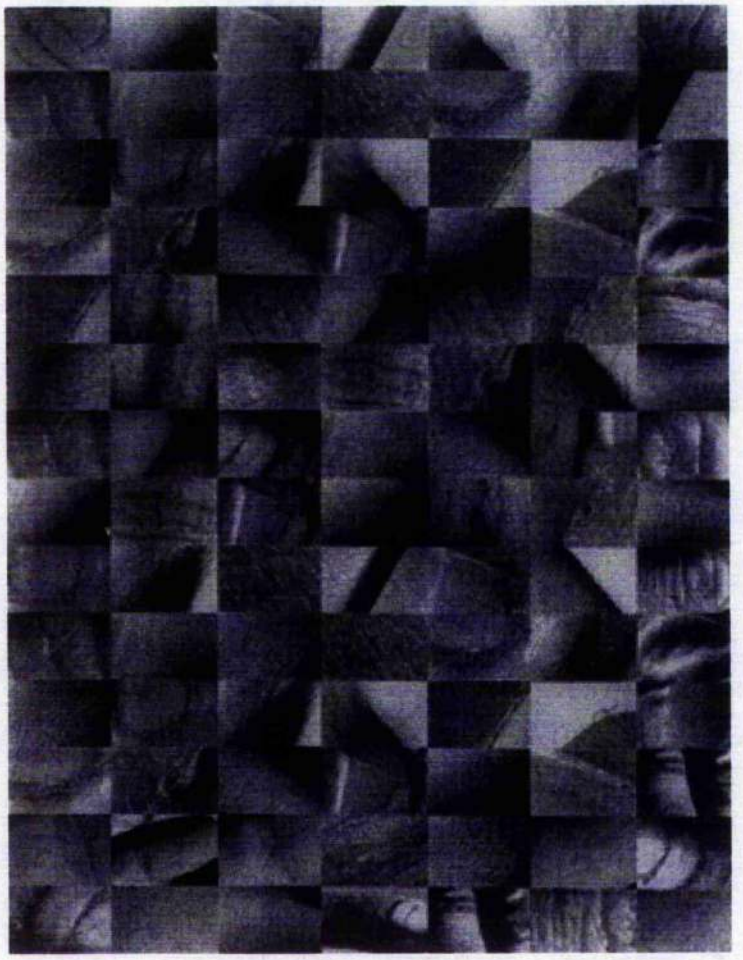

Figure 45 Ken Gonzales-Day: Untitled #96, 1999[26]

Ken Gonzales-Day produced a set of images in 1999 which illustrate the concept of haptic seeing. His *Untitled #96* consists of a grid of close-up and microphotographic images of skin and nails. While some parts of the montaged image are recognisable as, for example, a finger, others are close-ups of surfaces that we can only presume to be skin. In the caption (see footnote) Gonzales-Day provides clues as to what his motives were concerning the choice of subject matter, but it is only through reading the article itself that his motives for its production become evident: "The grid was employed by artists in order to assert the two-dimensional surface of the

[26] Gonzales-Day's caption reads: here the grid documents the passage of time represented by the continual loss of tissue, nails and cuticles. Shot with a conventional 35mm camera and a 35mm microscope camera. In: Ken Gonzales-Day, "Analytical Photography: Portraiture, from the Index to the Epidermis," *Leonardo* 35, no. 1 (2002): 24.

canvas itself. The Modernist rejection of perspectival space was seen as a rejection of one of the most fundamental goals of painting since the Renaissance."[27] While Gonzales-Day's concerns centre on traditions in Modernist painting, one of his aims was to render three-dimensional space two-dimensional.

Untitled #96 does not provide the viewer with a slow, leisurely scanning experience, due to the small grid formation that serves to confuse and disrupt a continuous viewing. This in itself may be helpful in terms of haptic seeing, as is the notion of disruption of whatever sense of space may be generated by placing extreme close-ups of the skin's surface next to an image on an even closer or farther plane.

But in the end, even Marks concedes that "...tactile visuality is still not touch... for as much as haptic images might attempt to touch the skin of the object, all they can achieve is to become skinlike themselves."[28]

I hardly need to point out that it is the photogram which qualifies as a haptic image on all accounts. Photograms do not operate in perspectival space and therefore need close surface scanning and interpretation to be 'read'. They need the pre-requisite of touch for them to come into existence and therefore carry an extra element of authenticity, as I have already discussed at some length.

Before ending this section with some observations on touch and the everyday photograph, it might be worth considering the 'skin-like' quality of images touched on by Laura Marks in the quotation above. The photograph, be it a haptic image or not, will only ever be skin-like because of its surface appearance. The surface of the photogram, however, *is* the skin, or rather, a membrane, necessary to the formation of its very content. Only through real contact, not a metaphysical idea of touch or an image displaying haptic qualities, is the image created.

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[27] Ibid.: 25.
[28] Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses*, 192.

4.2 Touch and Photography

Steve Connor, an observer and commentator on modern cultural phenomena, considers photography 'an art of touch' not because of the often-cited *Imprint of the Real* idea, but because of the hands-on craft aspect of the medium which is increasingly disappearing and therefore often forgotten. He makes an interesting connection between the tactility of skin and the surface of a photograph:

> ...But it's still the case that there's a very privileged relationship between really quite vernacular practices and objects of photography, and touch. It's a particular kind of visual-tactile complex, I think, that photography gives us. If that weren't the case, why would the texture of photographs be so important? Shine and gloss: in one sense locking the photograph up, inviolably, like a kind of window, or glass, or protective skin or membrane; on the other hand, rendering it vulnerable, as a skin does. We look at a photograph and want to touch, and know that we mustn't; so there's a kind of preciousness that comes from the glossy photograph, and by reference to that, other kinds of textures that are always implicated, it seems to me, in the photograph.[29]

Connor's comparison of the surface of a photograph to glass implies the sense of observation of life through a window, which, in turn speaks again of the image's creation via the separation of the observer and the observed by the black space of the camera's interior.

The glossy surface seems to facilitate a sense of 'direct' transmission of the content of the photograph, whereas, strangely enough, a satin or matt surface can hamper immediate access. These textures call attention to themselves precisely because they are *not* shiny. Paradoxically, the glossy suface, which reflects light and therefore calls attention to itself as a barrier in the act of

[29] Brian Dillon, "Cutaneous: An Interview with Steve Connor," *Cabinet: A Quarterly of Art and Culture* 13 (2004).

viewing, appears more transparent and mediative of the content than a matt surface devoid of specular highlights.

Connor also addresses the touchability of the photograph as object, which has been a favorite theme of writers on photography through the years.

Elizabeth Edwards echoes Connor's observation: " In the many hours I have spent watching people look at photographs, the describing of content is accompanied by what would appear to be an almost insuperable desire to touch, even stroke the image. Again, the viewer is brought into bodily contact with the trace of the remembered."[30]

While this particular aspect of touching the photograph may be important in terms of transmission of memory, it is not relevant to my argument here. However, some of its aspects pertaining to indexicality will be discussed in Chapter Five.

Edwards highlights one relevant facet of touch and the photograph. The earliest photographic processes, most notably the Daguerreotype and the Ambrotype, needed to be touched and 'handled' in order to be seen.[31] It is only at a certain angle of viewing and positioning in available light that, in the case of the Daguerreotype, the shiny metal plate will show an image. In the case of the Ambrotype, the dark negative image changes to positive at the correct viewing angle. Because these early photographs had to be handled extensively, these small unique objects were incased in sturdy cases, some more ornate than others. The usual materials used were gilded leather and most commonly velvet, thus adding another tactile experience.

Patrick Maynard comments on the possible manifestational qualities of photographs bound up with tactile qualities. Photographs being described in terms of 'nearness' or 'contact' refer to their supposed close connection with the thing photographed. Maynard, however, concedes that this is not an automatic quality but rather something which may or may not be present:

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[30] Elizabeth Edwards, "Grasping the Image: How Photographs Are Handled," in *The Book of Touch*, ed. Constance Classen (Oxford, New York: Berg, 2005), 422.
[31] Ibid.

> ... Testimonies about "nearness," "contact," "emanation," "vestige," "trace," "co-substantiality," and so on, register a sense that photographs of things can combine with these characteristics a strong *manifestation* function as well. It is important to emphasize that they *can*; not *must*; photographs need no more feature this dimension of fidelity than they need feature the perceptional dimensions: perspective and surface detail. Many of them clearly do not, though many do.[32]

Maynard's intriguing statement could mean a number of things. Apparently, perspective and surface detail and the perception thereof are a factor in whether photographs aid in manifestation, namely, close connection to the thing photographed. [33]

For me, the most telling conclusion of the statement is the fact that 'some do and some don't'. As far as I am aware, all photographs made with a camera come into being via an identical process[34]. What Maynard states here, in other words, is that some photographs are more indexical than others in terms of our perception of them. Considering that, as just stated, they are all made the same way, this can only mean that automatic indexicality, as such, does not exist and, rather, is something which does or does not materialise depending on the content and technical properties of the photograph and who is looking at it.

In other words, it is a personal interpretation on the part of the viewer rather than a mechanical or metaphysical link between subject and the observer of the photograph, via the machine and its operator.

I have drawn attention to the notion of indexicality in photography, which has established itself as a given. In Chapter Six I will examine some of our ingrained beliefs about 'what photography is' by a closer investigation of 'what indexicality is'.

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[32] Maynard, "Photo Fidelities Ii: Manifestation and Participation," 247.
[33] Contrast this with Laura Marks's definition for haptic seeing or visual embodiment.
[34] Photographs printed by means of alternative processes would be excluded on the grounds that the process itself attracts the viewer's attention away from the image.

5 Stronger Than Light: Some Thoughts on X-rays

The fact that we experience and seize space,
but cannot see it,
is very uncomfortable for a culture
as addicted to vision as ours ...
Vilém Flusser [1]

Having been typecast as a photographic process at its inception, the X-ray bears very little resemblance to the photographic image. Instead of providing a 'photographic' record of the body's interior, the X-ray compiles a record of variations in densities in the field between the ray-emitting 'gun' and the receptive plate.

It can, however, be likened to the photogram in its function as a touch-orientated process as well as constituting an extension of the photogram with the ability to penetrate solid bodies where light fails. A certain amount of interpretation is necessary when viewing a photogram; something, which must be amplified greatly when 'reading' X-rays. The invention of the X-ray radically extended the limits of the empirical world and the human sensorium into a previously invisible spectrum of light, while fulfilling a fantasy of both science and science fiction: to simultaneously expose the inside and outside of something; to retain the object's surface while visualising its depths.

5.1 Beginnings

In 1895, the German physicist and first recipient of the Nobel Prize in 1901, Wilhelm Conrad Roentgen, announced the discovery of new rays which could penetrate opaque surfaces. While experimenting with cathode rays and Crookes tubes, Roentgen observed an effect reminiscent of fluorescence, able to penetrate and transmit through solid surfaces. In an attempt to capture this luminescence on a photographic plate, Roentgen inadvertently discovered a

[1] Vilem Flusser, "Henry Lewis: X-Spaces," *European Photography*, Jan/ Mar 1990.

new type of ray that penetrated organic and inorganic matter, leaving a "shadow" of that object on the plate.

At its inception the proper use of the X-ray - so named because the nature of the rays was unknown at the time of their discovery - remained unsolved. Almost immediately, however, the press likened the X-ray to the medium through which it was documented, photography. Complaining of the publicity that surrounded his X-ray images, Roentgen writes: "For me was the means to the end, but they (the mass media) made it the most important thing."[2]

By the time Roentgen could publicise the fact that the photographic element in the X-ray process was merely the documenting medium, the public imagination had already labeled it as a new 'photographic' process. After the first description of the process appeared in the London *Evening Standard* on Jan 7th 1896, newspapers made a connection between X-ray images and spirit photography, implying that spiritualists, who claimed to be able to see through opaque matter, might have 'X-ray-sensitive retinas'.[3]

As Lisa Cartwright notes: "As soon as it was incorporated into medicine in 1895, the X-ray was represented by the popular press as an icon of death and an illicit, voyeuristic technique. Its skeletal image and its apparent optical penetration of the skin served as the basis for countless cartoons, satirical poems, and jokes showing male physicists and doctors engaged in voyeurism at the expense of female victims." [4]

All manner of allegedly X-ray related gadgetry started to be advertised. For 'Ladies', concerned about male X-ray vision, there was protective underwear, while, according to Nancy Knight, "...One odd but popular invention was the 'x-ray slot machine'. In some Manhattan and Chicago restaurants, a nickel

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[2] See Akira Mizuta Lippit, "The X-Ray Files: Alien-Ated Bodies in Contemporary Art," *Afterimage* 22/5 (1994): 6.
[3] See Jennifer Tucker, "Science Illustrated: Photographic Evidence and Social Practice in England 1870-1920" (John Hopkins University, 1996), 284.
[4] Lisa Cartwright, "Women, X-Rays, and the Public Culture of Prophylactic Imaging," *Camera Obscura*, May 1992, 30.

deposited in such a machine sent electricity through a fluoroscope, allowing the moving bones of the depositor's hand and wrist to be seen. ...."[5]

During the early 1900's, Roentgen had invented a series of potential uses for the X-ray, for diagnostic medicine, vivisection, crystallography and more, and had produced monochrome photographs enabling the viewer to see beyond the world of appearances and, more importantly, proving that there was a world beyond human vision. While the earlier invention of the microscope had revolutionized vision and allowed access and knowledge of entities too small for the human eye to see, it nevertheless seemed an 'extension' of human vision. The X-ray, however, produced images beyond anyone's imagination and allowed visual access without dissection or surgery.

Knight highlights the phenomenon of Medical Futurism, the idea that machines could be put to work in medical diagnostics and healing, which started with the invention of the X-ray. For the first time there was the notion that machines could be used as an extension of our senses – to extend the duration and quality of life. In this sense, the X-ray machine was the forerunner of the machine-orientated medical practice of today.

As for the changes in terminologies referring to X-rays, doctors grew increasingly comfortable interpreting X-ray shadows, but were less apt to refer to them as such. By 1900, Great Britain's *Archives of Clinical Skiagraphy* had changed its name to *Archives of the Roentgen Ray*. Barron Lerner notes that the "general use of the term 'skiagram' persisted into the 1920s, but subsequently died out. A term emphasizing 'shadows' suggested haziness and unclarity, but by the twenties, x-rays represented the gold standard of diagnosis for many diseases."[6]

Yet, in the early days of the X-ray, the very idea of an invisible ray which penetrates and documents the results influenced science fiction writers for a

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[5] Nancy. Knight, "The New Light": X Rays and Medical Futurism"," in *Imagining Tomorrow: History, Technology, and the American Future*, ed. Joseph Corn (Cambridge: MIT Press, 1986), 18.
[6] Barron H. Lerner, "The Perils of "X-Ray Vision": How Radiographic Images Have Historically Influenced Perception," *Perspectives in Biology and Medicine* 35/3 (1992): 87.

decade and beyond. Thomas Edison was a firm believer in the power of the X-ray and tried, but never succeeded, in making an X-ray of the human brain at work. Scientists, Spiritualists and Alchemists all planned to use the new technology to their ends. Claims of X-rays restoring sight to the blind, removing facial hair and, as Knight tells us:

> ...X rays, many believed, would become a part of everyday culture, from henhouses to the temperance movement, from the detection of flaws in metal to the analysis of broken hearts. One indication of this widespread belief was the number of humorous verses about the rays. A typical example:
>
> Not worth your while
> That false, sweet smile,
> Which o'er your features plays:
>
> Thy heart of steel
> I can reveal
> By my cathodic rays![7]

Roentgen's first published X-ray 'photograph' shows the hand of his wife Bertha, complete with what we have learned to read as a large ring on her finger. One of the initial reactions to X-ray imagery was a sense of fear; understandable because of the body's skeletal appearance and inherent inference of death. Bertha is said to have shuddered at the sight of her hand thus pictured.

[7] Knight, "The New Light": X Rays and Medical Futurism"," 18.

Figure 46: The first X-ray image by W.C. Roentgen, 1895

Bertha's hand, apart from the historical connection, is interesting to me because of the inclusion of the ring. As I will discuss below in detail, there is an ambiguous relationship between inside and outside in X-rays, which the ring draws attention to from the very outset. Evoking notions of the *Uncanny*,[8] later defined by Sigmund Freud in the eponymous essay in 1919, the ring signifies the outside of the hand while the bones signify the inside. If the skeleton means death, then the ring surely says *You Can't Take It With You.*

[8] See p.168/169 for a definition the Uncanny

Thomas Mann reworked this moment in *The Magic Mountain* as his main character, Hans Castorp, contemplates the X-ray of his hand:

> And Hans Castorp saw, precisely what he must have expected, but what is hardly permitted man to see, and what he had never thought it would be vouchsafed for him to see: he looked into his own grave. The process of decay was forestalled by the powers of the light ray, the flesh in which he walked disintegrated, dissolved in vacant mist, and there within it was the finely turned skeleton of his own hand, the seal ring which he had inherited from his grandfather hanging loose and black on the joint of his ring-finger... With...penetrating, prophetic eyes, he gazed at this familiar part of his own body, and for the first time in his life he understood that he would die.[9]

In the early days of the X-ray, those notions of death, as well as being induced by imagery, proved to be all too real for some. Shortly after the euphoria of Roentgen's discovery had started to fade, unsettling reports regarding the effects of lengthy exposure to X-rays started to accumulate. As the effects of radiation were unknown at that time, symptoms of sunburn, alteration of skin texture, loss of hair and nausea or worse, death, were eventually traced back to being caused by overexposure to X-rays. As Akira Mizuta Lippit notes: "Under the glow of the X-ray, the body moved from a referent to a sign, from a figure to the primary site of inscription. X-rays turned the body into a photographic surface."[10]

[9] Thomas Mann, *The Magic Mountain*, trans. H. T. Lowe-Porter (New York: Alfred A. Knopf, 1951), 218.
[10] Lippit, "The X-Ray Files: Alien-Ated Bodies in Contemporary Art," 6.

5.2 From Death To Life

By the 1950s, the X-ray had undergone a change of popular image: from a preview of imminent death to a picture of health. Early public health advertising campaigns sought to gain public acceptance for tuberculosis (TB) screening by emphasising the virtues of X-rays, especially to female patients in order to rest feelings of guilt about being possible carriers in the home and endangering their families. In the interest of easing fears of the dangers of the X-ray process, TB screening advertising took to comparing the procedure with snapshot photography. A reassuring nurse smilingly tells the viewer: "...why – it's as easy as having your picture taken. It's simpler; you don't have to worry about getting the sun in your eyes."[11]

Very recently, the need for a comprehensive screening programme for breast cancer has been making the news. Once again, it will be up to the advertisers to make this a palatable option for women. The mammogram machines operate on the old-fashioned X-ray principle of proximity to the imaging plate rather than cat-scan technology, but the levels of radiation are minute compared to those Roentgen would have used.

With the rapid advancements in radiology technology, the conventional X-ray process, known as tomography, is becoming increasingly obsolete. Computed tomographic scans, or CT scans for short, have mostly become the norm. This technology does not rely on touch or close proximity to the imaging surface anymore. CT scans are created by feeding multiple X-ray images of a certain area of the body into a computer. The data is collated and the computer will produce an image in sharp detail, something the original X-ray is not capable of doing.

While CT scans are much easier to read than original X-rays, they are not real representations of the body, but a computer-generated amalgam designed to give a clearer picture of the body's interior.
Still more recent imaging methods such as MRIs (Magnetic Resonance

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[11] Cartwright, "Women, X-Rays, and the Public Culture of Prophylactic Imaging," 29.

Imaging) and PETs (Positron Emission Tomography) give ever improving visual information about our interiors but use technology other than the original X-ray to achieve this.[12]

Even if considered to be well on their way to extinction, traditional X-rays remain a necessary part of the immigration procedure to the United States. On arrival, the immigrant is required to present a full-sized chest X-ray to the immigration officer. Much like a hugely oversized ID card it has to be produced to be able to travel from the country's exterior to the interior, even as the inherent qualities of the X-ray itself spectacularly break down these distinctions.

5.3 Inside / Outside

Close proximity and the opposite, far perception, form the modus operandi for the photogram in direct contrast to the photograph.

I have previously mentioned the 'skin' aspect of both photographs and photograms in connection with how the surfaces operate. The notion of skin is central to my understanding of the nature of the photogram: a thin membrane which, when in closest proximity to an object, becomes the picturing agent. Think of the skin as screen, yet conductor, a thin membrane which keeps the outside from invading the body and the inside of the body from escaping.

Steve Connor describes human skin as " a kind of barrier which maintains – hydraulically, mechanically – the stable relations between inside and outside."[13] While this may be its most important function, it is also a living barrier which breathes, strong and fragile at the same time, an organ which requires a certain amount of maintenance in order to fulfill the not-so-basic function of keeping the inside in and the outside out. The human skin is curious in that it can pinpoint touch and pressure accurately (we can tell

[12] For a detailed explanation of these technologies see Lerner, "The Perils of "X-Ray Vision": How Radiographic Images Have Historically Influenced Perception."
[13] Dillon, "Cutaneous: An Interview with Steve Connor."

pinpricks on our fingers apart to the distance of two millimeters) and represents our tactile interface with the world. We are tickly when another touches us, yet the same action on our part does not produce the same sensation. What happens when the function of this special membrane is impaired? When the distinctions between inside and outside break down – as is the case with the X-ray?

Connor, in a paper at the Conference of the Association of British Art Historians in 2000, mentioned the fact that schizophrenics have lost the ability to tell the difference between inside and out. The voices they hear are generated by them, yet they perceive them as coming from outside. Only schizophrenics can perceive a tickling sensation caused by their own touch; this constitutes one of the chief tests for the disease.

The game of distance is the game of near and far

With regards to the break-down of boundaries in the X-ray, Mizuka Lippit travels back in time to the first-ever X-ray, the image of Bertha Roentgen's hand and her reported reaction of shuddering in horror:

> The death that Berthe glimpsed, however, was not that of her flesh but rather of a unified self. ... Given the combined internal and external views of an object made possible in an x-ray image, the viewer is forced to occupy an impossible vantage point – at once inside and outside. Accordingly, the stability of both the perceiving subject and the perceived object are called into question. The x-ray collapses, as it were, the metaphysical foundation of the senses, the essential dualism that separates interiority from exteriority. In the x-ray, only a faint perceptible line recalls the former separation of the dimensions of interiority and exteriority, subject and object.[14]

A porous distinction between inside and outside, as is the case in the X-ray, could be described as a manifestation of the Duchampian notion of the

[14] Lippit, "The X-Ray Files: Alien-Ated Bodies in Contemporary Art," 6.

infrathin[15], especially in the case of the department store amusement machine where anyone willing to spend a nickel could see his or her hand from the inside and outside simultaneously.

The Freudian Uncanny manifests itself in a feeling that emerges when what was secret and hidden has somehow come to light. Freud himself defines it thus:

> ...an uncanny experience occurs either when infantile complexes which have been repressed are once more revived by some impression, or when primitive beliefs which have been surmounted seem once more to be confirmed.[16]

Instances may include confrontations with, or reminders of, subjects or objects of childhood fears. Reactions to ghost stories, and characters in horror films such as Zombies, would fall into Freud's second category, that of 'surmounted primitive beliefs'. But manifestations of the Uncanny are not always this obvious. A sense of the Uncanny is inherent in the relationship we have with our own bodies; the relationship between inside and outside and, as Nicholas Royle notes:

> The uncanny has to do with a strangeness of framing and borders, an experience of liminality. It may be that the uncanny is a feeling that happens only to oneself, but is never one's own: its meaning or significance may have to do, most of all, with what is *not* onself. ... It may thus be construed as a foreign body within oneself, even the experience as oneself *as* a foreign body, the very estrangement of inner silence and solitude. ...[17]

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[15] Duchamp made two notes on X-rays in the 1920s. The first links them to the forth dimension and the second to his notion of 'infrathin'. See Linda Dalrymple Henderson, "X Rays and the Quest for Invisible Reality in the Art of Kupka, Duchamp, and the Cubists," *Art Journal* 47 (1988).
[16] Sigmund Freud, "The Uncanny," in *Sigmund Freud: Art and Literature*, ed. Albert Dickson (London: Penguin Books, 1985), 372.
[17] Nicholas Royle, *The Uncanny* (Manchester: Manchester University Press, 2003), 2.

> The human sense of sight does not allow us to see the inside our bodies; any visual revelation thereof must therefore come as a shock. A further example of manifestation of Freud's Uncanny involves the phenomenon of doubling, clearly relevant in the case of the X-ray's example above, where two 'states' of the same body can be visible at the same time. Beliefs in body doubles were thought of as a positive aspect in so-called 'primitive' societies such as the early Egyptians, where they were regarded as an insurance against extinction. Thereafter, the meaning of body doubling changed, according to Freud, "from having being an assurance of immortality, it becomes the uncanny harbinger of death".[18]

Valerie Reardon makes the connection between Freud's Uncanny and a similar concept by Jaques Lacan: "Lacan reworked this notion and came up with the term *extremité*, a blurring of the line between interiority and exteriority which points to neither but is located where they coincide and become threatening."[19]

In my opinion, it is the modes of perception our body offers us, again related to touch, which contribute to the uneasy relationship with an interior, which can be made visible in X-rays, but still cannot be *felt* like anything we can experience on the outside. The term *Interoception* refers to the perception of our internal workings, which, according to Drew Leder [20], turns out to be woefully inadequate compared to the perceptional powers of the outside of our bodies, the operational territory of our five senses. After having visually selected, touched, smelt and tasted Proust's *Madeleine*, for example, complete with reminiscent flashbacks, the perceptional story ends. Apart from some possible grumblings of the stomach or digestive emissions, the interior journey of the *Madeleine* remains unknown.

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[18] Freud, "The Uncanny," 357.
[19] Valerie Reardon, "Helen Sear: Twice...Once," review of Review, *Art Monthly*, May 1998.
[20] Drew Leder, "Visceral Perception," in *The Book of Touch*, ed. Constance Claasen (Oxford, New York: Berg, 2005).

Leder points out some of the problems in diagnosing disease, or even locating syndromes, by internal indicators:

> The inner organs exhibit comparatively restricted modes of discomfort. A particular viscus often has its stereotyped ways of responding to almost any noxious stimuli; stomach cramps can result from stress, infection and food-poisoning alike. Moreover, the same general sort of pain, often described as a diffuse aching or burning, is shared in common by many different viscera.[21]

In what is known as 'referred pain', an organ under attack can channel the sensation to another organ or to a different part of the body entirely. And even though we now have the means to invade the body's interior visually, a process started by the X-ray, there occurs a failure on our part to connect the visuals and our interior to the same extent that we co-ordinate regular vision with *Exteroception*, the sense of location of our body in external space. Leder again:

> As with my surface body, I can bring to bear upon these depth organs certain strategies of reflective observation. A blood sample can tell me a good deal about my liver function. Through a sphygmomanometer I can read off my blood pressure. I can look at an X-ray of my lungs. I can even gaze through a colonoscope at the lumen and folds of my own colon. Such techniques enable me to gain knowledge concerning my viscera. Yet, as with my surface body, the absences that haunt my bodily depths are not effaced by these reflective maneuvers. Though I can visually observe my colon, its processes still elude experience from within. The magical power my body has to absorb water and electrolytes is not perceived as I gaze through the endoscope upon its furrowed, tubular space. The mystery of my body is only heightened by the very strangeness of the organ before me, its phenomenological non-coincidence with my body-as-lived.[22]

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[21] Ibid., 336.
[22] Ibid., 339.

Given our strained perceptional relationship with our bodies' interiors and the inability to compute the visual information with 'what is felt', Vilém Flusser's introductory quotation of this section may only be applicable if "to experience and seize space" can be read in the visual sense only. Any true understanding or 'knowability' flounders on the apparent incompatibility of interior imaging techniques with our sense (or lack of) of the 'body-as-lived'.

5.4 Brave New World

Roentgen's discovery clearly proved that there was more out there than the eye could see. The supremacy of vision, championed since the Enlightenment, had been shown to have failed, thus raising fundamental questions about the nature and quality of matter itself. What else was out there which could only be accessed through the use of special rays or machines? How could our own senses ever be trusted again? Perception was clearly in crisis since it had been proven to be operating in only a section of the visible spectrum.

However, Roentgen was not the only one making discoveries with far-reaching consequences around the turn of the nineteenth century, as Ann Thomas writes:

> D'Arcy Thompson's statement in 1917 that "we have come to the edge of a world of which we have no experience, and where all our preconceptions must be recast" was perhaps inspired by discoveries such as x-rays, radium, X-ray diffraction crystallography and Einstein's theory of special relativity.
> These discoveries introduced entirely new ways of considering the nature of matter, space and time. With the important discoveries of X-rays by Roentgen in 1895, radioactivity by Henri Becquerel in 1896, and diffraction of x-rays by Max von Laue in 1912, the visualization of hidden structures or subvisible worlds in science took an unexpected and irreversible turn.

The traditional view of images formed by light was about to be overthrown by the discovery that visible light was but a small part of the electromagnetic spectrum, which also contained other forms of radiation, capable of producing images including those made by the action of X-rays.[23]

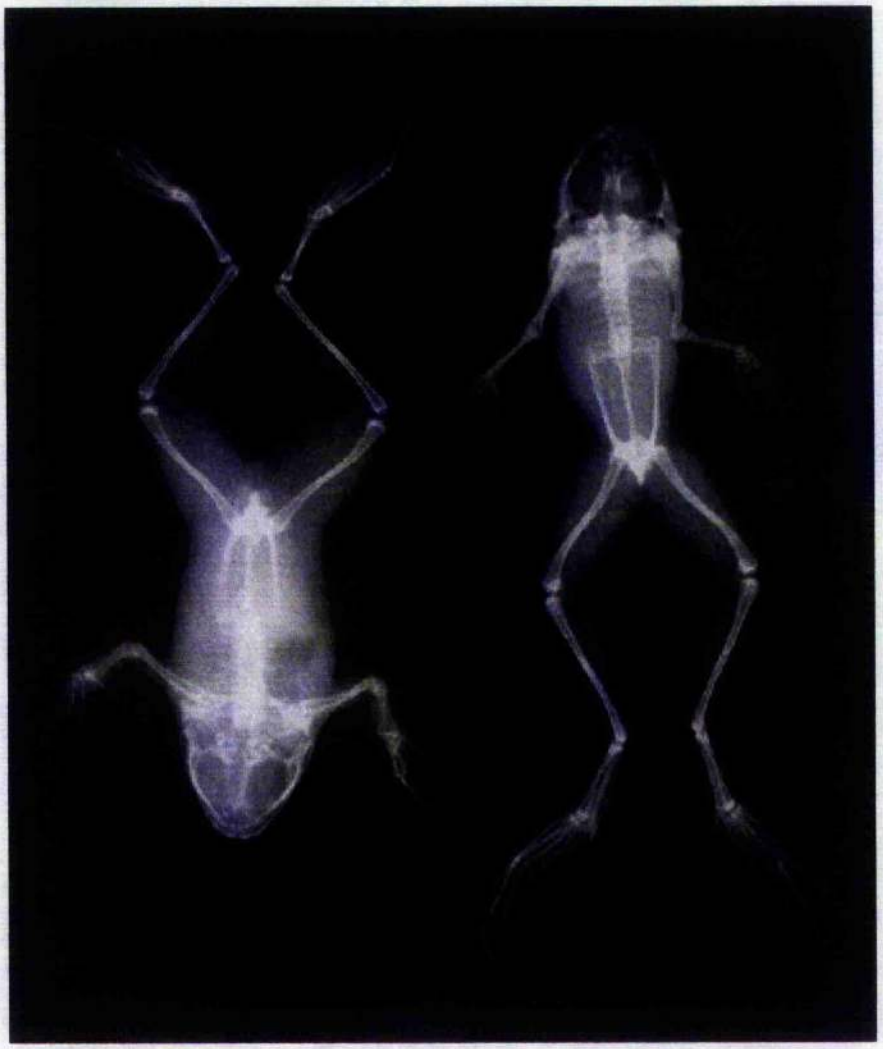

Figure 47: Josef Maria Eder and Eduard Valenta, 1896
Radiographs of Frogs in anterior and posterior positions

[23] Ann Thomas, "The Search for Pattern," in *Beauty of Another Order: Photography in Science*, ed. Ann Thomas (New Haven: Yale University Press, 1977), 112.

It was not long before artists turned their attention towards an invisible reality, immaterial, and often concerned with the *fourth dimension*. The fourth dimension was born of desire for something more than the visible. In an almost spiritual way, 'sensitive' artists were rumoured to be able to tap into a 'higher reality' or 'cosmic consciousness'. The Cubists and Futurists adopted an avid interest in the X-ray together with spirit photography and chronophotography.[24]

Linda Dalrymple-Henderson notes: "Like the fourth dimension, X-rays constituted an area where science and occultism could readily meet. With their penchant for seeking to 'prove' their claims scientifically, French occultists of the early twentieth century made frequent references to X-rays."[25]

The ideas of X-rays and the fourth dimension could interrelate and be made to appear plausible by thinking of X-rays as picturing a "truer reality within objects", and a fourth dimension "suggesting that three-dimensional objects were simply sections of more complex, four-dimensional entities."[26]

A great deal of attention centred on the photographic plate which, apart from functioning in a photographic manner, now had the unquestionable ability to capture images invisible to the human eye. The followers of psychic and spirit photography were very much encouraged by this turn of events and continued their efforts to make their own brand of the invisible visible.

Throughout its history, the X-ray has maintained an ambivalent relationship with art, staying mostly on the side of science. While it was not generally used 'straight' as an image making device, it inspired a great number of artists, chiefly the Futurists, with artists like Duchamp, Kupka and Picabia, Man Ray and Moholy-Nagy; the latter pair seeking to recreate some of its essence by reviving the technique of the photogram, using light instead of rays.[27]

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[24] Otto Stelzer, "Moholy-Nagy and His Vision," in *Painting Photography Film*, ed. Lazlo Moholy-Nagy (London: Lund Humphries, 1967), 149.
[25] Dalrymple Henderson, "X Rays and the Quest for Invisible Reality in the Art of Kupka, Duchamp, and the Cubists," 326.
[26] Linda Dalrymple Henderson, "Francis Picabia, Radiometers, and X-Rays in 1913," *Art Bulletin* 71 (1998,): 118.
[27] See Chapter One for a detailed history.

Laszlo Moholy-Nagy, one of the foremost exponents of the photogram, was quick to comment on the X-ray's most salient features:

"In x-ray photos," he writes, "structure becomes transparency and transparency manifests structure. The x-ray pictures, to which the Futurists have consistently referred, are among the outstanding space-time renderings on the static plane. They give simultaneously the inside and outside, the view of an opaque solid, its outline, but also its inner structure..."[28]

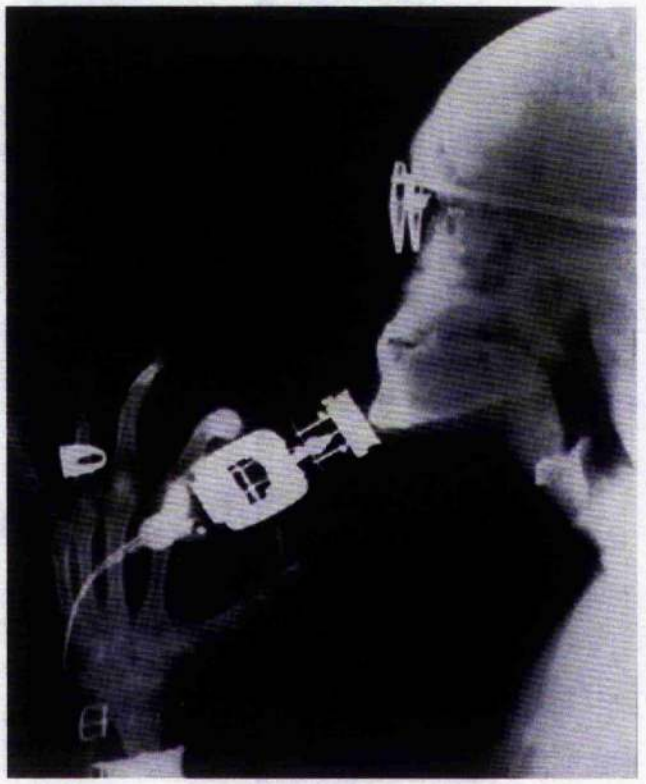

Figure 48: Man Shaving, X-ray photograph, L. F. Ehrke and Dr. C. M. Slack, 1941

As Ann Thomas outlined above, X-rays were joined by alpha, beta and gamma rays, all of them invisible, but able to now manifest themselves in one

[28] Laszlo Moholy-Nagy, Vision in Motion (Chicago: Paul Theobald, 1947), 252, quoted in Akira Mizuta Lippit, "Phenomenologies of the Surface," *Qui Parle* 9/2 (1996): 39.

form or another. This dealt the popular notion of the fourth dimension a severe blow. Dalrymple-Henderson explains:

> With reality so radically redefined by x-rays and radioactivity, avant-garde artists faced a serious challenge to the romantic image of the artist as possessing sensibilities more highly developed than those of the average individual. Could the modern artist, like the photosensitive plate struck by x-rays, reveal an invisible reality? ...[29]

Whatever powers X-rays may have been invested with during the early 20th century, they are merely one in a long series of technological innovations that have shaped the way we 'see' and interpret images today. In the past, devices like the stereoscope, the diorama, but most of all, the photographic image, have altered the way we can gain information from 'pictures' which have originally not been a part of our visual repertoire. And as with all new imaging techniques which are mainly being developed in the military or medical arena, we will continue learning to interpret their findings by translating data into visual terms which make sense to our modes of perception.

In exploring some of the history and ontology of the X-ray, I have highlighted its transformative nature and the dissolution of boundaries where notions of inside and outside are concerned, closely connected to manifestations of the Uncanny. In this way, the X-ray represents a progression from the photogram, especially with its original concept of closest proximity to the picturing plate. Both produce 'negative' images (in photographic terms) and each needs a larger degree of interpretation than is the case with any regular photograph.

[29] Dalrymple Henderson, "X Rays and the Quest for Invisible Reality in the Art of Kupka, Duchamp and the Cubists," 328.

6 A Question of Semblance

We are all aware of photography's foothold in 'reality'.
The medium of photography as a whole has been called an 'index of the real', a representation as close to reality as possible, by a number of writers on photography. The chief propagator, in these terms, is Rosalind Krauss in her 1977 essays *Notes on the Index* parts 1 and 2.[1]
In this chapter I conduct an inquiry into the semiotics behind the photographic image and the accepted common notion of photography as an 'indexical' medium. I investigate the well-known analogy of the 'footprint', commonly quoted as an example of photographic indexicality, and discuss how this makes a very fitting description for the photogram, but spectacularly breaks down when examined in connection with the photograph.
Geoffrey Batchen writes in *Ectoplasm*:

> ... For what makes photographs distinctive is that they (photographs) depend on this original presence, a referent in the material world that at some time really did exist to imprint itself on a sheet of light-sensitive paper. Reality may have been transcribed, manipulated, or enhanced, but photography does not cast doubt on reality's actual existence. Indeed, quite the opposite. Photography's plausibility has always rested on the uniqueness of its indexical relation to the world it images, a relation that is regarded as fundamental to its operation as a system of representation. As a footprint is to a foot, so is a photograph to its referent....[2]

[1] Rosalind E. Krauss is an Art Critic and Writer. In 1975 she started the critical journal *October*, published by MIT Press. Together with *October* editors Yve-Alain Bois, Hal Foster, Benjamin Buchloh and Annette Michelson she set out to re-examine Modernist art through postmodern philosophy, notably Derrida and Lacan. Her interest in and engagement with photography is expressed in articles such as *Notes on the Index* (1977) and *The Photographic Conditions of Surrealism* (1981).
[2] Geoffrey Batchen, "Ectoplasm," in *Each Wild Idea* (Cambridge, Mass: MIT Press, 2001), 139.

Except, not quite:

This footprint example surfaces continually throughout writings on photography and may illustrate the point at first glance. But, on closer inspection, does the footprint resemble the foot in anything but shape? The only information it can give is its outline and, if made in sand, possibly some information about the weight of the body that created it and whether that body was walking slowly or running. All this is information not pertaining to the visual image of the foot, but to an event.

No footprint will ever be able to give us an image of the appearance of the foot itself, far less the colour and texture of its skin or the shape of its nails. This is the domain of the photograph.

Figure 49: J.-A. Boiffard: *Illustration for Georges Bataille, "Le Gros Orteil"* , 1929

I have to conclude that only a photograph of the foot looks like the foot, providing all the surface information we need to 'identify' and compare with the original; the reason why photography is frequently employed as 'proof'.

I am not trying to disprove what seems like a 'fitting' metaphor and, yes, light 'traces' the subject to be photographed and 'writes' itself on light sensitive material to create the image. But it does so from afar. It is only the photogram with its requirement for contact, which can truly lay claim to the footprint metaphor. The idea of the 'imprint', be it foot or otherwise, carries a different set of readings and meanings than does the photograph.

A point in case may be the souvenir from nursery school: the hand print in Plaster-of-Paris. The first reaction when looking at this artifact would *not* be to try and visually reconstruct the image of the hand of the child. The signification of the imprint works in a different manner, one not immediately related to the visual. The first and foremost message of the imprint is that of authenticity: the small hand really made this imprint; the place and time are secondary considerations, other than it was made when the hand was small, thus indicating a state, rather than a 'where and when'.

6.1 Peirce and the Image

At this point I would like to give a brief, and therefore necessarily simplified, overview of the principles of Peircean semiotics, on which this whole debate rests. Broadly speaking, there are two schools of semiotics: Saussurean and Peircean. Ferdinand de Saussure (1857-1913), a Swiss linguist, based his system of semiotics squarely on language as the overarching structure of signs, whereas for the American philosopher Charles Sanders Peirce (1839-1914) any perception or sensation could be suitable as an indicator of 'Firstness', the first step in perception and interpretation of any sign. *Quality*, *Feeling* and *Sensation* qualify as first points of signification in the realm of Phenomenology (ie: how the body perceives its surroundings)[3]. Unlike Saussure, Peirce seemed to be more concerned with the physical aspect of material signs than in signs as abstract elements in a system of discourse. Because Peirce's system is not built on language as such, his theories have

[3] See table in; Thomas A. Goudge, *The Thought of C. S. Peirce* (Toronto: University of Toronto Press, 1950), 109.

become the first port of call for anyone concerned with visual imagery, since images feature in the Peircean system as entities without necessarily being twinned with language, as opposed to its Saussurean counterpart.[4]

Both schools are concerned with the theory of 'signs as coded access to an object'[5], but differ in how this representation takes place and what qualifies it in the first place. Both have spawned their followers: Michèl Foucault, Jacques Derrida, Julia Kristeva and Jean Beaudrillard can be said to follow the Saussurean school, whereas Charles Ogden, Charles Morris and Thomas Sebeok made Peircean semiotics their base. Saussurean semiotics is based on the Signifier and the Signified, Denotation and Connotation, whereas Peirce devised a system with three elements at its root, three stages of a sign which lead to the perception of the world at large: Firstness, Secondness and Thirdness.

Firstness refers to *Quality* and first encounters with a sign (*Representamen*) before it is processed further. This is a very brief and somewhat nebulous stage, as in, for example, experiencing a sound, say, a siren, before identifying it either as an ambulance, house-alarm etc, or perceiving the colours of a painting, for example, before looking and identifying the content. In Peirce's own words, "Firstness is so tender that you cannot touch it without spoiling it." [6]

Secondness, then, is concerned with facts or objects arising from the relationship with Firstness, a signification before they have been mediated in any way or slotted into a chain of events or meanings. In the case of the house alarm, Secondness would mean the alarm bell (*Object*) in a state of ringing. Secondness in my second example would be the recognition of the painting-as-object. It is at this level of Secondness that Peirce's classification of icon, index and symbol takes place.

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[4] While the 'linguistic turn' and its theories of structuralism and post-structuralism dominated critical art theory in the 70s and 80s, the 'visual turn' staged a come-back with the writings of Hal Foster, Jonathan Crary and Martin Jay from the 80s onwards.

[5] For a general discussion see Paul Cobley and Litza Jansz, *Semiotics for Beginners* (Duxford: Icon Books, 1997), 29.

[6] In: Goudge, *The Thought of C. S. Peirce*, 87.

Thirdness, unlike Firstness and Secondness, cannot be denoted as such, but can be described as the process of mediation and the understanding of where and how the object / fact fits into the perceiving experience and meaning is produced. The alarm is ringing because a) someone broke into the house or b) it was set off inadvertently by the owner or a houseguest unfamiliar with the alarm (*Interpretant*). Thirdness, according to Peirce, has to do with generalities and laws. Thomas Goudge explains:

> Thirdness must contain something which links it with what is to happen, and also with what has happened. This something can only be an element of generality. The very process of prediction is of a general nature, for it refers, in the vast majority of cases, not to a uniquely specific outcome, but to some *kind* of outcome. The cook who follows the rules in her recipe-book for making an apple pie, can predict that an apple pie will result, but she cannot predict, nor indeed is she interested in, *the* specific apple pie which will be produced. What she desires is a certain kind of object. Moreover, she feels confident but not absolutely certain that the recipe will produce the desired result; that is, she feels that her prediction has a decided tendency to be fulfilled. But this "is to say that future events are in a measure really governed by a law"[7]. Generality and law are at the heart of Thirdness.[8]

In short, Peirce's triadic construct is this: sign *A* denotes a fact or object *B* for an Interpretant *C*. Each sign always carries these three aspects. The sign is an instance of Firstness, its object Secondness, and the Interpretant, or mediating element which makes it fit within our structure of understanding, Thirdness. Laura Marks quotes Gilles Deleuze with a beautiful demonstration of how the three categories relate, using the Marx Brothers as an example:

> The three brothers are distributed in such a way that Harpo and Chico are most often grouped together, Groucho for his part looming up in order to enter into a kind of alliance with the two others. Caught in the indissoluble group of 3, Harpo is the 1, the representative of celestial affects, but also already of infernal impulses, voraciousness, sexuality,

[7] Peirce quoted in Ibid., 91.
[8] Ibid., 91-92.

> destruction. Chico is 2: it is he who takes on action, the initiative, the duel with the milieu, the strategy of effort and resistance... Finally, Groucho is the 3, man of interpretations, of symbolic acts and abstract relations ... he is the master of reasoning, of arguments and syllogisms which find a pure expression in nonsense: 'Either this man is dead or my watch has stopped' he says, feeling Harpo's pulse in *A Day at the Races*.[9]

Peirce's system has been named an unlimited semiosis[10] in that the sign produced by Thirdness can thus represent a new Firstness, producing a never-ending spiral of triadic formations. In the following passage, Peirce appears to indicate a signage without end:

> All that we directly experience is our thought - what passes through our minds; and that only, at the moment at which it is passing through. We here see, thoughts determining and causing other thoughts, and a chain of reasoning or of association is produced. But the beginning and the end of this chain, are not distinctly perceived. ...[11]

Peirce has been accused of obsessively inventing triadic constructions in his theory of signs and spent the latter part of his life denying this in his writings.

Geoffrey Batchen therefore concludes that, in the Peircean system, there can be no 'original thing' since everything is a sign for something else: "Peirce's work in fact never allows us to presume that there is a real world, an ultimate foundation, that somehow precedes or exists outside representation. Real and

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[9] Gilles Deleuze, The Movement-Image, 199-200, quoted in Laura Marks, U., "Signs of the Time: Deleuze, Peirce, and the Documentary Image," in *The Brain Is the Screen: Deleuze and the Philosophy of Cinema*, ed. Gregory Flaxman (Minneapolis: Univ. of Minnesota Press, 2000), footnote p. 98.
[10] A term coined by Derrida quoted in Geoffrey Batchen, "Method," in *Burning with Desire: The Conception of Photography* (Cambridge, Mass: MIT Press, 1997), 198.
[11] In: Christian J. W. Kloesl, ed., *Writings of Charles S. Peirce: A Chronological Edition*, vol. 3, 1872-1878 (Bloomington: Indiana University Press, 1986), 29.

representation, world and sign, must, in line with Peirce's own argument, always already inhabit each other."[12]

Peirce's terms of Firstness, Secondness and Thirdness are each subdivided into a further three categories:

	Quality *Firstness*	**Facts / Objects** *Secondness*	**Law** *Thirdness*
Representamen *Firstness*	**Qualisign** a Representamen made up of a quality, e.g. the colour green	**Sinsign** a Representamen made up of an existing physical reality, e.g. a road sign in a specific street	**Legisign** A Representamen made up of a law, e.g. the sound of a referee's whistle in a football match
Object *Secondness*	**Icon** where the sign relates to its object in some resemblance with it, e.g. a photograph	**Index** Where the sign relates to its object in terms of causation, e.g. weathercock, medical symptoms	**Symbol**[13] Where the sign relates to its object by means of convention alone, e.g. a word, a flag
Interpretant *Thirdness*	**Rheme** Where the sign is represented for the Interpretant as a possibility, e.g. a concept	**Dicent** Where the sign is represented for the Interpretant as a fact, e.g. a descriptive statement	**Argument** Where the sign is represented for the Interpretant as a reason, e.g. a proposition

Table 1: Summary of Peirce's three trichotomies of signs[14]

[12] Batchen, "Method," 198.

[13] Please note that the Peircean *symbol* differs from the Saussurean meaning. In Saussurean semiotics, the word 'symbol' equals anything which can be 'read', much like Peirce's *sign*. Peirce's symbol has a much narrower, more defined meaning and refers to a culturally created entities such as speech and writing.

[14] This table is based on Cobley and Jansz, *Semiotics for Beginners*, 31-34.

To discuss each of these groups is outwith the scope of my enquiry, but I would like to concentrate on the Object group of Secondness, and the Icon and the Index in particular. While clearly iconic (and listed in the above table as such), the photograph nowadays seems to have acquired the status of an index.

To substantiate claims of indexicality for the photograph, one single quotation by Peirce is cited[15], where he names *certain* photographs as examples of indices. The problem with Peirce's writings on semiotics, logic, or anything else for that matter, is, that he never collated or reviewed anything. When he wished to add to an idea, he simply started from the beginning again, sometimes with differing findings. To make one quotation the crux of work of such a dispersed nature makes no sense and I am therefore looking to Peirce scholar Thomas Goudge who, among others, organised and categorised Peirce's writings.[16]

According to Goudge, the trichotomy of *icons*, *indices* and *symbols* was of particular importance for Peirce. It first appears in his writing in 1867, as the distinction between *likenesses*, signs and symbols (§1.558). They are named as "three kinds of representations" which relate to the object they represent. After 1885, Peirce replaced these designations with an update and provided a tighter framework in terms of their definitions.

Peirce then notes three particular functions of the Icon:

a) Where there is a resemblance in respect of simple qualities, as in the case of a photograph of a person, the icon is an *image*.
b) Where the relations of the icon's parts are matched by analogous elations on the object's part, we have a *diagram*. The blueprint of a completed building is an obvious illustration.
c) Where there is no precise matching but more general 'parallelism' of relation or characters, we have an icon functioning as a metaphor. (§2.227)[17]

[15] See Krauss on p.194
[16] Goudge, *The Thought of C. S. Peirce*.
[17] Ibid., 143.

The sign of the index also has three distinctive characteristics:

a) It bears no significant resemblance to its object
b) It refers to single units, single collections of units, or single continua
c) It directs attention to its object by blind compulsion (§2.306)[18]

For Peirce, the index constitutes a dynamical or causal connection both with what it signifies and "with the senses or memory of the person for whom it serves as a sign".(§2.305)[19]

The photograph, since it has been ruled out by *a)* in the index category above, could only ever possibly satisfy one of these conditions, namely its functioning as a sign for the viewer. Again, it is only the photogram which satisfies the above conditions to qualify as an index. Goudge again:

> On perceiving the index he (the person involved) is led directly to a cognition of the object. Hence the sign is "evidence for" the object or the event it represents.[20] A bullet-hole is the index of the passage of a bullet; a plumb-bob is an index of a vertical direction; a weathercock is an index of the direction of the wind; a barometer with moist air is an index of rain;...(§2.286-287; 2.304)
> In all these cases there is a Secondness involved which is an "existential relation".[21]

Having digested all this information, one would assume that the greater the likeness to the referent, the more iconic the object. In fact, according to Richard Zakia, "... an iconic representation can have various levels of iconicity. On a scale of 1 to 10, a colour photograph would be a 10, a black

[18] Ibid., 144.
[19] Jacques Derrida's description of writing in the dark, p.149, serves as a good example here.
[20] Note the phrase 'evidence for' as opposed to 'visually represented', as would be the case in a photograph.
[21] Goudge, *The Thought of C. S. Peirce*, 144.

and-white photograph about a 5 and a line drawing about a 1 or 2."[22] Zakia explains the Icon / Index / Symbol categories thus:

> In an iconic representation the representation looks like the object. A photograph of a car looks like the car. An indexical representation is an indirect reference such as the shadow of a car or the wet treadmarks of the tyres left on a dry road. A symbolic representation would include the car's logo. Other examples of indexical representations are a person's fingerprints, the smell of smoke, a fragrance in an empty room, an empty chair on the porch of an old home, footprints on a sandy beach, an arrow or finger pointing to something. In short, an indexical representation is an index to something else. ...[23]

Yet Zakia, who approaches photography from a phenomenological and psychological position (he cites Robert Arnheim as a mentor and friend), represents a minority voice with his straightforward interpretation of the iconical versus the indexical, while the 'photograph-as-index' bandwagon rolls on, to the point of being unquestioningly accepted as fact.

What follows is a collection of statements made in favour of the photograph as index and an exploration into why this may be so. Before leaving Zakia's definition, however, it may be interesting to consider the semiotic status of a photograph of an 'empty chair on the porch of an old home'. This would make it an iconic representation of an indexical sign, that is, the absent person, which, I would argue, is as close as a representational photograph ever gets to being indexical.

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[22] Richard D. Zakia, *Perception and Imaging* (Boston: Focal Press, 1997), 239.
[23] Ibid., 238.

6.2 Lightwave Theories

To make a photograph, there has to be light in order to transmit information to a light-sensitive surface: film, in most cases. Susan Sontag, famously, has likened the photographic image to footprints in the sand[24], but it was Rosalind Krauss who continually inferred the notion of contact or indentation in order to establish the concept of the 'indexicality' of photography, which seems to have been generally adopted without question:

> ... For photography is an imprint or transfer off the real; it is a photochemically processed trace causally connected to that thing in the world to which it refers in a manner parallel to that of fingerprints or footprints or the rings of water that cold glasses leave on tables.... On the family tree of images it is closer to palm prints, death masks, the shroud of Turin, or the tracks of gulls on beaches. For technically and semiologically speaking, drawings and paintings are icons, while photographs are indexes...[25]

Kraus concludes that a photograph represents "A kind of deposit of the real itself."

But exactly what kind of deposit are we talking about? An index surely implies some sort of contact, touch or indentation, which equates with her analogies of death masks, palm prints and gull tracks and which run along the same lines as Sontag's footprints in the sand.

Jean-Claude Lemagny, who writes about photography in terms of a plastic art, describes the reason for photography's veracity thus:

> Why is photography objective? Because it is made up of a luminous imprint made from a distance (or sometimes by direct contact). Semiologists consider it like the footprints left by animals in the sand

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[24] Sontag, *On Photography*.
[25] Rosalind E. Krauss, "The Photographic Conditions of Surrealism," in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, Mass: MIT Press, 1986), 110.

> or snow, traces which are otherwise molds. In terms that might be paradoxical but not absurd, it might be said that a photograph is a flattened, luminous mold.[26]

Lemagny is quite vague as to how this luminous imprint is made from a distance, other than that it becomes a *flattened* luminous mold in the photograph. Presumably, we are supposed to make the connection via the information that light *touches* the retina[27], implying the transference of a three dimensional image to the eye. His additional statement of "Photography ... touches from afar ... by and in light"[28] hints at his idea of this tactile transference.

In *The Index and the Uncanny*, Laura Mulvey also heads down the well-trodden path of the photograph as an indexical entity, quoting the usual passages by Peirce and Bazin[29]. For Mulvey, the connection between reality and the photographic image is *material* and *physical*:

> It is the indexical aspect of the photographic sign, located as it is in a preserved moment of time, that allows movements to take place across the boundaries between the material and the spiritual, reality and magic and between life and death. From this point of view, the most material aspect, the physical link between object and image gives rise to the most elusive and ineffable properties of this particular sign. ...[30]

This somewhat romanticised view echoes the writings of Roland Barthes, for whom the photograph does not represent the past, but *magically* emanates it.[31] Roland Barthes' interpretation of the meaning of the photograph is seductive, has numerous followers and is, as will become clear, at least partly to blame for its classification as index.

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[26] Lemagny, "Is Photography a Plastic Art?," 141-2.
[27] See his quotation regarding light 'rubbing against the retina', indicating the tactility of transfer, in Chapter 3, p. 116
[28] Lemagny, "Is Photography a Plastic Art?," 143.
[29] See in discussion on Krauss below.
[30] Laura Mulvey, "The Index and the Uncanny," in *Time and the Image*, ed. Caroline Bailey Gill (Manchester: Manchester University Press, 2000), 147.
[31] Roland Barthes, *Camera Lucida: Reflections on Photography* (New York: Noonday Press, 1981), 88.

> One day, quite some time ago, I happened on a photograph of Napoleon's youngest brother, Jerome, taken in 1852. And I realized then, with an amazement I have not been able to lessen since: "I am looking at eyes that looked at the Emperor."[32]

These are the opening lines of Barthes' famous book *Camera Lucida: Reflections on Photography*. In this first paragraph Barthes sets the tone for what is to come: the magical connection between the subject and the viewer through the medium of photography. In these opening lines, Barthes makes a personal connection between himself, the viewers in the book, Jerome and Napoleon.

Yet, as Ron Burnett[33] points out, these kind of musings do not, in fact require a precise image - or a photograph per se; we do not need to see an image of Jerome to make Barthes' connection from us to him, to the image, to Napoleon. Barthes' notion relies as much on our assumption of photographs as a) carriers of memories and b) moments frozen in time. For example, not only do we see the face of someone, but we also have knowledge of the preceding and subsequent actions of that person, a fact that accompanies the image like an invisible attachment. The face of Jerome as a photograph, without the accompanying information about his status, would fail to spark any such chain-reaction.

This kind of lyrical but largely imaginary connection is what operates in the attempts to claim indexical properties for the photograph: 'light which touches the subject and imprints their features onto the light sensitive surface of the film'[34].

Burnett points out that this rampant, subjectivist interpretation had much to do with Barthes' admiration of Sartre's *The Psychology of Imagination*. He notes that Sartre's subjectivism is taken up with a vengeance in *Camera Lucida*. "There clearly is a need to place some mediators between the discourse of the

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[32] Ibid., 3.
[33] Burnett, "Camera Lucida: Roland Barthes, Jean-Paul Sartre and the Photographic Image."
[34] See Elizabeth Barrett-Browning on p.190, also Talbot on p.87/88

imaginary as it is externalised by a subject and the piece of paper or photograph." [35]

In recent photographic discourse we speak of a visual language, of reading photographs. Needless to say that linguistics do not come into it and photographs do not speak. What becomes clear is that we are the ones 'speaking' to it, projecting ourselves into the picture as the photograph becomes an image.

Burnett makes this important distinction between photograph and image, one that, to me, fits perfectly within the construct of the Peircean universe:

> Photographs and images ... the former inevitably plays into questions of sight and object, questions of verification and truth – the latter is the result of an act of consciousness and therefore subject to a different, though related questions. ... Images cannot claim the autonomy of photographs. Images can never be separated from vision and subjectivity. Images are part of a mental process, the result of an interaction between photographs and viewing subjects. Images are products of perception and thought, conscious and unconscious, looped in the spiral of relationships which are continuous – a conitinuum. Time, in this loop, does not rely on the movement of a clock but is instead located in the physical periodicity of the photograph.[36]

Leaving the issue of icon and index aside for a moment, seeing the photograph as *photograph* and not as *image* could be said to represent Peirce's *Firstness*, something that is so fleeting as to be virtually non-existent ("so tender that you cannot touch it without spoiling it", in his own words). In order to consciously try and experience the photograph in its original state, if that is possible at all, we would have to consciously strip all our projections from it, our inferences and assumptions, and once again:

The game of distance is the game of near and far.

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[35] Burnett, "Camera Lucida: Roland Barthes, Jean-Paul Sartre and the Photographic Image," 30.
[36] Ibid.: 22/23.

The photogram, in contrast, operates on a different level. The 'photograph' of the photogram, (and I use the term 'photograph' in the sense discussed above), is much slower in becoming an image due to its partially abstract nature (through real contact with the creating object), but also due to the fact that the signifiers point to the creating object in a much more self-contained manner.

Burnett comments again on Barthes' interpretations:

> It is the received history of Napoleon which acts on Barthes and it is those texts with which he is engaged. There are an infinite number of things which Barthes could have said about the photo, and yet he chose to mention his own shock at the historical connection to Napoleon. It is not an accident that of all of the photos in camera Lucida the one which is missing is the photo of Jerome. ...[37]

It becomes evident how little relevance the actual photograph has when faced with the inevitable emergence of the mediated image. Barthes has not pioneered this way of looking at photographs - most writing in the earliest stages of the photographic medium had a similar quality [38] - but his writing has been disseminated, quoted and analysed to a much greater degree than any texts of early photographers.

In 1843, Elizabeth Barrett-Browning wrote about the photograph:

> The picture is connected with its prototype by sensibilities peculiarly touching. It was the very light radiated from his brow—the identical gleam which lighted up his eye—the pallid hue which hung upon his cheek—that penciled the cherished image, and fixed themselves forever there.[39]

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[37] Ibid.: 30. – as well as, famously, the image of Barthes' mother.
[38] See Talbot's attempts to describe the new medium of photography quoted earlier in *Traversing Black Space*, p.87
[39] Elizabeth Barrett in The Edinburgh Review, "January 1843, an Excerpt," in *Photography in Print: Writings from 1816 to the Present*, ed. Vicky Goldberg (New York: Simon & Schuster, 1981), 65.

She precedes Barthes by speculating on the effect of family photographs, seen by generations to follow, and pinpoints what was to become Barthes much quoted 'Photograph as Symbol of Mortality' theory. Barrett-Browning again:

> But even in the narrower, though not less hallowed, sphere of the affections, where the magic names of kindred and homes are inscribed, what a deep interest do the realities of photography excite! In the transition forms of his offspring, which link infancy with manhood, the parent will discover the traces of his own mortality; and in the successive phases which mark the sunset of life, the child, in its turn, will read the lesson that his pilgrimage too has a period which must close.[40]

Let me remind you once more of Barthes' rhetoric, which invokes touch and magic as well as light transference:

> And if Photography belonged to a world with some residual sensitivity to myth, we should exult over the richness of the symbol: the loved body is immortalized by the mediation of a precious metal, silver (monument and luxury); to which we might add the notion that this metal, like all the metals of Alchemy, is alive.
> Perhaps it is because I am delighted (or depressed) to know that the thing of the past, by its immediate radiations (its luminances) has really touched the surface which in its turn my gaze will touch...[41]

Reading this, it seems that Barthes has changed tack from his initial message delivered in the 1970's, labeling the photograph a "message without a code".[42] Barthes language now is lyrical and seductive: it comes as no surprise then that many writers on photography never stray very far from this cosy enclosure of analogies. Elizabeth Edwards, for example, likens the photograph

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[40] Ibid.
[41] Barthes, *Camera Lucida: Reflections on Photography*, 81.
[42] Roland Barthes, *Image Music Text*, trans. Stephen Heath (London: Fontana Press, 1977), 43.

to relics: "it is authentic in that it is traces off the living; that which was there, like the 'pignora' of the saints."[43]

Once again there is an issue of distance. Relics most obviously included the corpses of saints, but more often than not smaller parts of their bodies which had been specifically separated for the purpose of worship. Relics also included items which had belonged to or been used by the saint, such as clothing, official insignia, or books. More importantly, items brought into contact with relics - pieces of cloth touched to a shrine, vials of water which had washed a corpse, or blood miraculously exuded from a long defunct corpse - themselves became relics. All of these were in the utmost proximity with the body. How does the photograph equate to this?

Rosalind Krauss writes:

> As distinct from symbols, indexes establish their meaning along the axis of a physical relationship to their referents. They are the marks or traces of a particular cause, and that cause is the thing to which they refer, the object they signify. Into the category of the index, we would place physical traces (like footprints), medical symptoms.... Cast shadows could also serve as the indexical sign for objects. ...[44]

So far, so good – and elsewhere she elaborates:

> By index I mean that type of sign which arises as the physical manifestation of a cause, of which traces, imprints, and clues are examples. ...[45]

At this point, it seems that she has digested the signification of the index and even comments on photograms: "... The image created in this way is of the

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[43] Elizabeth Edwards, "Grasping the Image: How Photographs Are Handled," in *The Book of Touch*, ed. Constance Claasen (Oxford, New York: Berg, 2005), 421.
[44] Rosalind E. Krauss, "Notes on the Index: Part 1," in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, Mass: MIT Press, 1986), 198.
[45] Rosalind E. Krauss, "Notes on the Index: Part 2," in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, Mass: MIT Press, 1986), 211.

ghostly traces of departed objects; they look like footprints in sand or marks that have been left in dust."

But she then, disappointingly, continues:

> But the photogram only forces, or makes explicit, what is the case of *all* photography. Every photograph is the result of a physical imprint transferred by light reflections onto a sensitive surface. The photograph is thus a type of icon, or visual likeness which bears an indexical relationship to its object. Its separation from true icons is felt through the absoluteness of this physical genesis, one that seem to short-circuit or disallow those processes of schematization or symbolic intervention that operate within the graphic representations of most paintings. ...[46]

In a reverse move of Peirce's classifications, Krauss now proposes that because the photograph is a 'copy' of the real, it is too descriptive to be an icon and must therefore be an index due to the 'physical light imprint'.

Suddenly it seems that the closer something resembles the original visually, the more indexical it becomes. Krauss at this point enlists André Bazin's description of the visually descriptive condition of the photograph:

> The photographic image is the object itself, the object freed from the distortion of time and space that govern it. No matter how fuzzy, distorted, or discolored, no matter how lacking in documentary value the image may be, it shares, by virtue of the very process of its becoming, the being of the model of which it is the reproduction; it *is* the model. [47]

I have shown that the argument of the photograph as index hinges on the idea that pictures 'trace' themselves on film, making an 'imprint' in the light sensitive surface. While the lyrical interpretation of the 'trace' goes right to the heart of the very function of photography, there remains the stubborn issue of distance. And not just one kind of distance, but several: light 'traces' the scene.

[46] Krauss, "Notes on the Index: Part 1," 203.
[47] Anre Bazin, What ids Cinema?, p.14 quoted in Ibid.

It enters the lens and traverses the black box, the historical connection to the Camera Obscura before exposing the light-sensitive film. It is at this point that Krauss looks for validation in the writings of Charles Sanders Peirce:

> In theorizing about the differences among the sign-types - symbol, icon and index - C.S. Peirce distinguishes photographs from icons even though icons (signs which establish meaning through the effect of resemblance) form a class to which we would suppose the photograph to belong. "Photographs," Peirce says, "especially instantaneous photographs, are very instructive, because we know that they are in certain respects exactly like the objects they represent. But this resemblance is due to the photographs having been produced under such circumstances that they were physically forced to correspond point by point to nature. In this aspect, then, they belong to the second class of signs [indices], those by physical connection."[48]

This is the famous quotation on which the notion of the 'photograph-as-index' has been founded. It stands in stark contrast to numerous passages where Peirce classifies photographs as icons. If one accepts the 'physical' connection through to the light sensitive surface, then the Polaroid process, at a push, could be a valid 'indexical' mode, where positive and negative are as one before having to be peeled apart in order for the image to appear.

For the majority of pictures though, the photographic process does not end with the exposure of the film. Another instance of distance and removal from the original 'connection' occurs in the darkroom, where the image is now projected and enlarged and, on top of that, experiences a complete reversal of tones in order to be legible and resemble, once again, the original scene.

Elsewhere, Peirce (§2.306) argues that the action of indices "depends upon association by contiguity, and not upon association by resemblance or upon intellectual operations."[49] The index, then, requires contiguity; meaning

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[48] Krauss, "Notes on the Index: Part 2," 215.
[49] Floyd Merrell, "Nature's Tireless Circles," in *Peirce's Semiotics Now: A Primer* (Toronto: Canadian Scholar's Press, 1995), 87.

"being in actual contact or touching along a boundary or a point", as opposed to association by resemblance[50].

I would argue that, at the stage of the finished photographic print, the indexical connection to the initial subject is too 'distant' to qualify as an index, but what remains is an *iconic* document: a *signifier* which resembles that which it signifies (in other words, something which carries *meaning* by virtue of resemblance). It is only the photogram which, because of its true indexicality, will live up to the footprint comparison.

However, what seems to have been reinvented, along with a new meaning of indexicality, is the notion of contiguity. As discussed above, the notion of contiguity in a photograph, the 'transference of the light imprint' appears to be stubbornly prevalent, no matter how many different processes and transformation the image has undergone. Geoffrey Batchen, at least, does not make the statement of contiguity as fact, but admits this might not be an inherent element, rather one, as Ron Burnett stated earlier, inferred by us, the viewers. "So photography allows an imagined exchange of touches between subject, photograph and viewer": Batchen notes: "...and it is surely this invisible, hard-to-define psychological dimension that so pre-occupied Barthes in *Camera Lucida* ..."[51]

I hope to have clarified that photographs are not contiguous, and therefore indexical by nature, but seem to acquire these attributes by intervention and projection of the viewer's imagination. For me, there is just one niggling issue attached to this set of assumptions: if this contiguous connection is inferred from the receiving end only, how can there be a claim of an absence of contiguity in digital photography?

In the same essay Batchen writes:

> ...And indeed, it is precisely a capacity for visual contiguity that is now under threat as the photographic image is irresistibly transformed

[50] For a rigorous account of the issues of contiguity see Daro Montag's *Unravelling the Confusion through the Concept of Contiguity* in Montag, "Bioglyphs: Generating Images in Collaboration with Nature's Events", 67-69.
[51] Geoffrey Batchen, "Carnal Knowledge - Artistic Expression through Photography," *Art Journal* Spring (2001).

> into a continuous flow of electronic data. Where photography is inscribed by the things it represents, it is possible for digital images to have no origin other than their own computer program. ...Where a photograph compels by way of "the condition of being in contact", digital images fascinate by overtly abandoning any such claim; as they are content to be nothing but surface.[52]

He claims that digital images "remain untroubled by the future anterior, ...the *this has been* and *this will be* that so animates the photograph", and he concludes with "Digital images are in time, but not of time.". What an extraordinary claim from a man who in previous writings about digital imagery asserted:

> ... Photography will cease to be a dominant element of modern life only when the desire to photograph, and the peculiar arrangement of knowledges and investments that that desire represents, is refigured as another social and cultural formation. Photography's passing must necessarily entail the inscription of another way of seeing — and of being.[53]

In my interpretation of this passage, Batchen is saying that we will stop reading pictures as pictures only when we have found another way to convey and disseminate the information which does not involve sight and/or two-dimensional visual representation of images.

When Batchen's essay was published in 2001, digital photography was already well on its way of dominating the amateur market, namely the genre of family photography. In this respect it is hard to imagine what kind of computer-generated images Batchen has in mind, other than the swirly backgrounds employed by sports news programmes which, as far as I am aware, are not trying to signify anything in particular. In the ever-growing market of digital amateur photography, digital family photography operates

[52] Ibid.
[53] Batchen, "Ectoplasm," 143.

along the same lines as analog family photography and the imagined contiguity is still intact.

Laura Marks puts forward an interesting line of reasoning which answers Batchen's allegations to a point. The main thrust of Batchen's argument, which has been taken up by many others since, is that in digital imaging, the 'indexical' path of light, as it were, is severed because the information is converted into data, thereby breaking the link between the initial subject and the image. Marks argues that in electronic media "the analogue or indexical relationship is maintained insofar as the activity of electrons can be traced to a wave function."[54]

Short of an overview of quantum physics,[55] the argument is this: Electrons, just like light, travel in waves which merely use means other than light-sensitive surfaces to capture or transmit information. Radio and television broadcast on waves between transmitters and receivers. Images are being transferred via electrical or optical cables and many computers are now operating in a wireless environment, again using electromagnetic airwaves (either radio or infrared) for communication.

Throughout this section I have questioned the supposed contiguity or indexicality of photographs based on the 'light-wave theory', suggesting instead that any connections (and I do *not* question the power photographs have to impart knowledge and incite memories and emotions) are projections purely from the viewer's perspective. I therefore find it hard to empathise with the sense of crisis and the demise of alleged 'authenticity' of photography expressed in some quarters, as light particles are exchanged for electrons and alter their mode of travel. As Ron Burnett notes in connection with the argument about photographic 'truth' being inherent in the analog as opposed to the digital:

> The post-photographic construction of meaning becomes the site for precisely the same kinds of questions which have always haunted

[54] Laura Marks, U., "How Electrons Remember," in *Touch: Sensuous Theory and Multisensory Media* (Minneapolis: University of Minnesota Press, 2002), 163.
[55] For an illuminating explanation see Ibid., 162-75.

> photographs, questions centred on whether or not the truth is present. The beauty is that digitally remastering if not digitally producing photographic prints merely points out what has always been the case. Photographs have always been subject to design and redesign, to constructivist and deconstructivist practices which have made truth the playground for imagination.[56]

The photo-processing chain *Snappy Snaps* has, to my knowledge, not received any complaints that their customers' digital prints are not as 'real' as the ones taken with film, instead of memory cards. And I take heart in the fact that, as I write this, they are advertising their line of black-and-white photographic posters of film stars, such as Audrey Hepburn, as ICONIC ART.

[56] Burnett, "Camera Lucida: Roland Barthes, Jean-Paul Sartre and the Photographic Image," 28.

7 Conclusion

On Distance in Photographic Images uses the theme of distance and reversal to interrogate a particular relationship: the relationship of the photograph to the photogram and vice versa.

The photogram, a seemingly simple process, is being examined both in terms of its historical origins, by whom it was used and to what end, and by varying descriptions of the process itself, which already conditions the reader as to what kind of 'entity' they are producing or viewing. Of interest here is a theory by Rolf H. Krauss whereby the photogram is credited with the first ever conceptual use of the medium of photography by the Dadaists and Surrealists in the 1920s. Due to the unpredictability of the results and the non-representational character of the process, it appealed to their sense of automatism but, most importantly, severed the connection between the artist's hand and 'head'.

While there is a good amount of literature on artists working with photograms, it tends to be restricted to catalogues and reviews about individual artists' works. Apart from the German artist and writer Floris Neusüss, who published anthologies of the photogram from Talbot to the 1980s, no other literature exists which addresses the ontology of this genre of image making. Throughout this thesis I have gathered information from a variety of sources to examine the workings and perceptual implications of the process. By looking at the work of contemporary artists, I propose three distinct groups and methods of working with the photogram: Documentarist, Metaphorical and Essentialist.

Any comparison involving photography must necessarily entail the notion of visuality. I have argued that photography is largely defined by the 'black box syndrome', the space inserted between the observer and the observed, when using any sort of photographic device. I have outlined the histories of this particular trope from the early peepshow boxes and panorama spectacles to

modern day photography. Of interest is also the way we have adopted camera conventions, by having learnt to automatically assimilate images which are not natural to the way the human eye sees. To enlarge on the conventions of distance and vision I have gathered examples of literary voyeurs and flâneurs which are immediately understood / obviously connected and which add another dimension to the implications of camera use.

Contrast this with the very different working methods of the photogram and other touch-related processes such as the photo-copy, a hybrid which combines close-contact origin with external imaging properties. Distance and reversal looms large once again as I examine the Visual and the Haptic, both ingredients in the photogram process, and the dissolution of spatial and perspectival boundaries inherent in the process. Through the non-signification but authenitic touch-related aspects of photograms, the notion of Deleuze's fossil and Benjamin's fetish are evoked as the implications of both depiction and manifestation are scrutinised.

Enlarging on the interaction of vision with the sense of touch, I propose that the sense of the Uncanny and our inability to engage with images of our own interior may lie in the realm of (a lack of) *interoception* – the manner in which we are sensorially 'fully clad' on the outside, but sadly lack the same when it comes to the inside of our bodies.

There is a fair amount of cross-over between sight and touch in our vocabulary describing mental agility. The terms *smart* and *sharp as a tack* compete with *bright* and *brilliant*, although traditionally the sense of touch (and most other senses) has been 'seen' as less important than vision. Yet, the sense of touch interacts with the photograph-as-object in a number of ways unconnected to the production process of the photogram. Daguerrotypes, for example, have to be handled and positioned 'just so' for the image to become visible. Touch is also involved in their often elaborate housing made of velvet, leather and other tactile materials.

The experience of touch originates on the site where the receptors are located: the skin. Our skin forms the actual and psychological barrier between inside and outside, something that can be disturbed by the imaging method of the photogram, but very much amplified by the X-Ray. Connected to the photogram by aspects of the imaging process through close contact with the sensitive material, it was among the first techniques and inventions which demonstrated the limits of human vision and initiated a questioning of the reliability of our senses, both in scientific and art disciplines.

Throughout this thesis, ontological differences between the photograph and the photogram are investigated and highlighted. In a semiotic interrogation I finally put to rest the myth of the photograph as an 'indexical' entity and restore its iconical status. The myth of photography's indexicality rests on what I have named the *Lightwave Theory*, the popular notion by which the subject is connected to the viewer by means of a 'Luminous Imprint'. Rosalind Krauss and Roland Barthes are the chief propagators of this romantic idea which, through repetition in recent critical discourse, has assumed canonical status. A careful re-reading of Charles S. Peirce's triadic semiotic theory proves otherwise.

The photogram, however, qualifies as an index on all fronts.

In this thesis I have conducted an ontological, theoretical and discursive investigation around the nature of photography and the photogram in particular. A number of original points have resulted in my application of various theories toward the workings of — and thinking about — photograms. The link with the haptic, in particular, both physically and visually, has, to my knowledge, not been addressed and opens up a whole area of inquiry into the problem of visuality and the index.

My classifications of practicioners' working ethics concerning the photogram have likewise not been recorded previously. As a project for the future, a comprehensive contemporary survey of contact-orientated work would be of benefit. In order to gain the knowledge to be able to make informed connections across fields and disciplines, some traditional art historical routes of enquiry had to be truncated.

Transitaria, the large body of practical work which I developed parallel to this thesis constitutes an original contribution to knowledge in itself. In addition, it constitutes *transfer of knowledge* as it is shown in exhibition venues both in this country and abroad. Looking at both parts it becomes obvious that neither could have been developed without the other. They informed each other in all respects. The practice instigated the investigation into the haptic realm in particular and the theory influenced, and continues to influence, my thinking about certain areas of practice and will continue to channel the creative choices I make in the future.

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Part Two: Transitaria – Images and Writings

Introduction

Part Two represents the practical part of my project. Because of its function it would be erroneous to call it an appendix. It functions very much like a coda would in music. It represents the 'last thing' which rounds off and makes sense of what has gone before. Without *Transitaria*, the practical work, the written thesis would not be what it is and vice versa.

The prologue addresses the writing of Blanchot, whose idea of near and far has been the impetus and methological touchstone. The piece on Blanchot here makes an important connection between the two parts, performing not only a perceptional cyclus where the photograph is concerned, but suggests to me that theory and practice may be moving along the same lines in that one would not exist without the other.

The essay *Beauty and the Beast* contextualises my work with the medusa. I explore facts and fictions around the creature and suggest reasons s to why they seem to have been gendered female in the popular imagination. Again, in the spirit of near and far, I end with a reflection on my own practice.

Transitaria is a work in four parts. In this form, which, again, is 'far' from the original, it is represented as a mere collection of examples. I have provided a short explanation and sizes of the original pieces in the next section.

The game of near and far bears witness to the fact that this reader's experience of Transitaria will be a very different one from the viewer who encounters the work in a gallery space.

Prologue: Eternal Return

> ...And the trace, being always traces does not refer to any initial presence that would still be present, as remainder or vestige, there where it has disappeared. ...
>
> Maurice Blanchot[1]

The theme of distance, inapproachability and unsituatedness is at the heart of Maurice Blanchot's writings in *Le Pas Au-Delà / The Step Not Beyond*. An example of fragmentary writing, the text continually folds back on itself. It negates knowledge of voices and events while deliberately placing the reader in a permanent state of uncertainty, a state of hovering, yearning for some piece of solid ground to cling to and to proceed from.

"In Blanchot's gamé of near and far," to quote Georges Didi-Huberman, "Elaboration makes the detour possible. The detour involves distancing. It calls forth its own *return*; it invokes the story of something rising up from "the depths of time," something that fills up a period of waiting. Something unique and far away, however near it may be. "[2]

Blanchot's notion of 'near and far' is central to my argument because it encapsulates the fundamental differences between the photograph and the photogram, perceptually and cognitively. It has allowed me to interrogate the medium of photography at large, its myths and conventions and its connection and collaboration with other sense perceptions. While I claim no special status as such for the photogram, I hope to have shown fundamental differences in its creation and perception, which may help to put some of our assumptions about photography at large into perspective.

My inquiry has involved a selection of voices from varying critical positions, from the 'linguistic turn' to the 'visual turn'. I have argued with some findings

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[1] Blanchot, *The Step Not Beyond*, 54.
[2] Didi-Huberman, "The Index of the Absent Wound (Monograph on a Stain)," 52.

which, once expressed, passed into photography 'lore' and are now repeated ad infinitum. The Light Wave Theory is a case in point...

Unexpectedly, I found ambiguities and contradictions abound, not just in critical writing but in the functions of the medium itself. I set out to find difference and have found opposites which nevertheless are able to live together: absence and presence, vision and blindness, light and dark, touch and sight. Blanchot would be proud.

The following passage by Derrida seems to suggest more than one mode of seeing and, in the spirit of Blanchot, gives no ground whatsoever. I find it oddly appropriate as an indication of my findings in this venture:

> – But skepticism is precisely what I've been talking to you about: the difference between believing and seeing, between believing one sees *[croire voir]* and seeing between, catching a glimpse *[entrevoir]* — or not. Before doubt ever becomes a system, *skepsis* has to do with the eyes. The word refers to a visual perception, to the observation, vigilance, and attention of the gaze [regard] during an examination. One is on the lookout, one reflects upon what one sees, reflects what one sees by delaying the moment of conclusion. Keeping *[gardant]* the thing in sight, one keeps on looking at it *[on la regarde]*. The judgement depends on the hypothesis. So as not to forget them along the way, so that everything be made clear, let me summarize: there would be *two hypotheses*. [3]

Whereas initially Blanchot's quotation on distance seemed, in a sense, surreal, I soon found that the frequent meeting of opposites, the constant reversals were, in a way, the norm rather than the exception.

[3] Derrida, *Memoirs of the Blind: The Self-Portrait and Other Ruins*, 1.

In attempting to explore the nature of the photogram, I entered into an inquiry about the nature of photography, perception, phenomenology and a host of other things beside. Writing phrases like "showing something as nothing" or "manifestation of absence" makes perfect sense to me now, largely thanks to Blanchot's guidance.

Finally, to give a further impression of the impossible place that may be possible, a passage of Blanchot on presence:

> Distancing oneself appears to be determined in relation to a fixed point that would be presence. But presence, in the absolute of the immediate in which, great instantaneous fire, it consumes itself endlessly, could not be fixed or included in the game of a relation. Presence, lightning of presence, which has always already devastated the space in which the approach takes place, does not enter into the clarity of the visible, no more than it lets itself be present. Presence lacks presence, destroys the present of presence.[4]

Blanchot's notion of the Eternal Return[5], designed to be unimaginable since it bypasses the present altogether, seems a fitting modus operandi for photography.

Lycette Nelson explains:

> To think the Eternal Return, one must think time as an infinite recurrence of finitude, but if the return is eternal, the circulation it brings about is never circulation of the same—of a full present—but only repetition without origin. The law of the return tells us that in the future will recur what has occurred, not in the present, but in the past, since everything that can happen has already happened. The infinity

[4] Blanchot, *The Step Not Beyond*, 81.
[5] Blanchot's Eternal Return differs from the Nietzschean version only in the absence of presence. Nietsche himself reformulated the ancient concept of cyclical time by suggesting (in *Will to Power* and *Also Sprach Zarathustra*) that the very life we lead will unquestioningly recur again in its identical form unless we aspire to become the 'Übermensch'.

> supposed by the return is not the eternity of the full present, but the infinity of rupture that the lack of the present introduces into time. [6]

In the photograph, things have been recorded from a distance (far), but the resulting image is easy to decipher and – therefore – near, but then again, removed in time. The photograph is therefore performing a circular dance, asking for remembrance, asking to be taken into the here and now, and at the same time receding into the distance again; always out of reach while simultaneously addressing the future and the past.

In this curious and ever lasting dance, Blanchot's notion of the Eternal Return may at last be realised through the medium of photography.

[6] Blanchot, *The Step Not Beyond*, x.

Beauty and the Beast

If there was such a thing as a Medusa Marketing Board, the slogan 'Boneless, Brainless, Bloodless, and Successfully Oceangoing for 650 Million Years' would in no way challenge the Trades Description Act.

Call them what you will, 'Jellyfish' or 'Blobs on the Beach' in popular terms or 'Medusa' as the scientific term for an adult jellyfish; most people are ambivalent toward these creatures. In popular perception they inhabit a territory situated at the threshold of attraction and repulsion, largely influenced, it seems, by the element they are encountered in. Nature films show them as graceful swimmers that can appear diaphanous, or fluorescent in deep seas, but our perception and reaction to them changes dramatically if we come upon them on dry land where they end up as formless entities in varying stages of decomposition. My interest in the medusas' liminal condition has led me to consider them in historical, theoretical and aesthetic terms.

One aspect featuring prominently in my investigation is that of metamorphosis. The idea of changing states is a way of life for the creatures I am exploring but, in a wider sense, has implications for our relationship with the our own bodies in general. In an age of ever faster changing technologies, the transgression or dissolution of boundaries is on the increase and, although we may feel safer by simply ignoring the changes, they still have enduring consequences. The safe knowledge that the human body is 100% human is no longer operational. People, for instance, now get a second chance at life with the implant of a pig's heart and mice are used to grow small human body parts. It could be argued that, in this case, the perceived boundaries between human and animal are showing 'leakages' while the addition of 'machine parts' is now also a common occurrence. Once we live, as many of us do, with engineered additions such as pacemakers and 'metal' bones, we have undergone a change, however subtle.

Regarding my investigation, the idea of change is ever present. There is the shape change that the Medusas undergo in their own life cycle, the 'thing'

they turn into when encountered out of their element and a further transformation through photographic means in my own practice. As I will expand on below, jellyfish seem to have been gendered female in the popular imagination, the term 'Medusa' itself is telling in its implication. In Greek mythology, the goddess Athena turned Medusa into a Gorgon after her dalliance with Poseidon. Medusa's silken hair was transformed into nests of venomous serpents and whoever looked upon her was turned to stone. Gorgons are the female monsters of Greek mythology. Monsters in fiction easily exchange body shapes, thus crossing defined categories but, in real life, the aforementioned interchangeability of body parts between human and animal is explored in theoretical tropes connected with the transgression of boundaries. In the case of the jellyfish, the notion of Kristeva's *Abject* comes into play as Beauty becomes the Beast by being stranded on dry land, evoking our sense of disgust, as this particular matter is encountered ' out of place'.[7]

1. The Facts

Jellyfish live in all of the major oceans. There are more than 2,000 species of jellyfish and jellyfish-like creatures. Some are the size of contact lenses, others are bigger than bicycle wheels. Their spaghetti-like tentacles may extend up to 200 feet. Biologically, jellyfish are classed as plankton, which includes any animal not strong enough to swim against the currents.[8] Every season schools of jellyfish can be found 'en masse' on beaches around the world, gaining some extremely bad press in the process. A 2004 Florida *Pensacola News Journal* report maintains that they

[7] I am referring to the famous quotation by Mary Douglas: "Dirt is merely matter out of place" in *Purity and Danger*.
[8] The word plankton, incidentally, is derived from the Greek word *planktos*, meaning 'wandering'. It is also the origin of our word *planet*.

> ...quietly wait for unwary swimmers, ready to latch onto a leg or arm or chest and inject you with venom. If chopped to bits by a propeller, they simply turn into thousands of tiny microscopic monsters.[9]

This phrasing already reveals some of the monstrous aspects these creatures seem to call forth, by suggesting a mechanical way of replicating themselves to do yet more damage even when deceased. According to a report by U.S. science writer Lilly Whiteman,

> ...many of the world's ecologically compromised waters, from Antarctic seas to tropical lagoons, are being inundated by these invertebrates. In 1999, enough jellyfish to fill 50 trucks were sucked from the ocean by a cooling system of a power plant in the Philippines. The creatures shut down the plant, plunged 40 million people into darkness, and started rumours of a coup d'etat.[10]

The medusa undergoes a remarkable number of life cycle transformations before becoming the creature we see stranded on our beaches. The adult medusa's eggs are fertilized by chance, either out in the water or under the female's umbrella. The larvae hatch from the eggs, usually floating within the plankton at first, but searching for a surface to adhere to. This can prove difficult in the open ocean and apparently the moorings of oil platforms make excellent modern grounds for the next stage of their development. Once attached, the larvae grow into polyps, their tentacles reaching out for food. Although being far from adult shape, they are already able to 'clone' themselves through a process named 'budding', where small polyps grow from each main polyp stalk. At a certain stage of the polyp's growth, the tentacles become segmented and, in an action called 'strobilation', the segments peel off from the stack and float away as young adult jellyfish called 'ephyrae'. Thus one polyp can spawn many hundred medusas-to-be.

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[9] See <http://www.pbrla.com/swimsafety_jellyfishbites.html>
[10] Lily Whiteman, *The Blobs of Summer* (2002 [cited); available from <www.nrdc.org/onearth/02sum/jelly1.asp>.

The ephyrae, themselves still plankton, feed on smaller plankton and grow until they reach sexual maturity, at which point they will have become medusas and able to reproduce.

Exaggerated reports of the toxicity of jellyfish are widespread and, although the tentacles of all true jellyfish are studded with stingers, a very small percentage are harmful to people. The symptoms include rashes and linear welts but are fatal to humans in only a few, very rare cases. The box jellyfish and the Portuguese Man O'War are the usual culprits, the latter indicating its potential with a rather combative moniker. In one of Arthur Conan Doyle's Sherlock Holmes mysteries a Lion's Mane Jellyfish was blamed for a death, although this presents more conjecture than fact.

Most jellyfish are poor swimmers but are propelled by tides, currents and wind. In the US, the Portuguese Man O'War commonly appears along the Gulf of Mexico coastline but can blow ashore as far north as Cape Cod.

The Portuguese Man O'War is not a single entity jellyfish but a colony of polyps, or 'hydrozoa', amazingly imitating the shape of a single medusa.

Hydrozoa colonies can have individuals that have specialized tasks like catching food, defending the colony or reproduction. Called a *siphonophore*, from the Greek *siphonophoros* or *tube bearing*, this colony of polyps can resemble large bladders of swimming individuals at the top of the colony and long threads with feeding polyps underneath, giving the impression of a single entity jellyfish. A feat of shape shifting, to say the least.

2. The Fictions

It is interesting to note that mere biological facts about the Medusa are regularly interpreted as signifiers of monstrosity. This 'monstrous' aspect of the creature seems to capture the collective imagination and has recently been taken up as a marketing ploy by some US Aquaria. The New York Aquarium at Coney Island Beach has a new wing entitled *Alien Stingers*: a dark interior with dramatically lit tanks and an otherworldly soundtrack. Long Beach Aquarium in Los Angeles is putting the finishing touches to its *Jellies:*

Phantoms of the Deep exhibit, featuring the 'Plankton Station', a 'Sting-O-Meter' and the 'Jelly-Jeopardy' game[11].

This is by no means a recent preoccupation: 'Monsters of the Deep' have been the subjects of stories throughout the centuries. The 1870 original version of Jules Verne's *20,000 Leagues under the Sea* features an illustration of some of the crew of the submarine *Nautilus* looking with amazement at clearly fictional, large dragon-like fish and giant jellyfish.

[11] For various info on jellyfish see following sites: Jellyfish, *Web Sites for Info:* (2004 [cited); available from <http://jellyfish-exhibit-long-beach.visit-los-angeles.com>
<http://www.aquarium.org/jellies>
<http://www.pbrla.com/swimsafety_jellyfishbites.html>
<http://en.wikipedia.org/wiki/Jellyfish
<http://jellieszone.com>
<http://www.ucmp.berkeley.edu/cnidaria>
<http://www.vattenkikaren.gu.se/fakta/arter/cnidaria/overcnid/nass01e.html>.

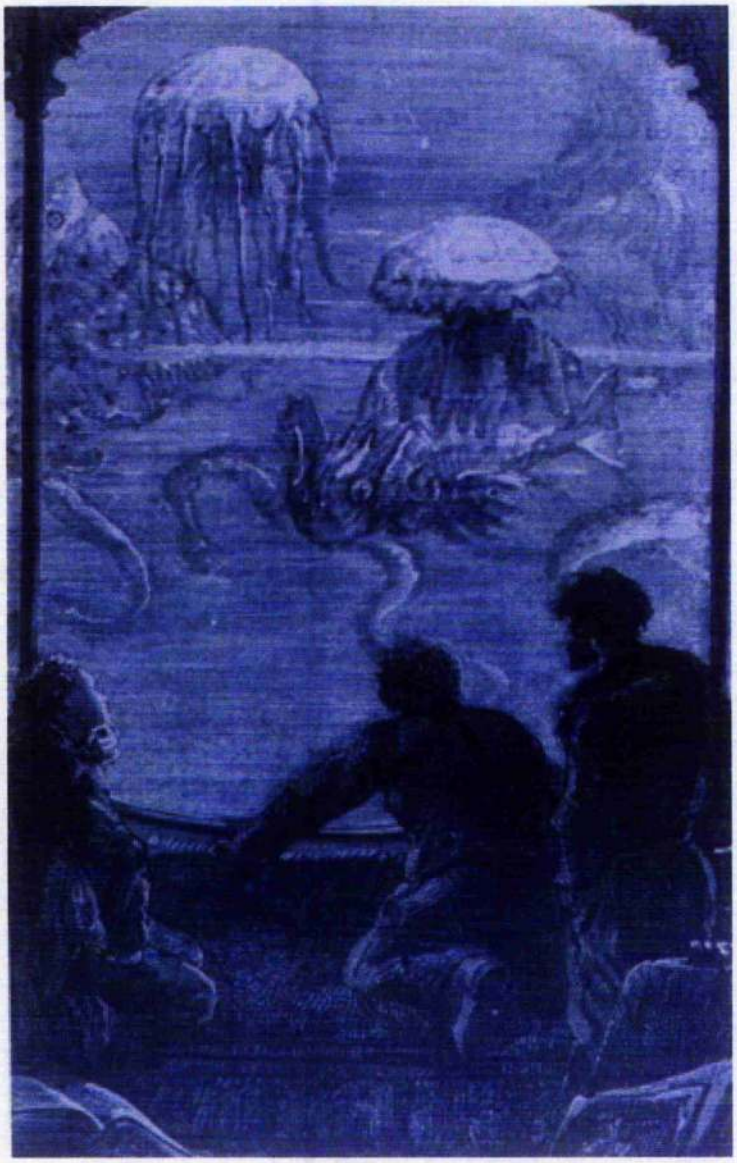

Figure 50: Observing marine life from the submarine *Nautilus*. In Jules Verne's *20.000 Leagues Under The Sea*, 1870.

A strange mix of fact and fiction operates in this image, but since its use is to illustrate a work of fiction, this is not a remarkable fact in itself. What emerges, however, is the fact that to us jellyfish are strange enough to be considered alien. In popular imagination, these creatures seem to be thought of as passive but potentially dangerous and somehow predatory entities and, as my research has shown, gendered female.

To my knowledge, the only instance of a testosterone-toting, male, monster jellyfish occurs in Florida filmmaker William Grefe's schlock-horror film

Sting of Death, made in 1965.[12] A mainstay of drive-ins all over the USA, its anti-hero turns out to be a were-jellyfish with a grudge - when not inhabiting his other shape, that of a marine biologist's assistant. Contrary to his real-life cousins, this mutant, when in its aquatic form, hunts down its victims on dry land and even commands hordes of 'regular' jellyfish to dispatch humans on his behalf. The film shows scores of gory deaths by stings, burns and welts due to the monster's bio-engineered parentage with a Portuguese Man O'War. Unsurprisingly, this particular species of jellyfish was singled out to play the villain – considering its name and role in fictional folklore. The fact that the species in 'real life' is not one entity but a community of thousands of small polyps was clearly beyond the scriptwriter's ken and care.

Closer to the general perception of the nature of the medusa comes the *Pale Lady Jellyfish*, courtesy of Jason Martinez from Long Island, USA: online Dungeon Master and creator of new monsters[13]. Martinez confesses to have been inspired by "what a good sailor story would be about". The *Pale Lady Jellyfish* is classed as a 'medium sized, aquatic aberration'. The description reads:

> Deceitful predator of the deep seas, these creatures charm their victims into their toxic embrace. The pale lady jellyfish appears to be a fairly ordinary jellyfish roughly four feet in diameter and whitish in colour. It has eight gossamer thin tendrils ending in pinkish suckers. The body is slightly luminescent, glowing a weak pink light. Pale Lady Jellyfish cannot speak but their illusions often do…

Their game combat abilities are described as such:

> When not feeding on fish or plankton, pale lady jellyfish attempt to lure humanoids into their embrace. They do this by creating tempting

[12] Donald Mankowski, *Review: Sting of Death* (Horror-wood Webzine, [cited 2004]); available from <www.horror-wood.com/tart_you_jellyfish_man.htm>.
[13] *Dungeons & Dragons* was a popular pre-PC fantasy game in the 1980's. There are now online bulletin boards and forums dedicated to the game where players publicise and swop their 'Warriors' and 'Monsters'.

> illusions (usually shipwrecked women) and then use their poisonous tendrils to incapacitate the poor soul.[14]

Here, Martinez crafts a hybrid of fact, fantasy and Homer's *Iliad.* In his version of the monster, medusas are using their 'female wiles' to feed on unsuspecting (and presumably male) adventurers. The description of 'eight gossamer tendrils ending in pinkish suckers' carries definite undertones of *female*, *clinging*, and *dangerous*.

In the 2003 Disney/Pixar film *Finding Nemo*, the two main fishy characters take a wrong turn in the ocean and find themselves surrounded by jellyfish. The jellyfish themselves are near motionless but very pink with long, frilly tendrils, giving the impression of a teenage girls' Night Out. The two fish must traverse the territory but, dramatically, one gets burned and stunned by an electric shock from a tendril and for a short while becomes unconscious. While the pink jellyfish never actually get to have their meal, the threat of the passive but potentially deadly predator is made clear. Interestingly, in real life an abundance of jellyfish is called a 'bloom', associated with flowers, femininity, fertility and imminent reproduction.

3. Metamorphosis

Given the shape-changing character of the medusas, both throughout their lifecycle and out of their element, the idea of metamorphosis is never far away. In Ovid's eponymous narrative, gods, humans and animals, animate and inanimate matter freely change shape and substance, sometimes with every intent of doing so, often involuntarily. In her examination of Ovid's *Metamorphoses*, Marina Warner finds that

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[14] Jason Martinez, *New Monsters / Pale Lady Jellyfish* ([cited 2004]); available from <www.geocities.com/celewritor/monster.html>.

> ... There is permanence as well as flux in the Ovidian cosmos: the extreme fixed state of petrification even brings to an end the animate existence of several of fate's victims, turned to stone for their crimes and misdemeanors, others fixed in the heavens as new constellations. ... Occasionally, simple visual puns on morphology can inspire one variety of botanical metamorphosis: for example, when Perseus lays down the Gorgon's head, the seaweed on the shore hardens on contact and turns to coral. [15]

The head, incidentally, belonged to Medusa. Ovid's sheer variety of transgression of boundaries calls to mind Hieronymus Bosch's well-known triptych *The Garden of Earthly Delights*. In the original papers, which were delivered with the painting in 1593, the triptych was first described as 'Painting of the Variety in the World'. In 1603 the Historian Padre Sigüeria named it somewhat fancifully *The Vanity of Glory and the Short-lived Taste of the Strawberry*.[16] After numerous subsequent re-naming including *The Painting of the Strawberry Tree*, it finally became *The Garden of Earthly Delights*. Indeed, strawberries literally feature larger than life. Constructed as a winged altarpiece, *The Garden* had been commissioned by Hendrik III of Nassau and was never meant to reside in a church. Today it resides in the Prado Museum in Madrid.

Painted much too early to be termed Surrealist, the painting nevertheless could be said to fall into this category, depicting a world where fish can fly and lovers sprout heads of fruit. The panels show what is now termed *Eden*, on the left, *Paradise* in the centre and *Hell* on the right. In the centre panel, beautiful nude people ride horses or oxen, frolic with fruit and outsized birds and use equally large shells and pieces of crustacean as shelter. The third panel, commonly referred to as *Hell*, depicts a multitude of surrealist scenarios. A pig in a nun's headdress seduces a mildly reluctant man while a human body is being devoured headfirst by a throned bird-like figure. Explosions abound

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[15] Marina Warner, *Fantastic Metamorphoses, Other Worlds: Ways of Telling the Self* (Oxford: Oxford University Press, 2002), 3/4,6.
[16] Hieronymus Bosch, *Garten Der Läste* (Munich: R. Piper & Co Verlag, 1955).

and, judging by the grimacing of some of the bodies involved, noise must be one of the methods of punishment. This is the only time that aural sensations are being referred to pictorially. This third panel, and to a degree the centre panel, signal mayhem and confusion, while the left panel, *Eden*, sporting the aforementioned strawberry tree (actually a tropical Dragon Tree palm draped with strawberry plants), seems peaceful and straightforward at first glance.

On closer inspection, emanating from the bottom right hand side, all the way up the right edge of the painting, disturbing things are starting to happen; creatures are mutating and a whole host of strange and indeterminate water creatures are taking to firm land.

Figure 51: Detail from Hieronymus Bosch, *The Garden of Earthly Delights*, 1593.

Warner again reminds us that in medieval eschatology, metamorphosis by almost any process belongs in the devil's realm:

> ... within the Judaeo-Christian tradition, metamorphosis has marked out heterodoxy, instability, perversity, unseemliness, monstrosity. As a philosophical and literary trope, as a theological principle, as cosmic and biological explanation, it distinguishes good from evil, the blessed from the heathen and the damned: in the Christian heaven, nothing changes, whereas in hell, everything combines and recombines in terrible amalgams, compounds, breeding hybrids, monsters – and mutants. ... [17]

In her view, Bosch's image of the creation of Woman indicates the coming disaster. Whereas the following panels clearly depict unreal scenarios, the landscape of Eden looks plausible and tranquil but just like in a good horror movie, closer inspection reveals mutated creatures hatching in unseen watery depths and menacingly crawling onto dry land. Anything untoward is happening only in the parts closest to Eve; Adam's side of the painting remains edenic. Paradoxically, it is only in Eden that predator kills prey and the struggle between life and death is addressed. An instance of the *Uncanny* operates here, precisely because we expect everything to be harmonious and placid in an environment where the Creator presents Adam with Eve. This is supposed to be Eden, not Hell: the *Before*, not the *After*.

4. Interpretations

The actions of hatching and splitting, detailed above, both conform to the Freudian notion of the *Uncanny*, which occurs when we are subconsciously reminded of long ago abandoned and repressed infantile fears and beliefs. The horror film genre exploits this particular notion by animating the Undead and

[17] Warner, *Fantastic Metamorphoses, Other Worlds: Ways of Telling the Self*.p.35/36.

monsters of every kind. Many of these play on fears of what might happen to our own bodies, such as the appearance of new orifices as memorably depicted in director David Cronenberg's 1983 film *Videodrome*, or other instances of growth and duplication where our expectations of body boundaries are questioned and challenged.

Innumerous tales, much older than Ovid's *Metamorphoses,* have employed shape-shifting scenarios to elicit an uncanny response in listeners.

I have addressed the medusa as a biological shape-shifter and its life cycle certainly replicates all these stages and more, yet it is not until it involuntarily leaves its element that our response to it becomes altogether unreasonable.[18]

In discussing Kristeva's concept of the Abject, Rosalind Krauss points out a similarity to Sartre's notion of 'slimyness', which fits a beach encounter with a jellyfish perfectly:

> ... Sartre's characterization of the *visqueux* (slimy) is a condition of matter that is neither liquid nor solid, but somewhere midway between the two. A slow drag against the fluidity of liquid... this flaccid ooze may have some of the qualities of a solid..., but it does not have the resistance of solids; instead it clings stickily to the fingers, sucking at them, compromising them, it is "docile'. Solids, Sartre reasons, are like tools; they can be taken up and put down again, having served their purpose. But the slimy, in the form of a gagging suction of a leechlike past that will not release its grip, seems to contain its own form of possessiveness. It is, Sartre writes, "the revenge of the In-itself."[19]

Sartre himself defines this sticky slimyness as an overtly female attribute:

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[18] Faced with a shapeless blob on the beach, it seems to represent aspects of three theoretical ideas at work: Sigmund Freud's *Uncanny*, Julia Kristeva's *Abject* and André Bataille's *Informe*, or Formless.It is beyond the scope of this paper to formulate a detailed discussion of the theories involved, but all three address the breaking down of boundaries in their own terrain.

[19] Rosalind E. Krauss, "The Destiny of the Informe," in *Formless: A User's Guide*, ed. Rosalind E. Krauss (New York: Zone Books, 1997), 238.

"Slime is the revenge of the In-itself. A sickly-sweet feminine revenge which will be symbolized on another level by the quality 'sugary'."[20]

Sartre juxtaposes the solidness of tools, i.e. the insubstantiality of the male with, as he sees it, the insubstantial gooeyness of the female, which passively and cloyingly adheres. It seems that, even in death, the medusa retains its female gender tag.

5. Practice

In my current photographic work I am trying to combine, in visual terms, our ambivalent reaction to an encounter with jellyfish while, at the same time, making a visceral connection back to perceptions of our own bodies. In the case of the medusae, we admire their beauty and grace when in their element, but their strangeness and potential toxicity alienates us and gives them an added edge. Just as their namesake, the Gorgon Medusa's head, was said to wreak havoc even after her death (the god Perseus used it to turn his enemies to stone), jellyfish tentacles are still able to deliver a sting when dead on the beach. In our perception of these creatures, the waterline seems to act as the divide; on dry land they become monstrous, abhorrent to some people, formless in their jelly-like consistency while still potentially able to do damage long after they have expired on the beach.

In my practice, I isolate them from their environment and photograph them on a light box or make photograms on light sensitive paper. The process itself is important. It forces me to physically handle the bodies, which serves to counteract any mere abstract aesthetic appreciation – certainly at this stage of the creation of the images. When making a photogram, the jellyfish sits directly on the photographic paper, which is then exposed to light. The resulting image looks more like a negative and the creature, while very obviously representing itself and leaving a true indexical trace, hovers between microscopic enlargement or, conversely, a telescopic view of a

[20] Jean-Paul Sartre, *Being and Nothingness*, in Ibid.

distant planet. This adds to the layers of perception and further alludes to a dimension of shape-shifting possibilities.

To emphasise the idea of metamorphosis and mutation I have started to 'mirror' the images' kaleidoscope-style, where a section of the image is replicated and digitally joined up seamlessly. This takes them toward the ornamental, which again has connotations of femininity but also of scientific history, when the kaleidoscope was invented and used as a scientific instrument. The fact that they are presented on a white background, thus removed from their context, plays on the idea of the collection, scientific or otherwise. This posits them beyond the beginning of the last century, characterised by a western preoccupation with a seemingly objective classification of the world. My computer-manipulated hybrids are attempts at preserving the medusas' fundamental nature while incorporating some of the ambivalent feelings we bring towards them and, as I am suggesting, toward our own bodies. By a digital flip of the viewing plane they intrinsically remain themselves, but acquire an ambiguous ornamentalism which questions reality and serves to make them 'both less and more' of what they are.

6. Research into Practice

The jellyfish work has been, all in all, a very physical experience. The starting point is walking beaches on both the East and West coast of Scotland, carrying buckets filled with seawater and a few dead jellyfish.

The first contact consists of lifting them from the sand and washing them in the surf before carefully decanting into buckets – with lids!

After this stage there have to be as few delays as possible, which has meant dropping buckets off in the darkrooms to be immersed in cold water overnight. The next morning would be spent photographing the jellyfish on a lightbox, all the while making sure that the seawater did not leak into equipment. Studio lights tend to generate heat, which means the aroma levels are rising steadily – a constant reminder of the subjects' origin.

The second stage takes place in the darkroom where the photograms are made. Certain decisions have to be taken, as in whether to pre-soak the photographic paper or not. If the baseboard of the enlarger is not absolutely level, the jellyfish may start to slide off during an exposure. Not good!!

Initially, I used implements such as spatulas to handle my subjects, but found it easier in the end to use my hands, since many of the jellyfish were extremely fragile and getting more so by the hour. Time was of the essence considering the decomposition factor. I also found out that different species dissolved others when left together in the same bucket. Chemistry?

Making the photograms has been the most unpredictable process of all. It was impossible to predict anything about the resulting image other than the outline of the subject itself. Much as with the x-ray, unseen inner structures manifest themselves, subject to change with each subsequent exposure.

I am giving a personal account of " the making of..." to illustrate the working methods required by the photogram as opposed to the photograph, something that I have addressed throughout this thesis. While it is true that photography in the studio also requires *some* handling, the photogram process requires contact not just in placing the subjects, but contact with the image-giving material. As indicated above, the results were absolutely unpredictable and unique as each photogram of the same subject is different.

What I have learnt through my research and the concurrent practical experiments is that, unlike taking a photograph from a distance, I will never experience the resulting images in the same way as someone just happening to come across them. Because of the photogram's image, unrepresentative of the subject per se, it is only the maker who carries the memory of the subjects who created the image, how they felt and, difficult to forget, their fragrance.

Making photograms is in part oriented toward process, much different from 'seeing' a picture and taking a photograph. With the photogram however, it is not until the print is developed that the content is revealed. It is a process by which the 'maker' is never entirely in control of the image, a process that

takes its own time and uses its own space; a process, very simple, yet sophisticated at the same time.

Parallels have been drawn between my work (Transitaria / Flux) and that of Susan Derges. The series in question is *Flux*, a series of 6 panels. Having made photograms of medusae for a long time I periodically reflected on their element but discarded the notion of making photograms of them in the water. Nevertheless, I experimented with water as a separate element with a view to have it undergo a similar 'metamorphosis' as the medusae themselves – becoming something else in the process.[21] In the same way as the images in *Bloom* are less overt depictions of jellyfish as they are indications of a visceral state, I wanted the water photograms to 'be water', but also hint at an interior space. Largely dark in tone and occasionally shot through with light, to me they represent rushing fluids and/or firing synapses. Given the history of my work over the years, there has always been more science 'fiction' than science. The title comments on the experience of movement and directionality, not substance. This is deliberate.

Susan Derges' photograms are all about locality. She has made work in the riverbed of the river Taw for years[22], almost all of it in colour and most of it with a view of looking up, ie: looking through the water's surface. Featuring shrubs above and vegetation trailing in the water and the moon in a variety of phases, many of these works resemble traditional Chinese painting.

Maybe the comparison between our works attests to the scarcity of artist working with the photogram and an 'looks similar – must be the same' attitude born of the fact that there isn't very much of it around.

In my past practice I have returned to photograms again and again without knowing exactly why I was drawn to this process.

Researching into the history and ontology has given me the opportunity to explore new subjects, such as the inquiry into touch, yet also to confirm and ground what I had suspected all along: there is a fundamental difference

[21] A series of 6 photograms of water, 60cm x 120 cm. See pages 250-253 for a sample.

[22] See Chapter One p. 42-45

between photographs and photograms. In this way, research has literally 'informed' my practice all along.

I am in no way arguing that photograms are more 'authentic' and therefore superior to photographs, just that they are different and operate on a different perceptional plane. The game of near and far bears witness to that.

It is the transformational aspect I am more attracted to and therefore had no problems in having a digital body of work accompanying the photograms. In the spirit of constant change, transformation and renewal experienced in our real-time world, I have created a new 'race' of organisms, strange but at the same time mildly plausible.

Transitaria

(2003-2006)

Transitaria encompasses four bodies of work: ***Bloom, Flux, Hybrids*** and ***Breathe.*** It reflects my interest in liminality, particularly things that hover on the fine line between attraction and repulsion.

It examines in visual terms, an encounter with jellyfish (Medusa being the term for their adult shape) and our ambivalent reaction to them while, at the same time, making a visceral connection back to the more primitive functions of our own bodies.

In our perception of these creatures, the waterline seems to act as the divide: on dry land they become monstrous, abhorrent to some people, formless in their jelly-like consistency while still potentially able to do damage long after they have expired on the beach.

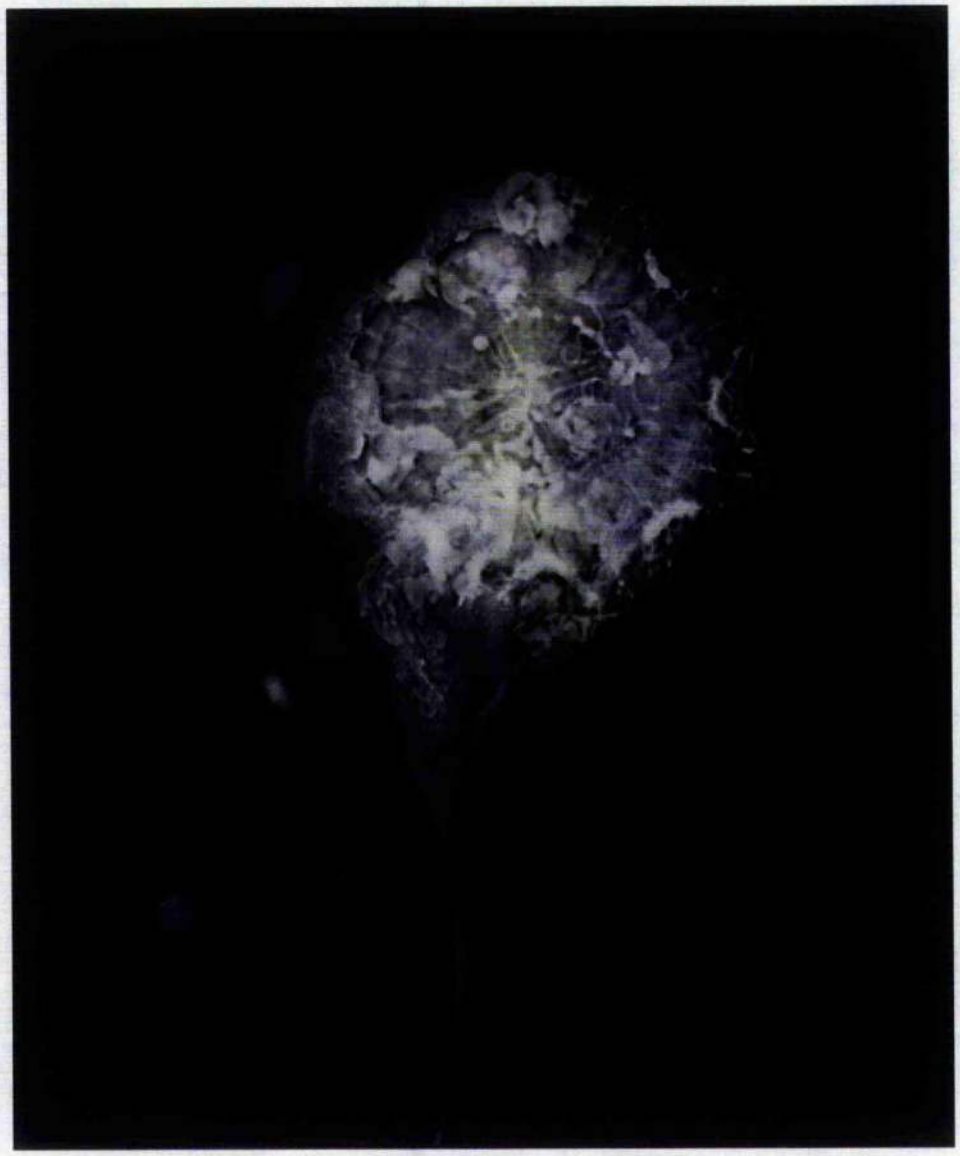
Bloom

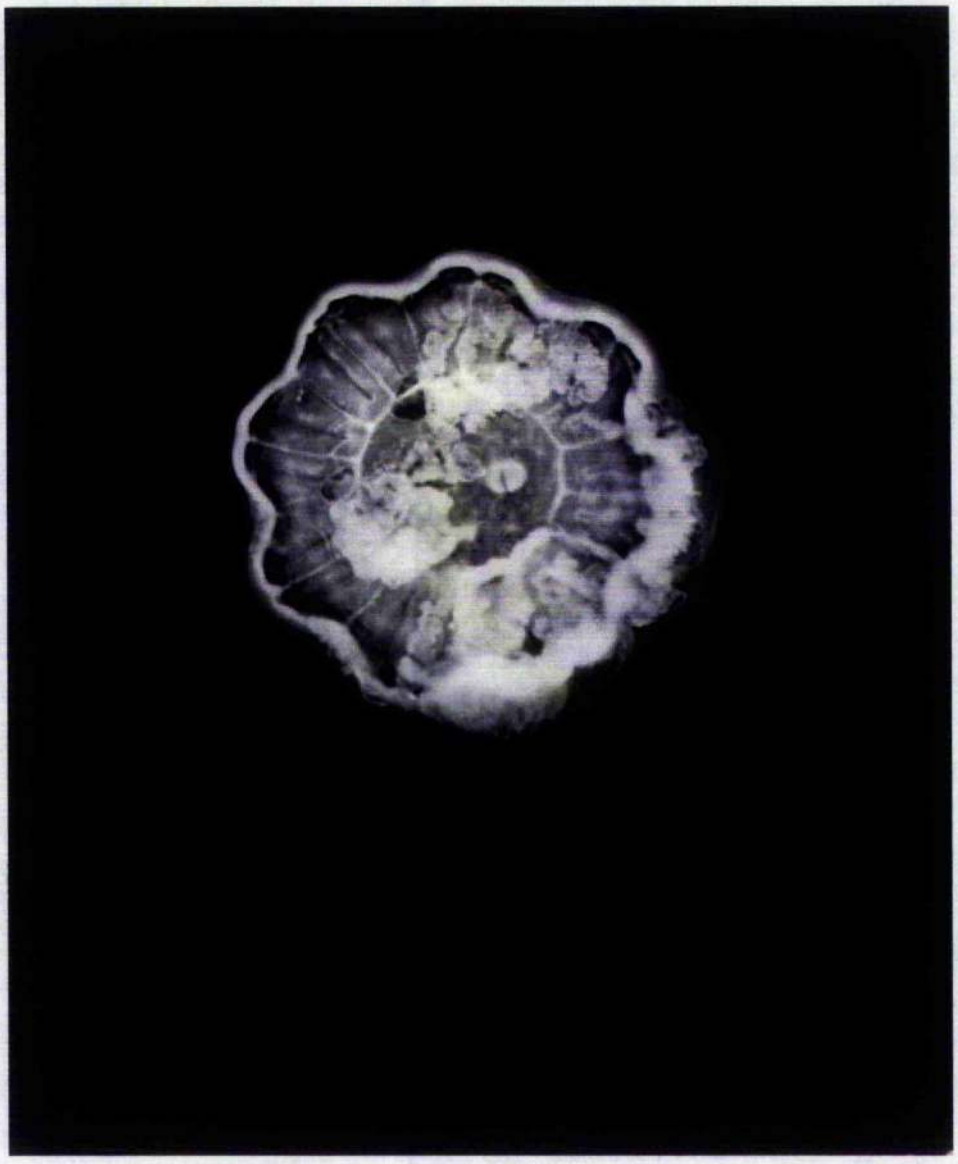
In *Bloom*, I have isolated medusae from the environment* to make photograms on light sensitive paper. The process itself is important. It forces me to physically handle the bodies, which serves to counteract any mere abstract aesthetic appreciation – certainly at this stage of the creation of the images. When making the photogram the jellyfish sits directly on the photographic paper, which is then exposed to light. The resulting circular 'imprint' looks more like a negative or an x-ray and the image of the creature, while very obviously representing itself and leaving a true indexical trace, hovers between microscopic enlargement or, conversely, a telescopic view of a distant planet.

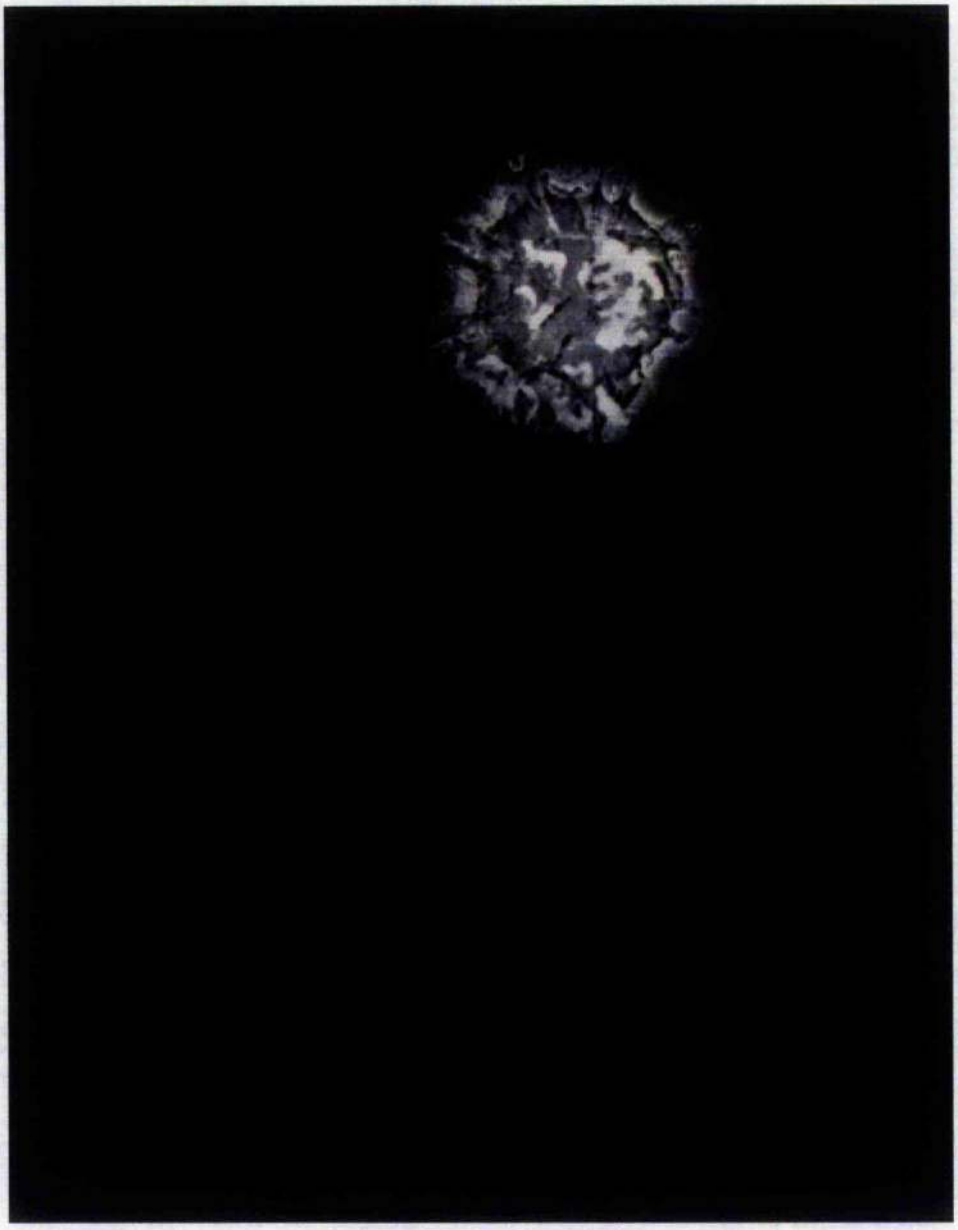
This adds to the layers of perception and further alludes to a dimension of shape-shifting possibilities, which echoes the life cycle of the creatures themselves. There is an archaic feel about them. Their appearance may have been captured in that one moment of exposure, but the image adds up to more than that. Unlike a photographic image, but very much in the tradition of scientific cataloguing, these photograms are closer to an imprint, or trace, signalling aspects of touch and authenticity due to the required presence of the object in the process of creation.

The size of the prints is 1 m x 1.3 m. The series can consists of 5 to 35 pieces, depending on installation space.

*No live jellyfish were harmed in these projects







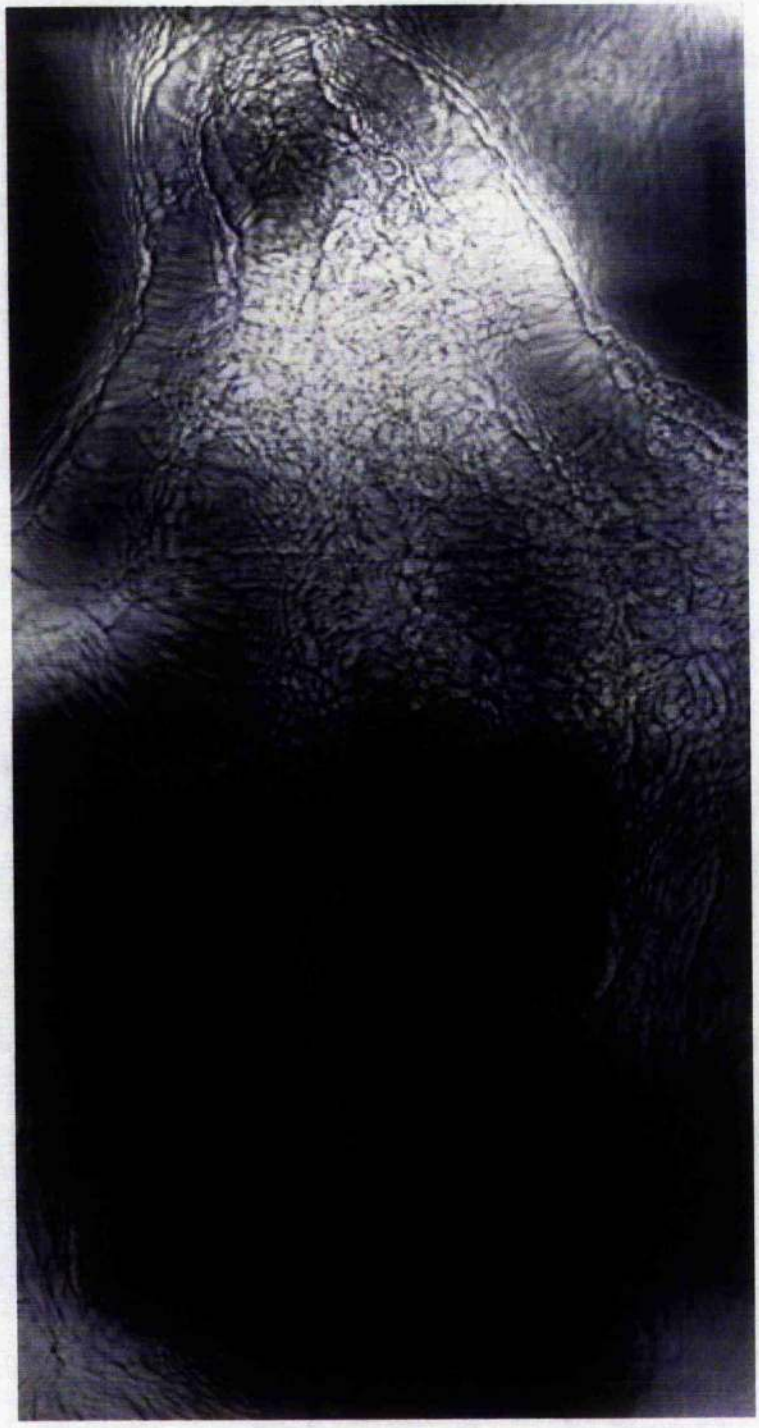
Flux

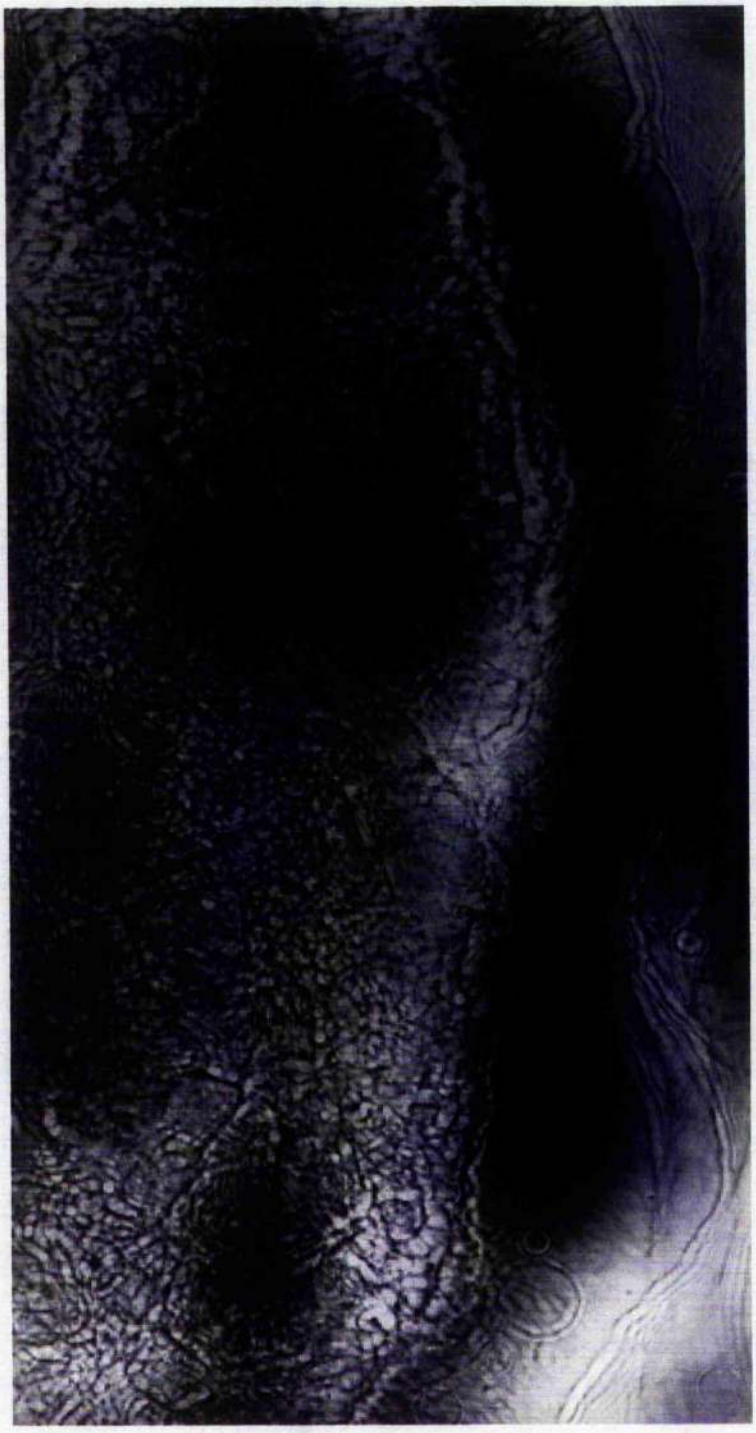
The following panels are unique photograms of water on silver-and-black monochrome paper.

Flux is visually messy and organic, alluding to the body's interior.

These monochrome illustrations are not entirely representative since the silver effect cannot be shown in print.

The series consists of 6-12 panels, 60 x 120 cm





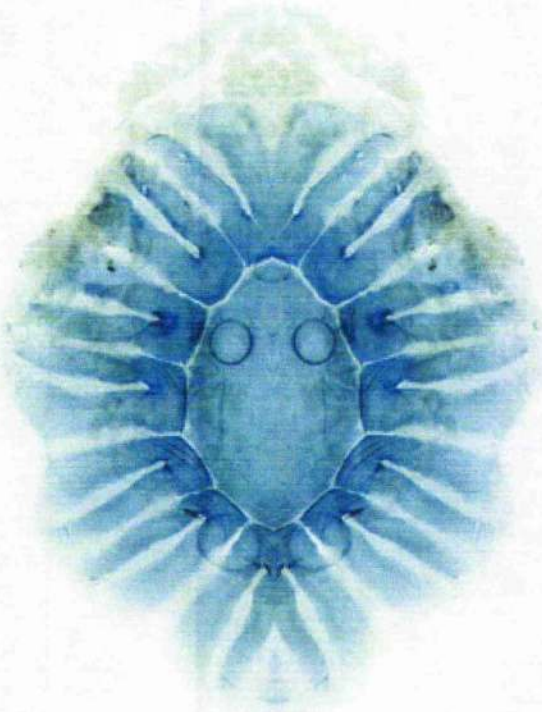
Hybrids

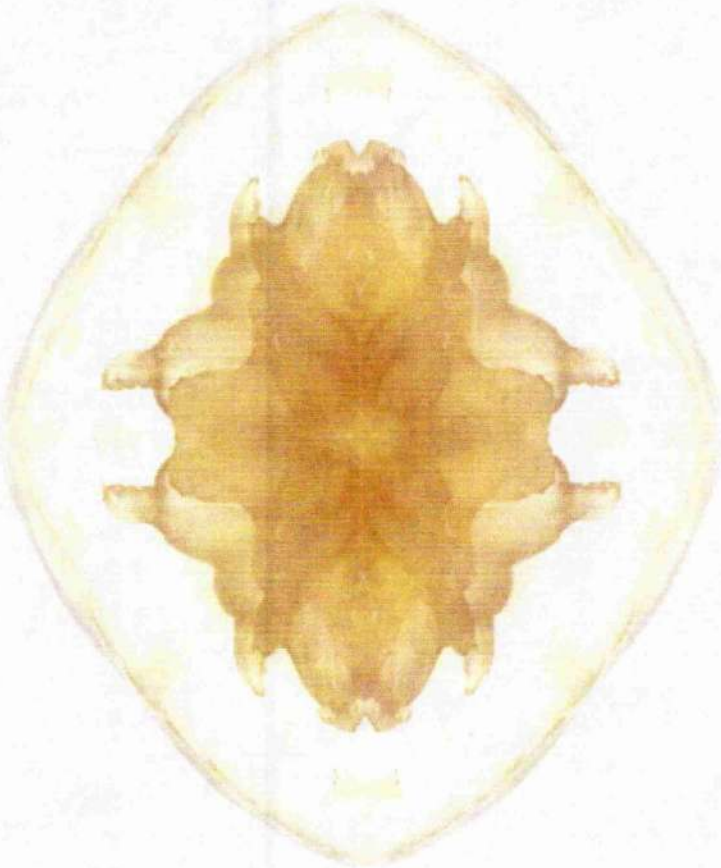
The series ***Hybrids***, emphasises the idea of metamorphosis and mutation of life forms. Initially photographed conventionally in a studio setting, the images are then digitised and 'mirrored' kaleidoscope-style, in that a section of the image is replicated once and joined up seamlessly.

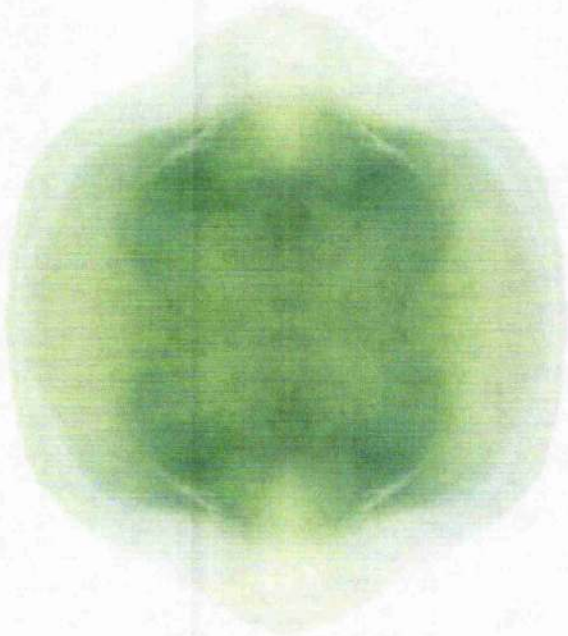
The fact that they are presented on a white background, thus removed from their context, plays on the idea of the collection, scientific or otherwise.

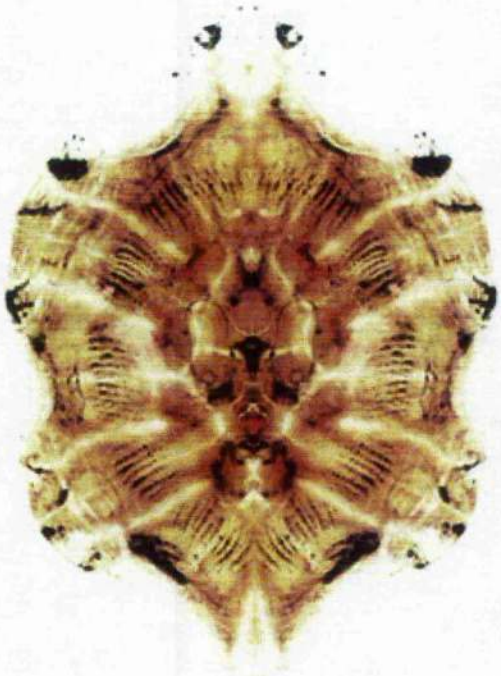
My digital intervention (a simple flip of the viewing plane) transforms them into a new digital species suggesting new habitats, new modes of existence at once simple and sophisticated, while still retaining the connection back to a visceral organic life form.

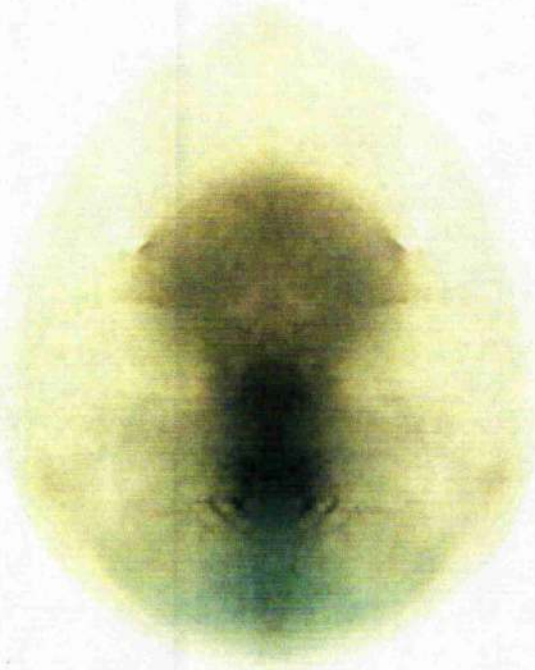
Digital prints, 50 x 50 cm or 60 x 60 cm. The series can consist of 5 to 40 pieces depending on installation space.

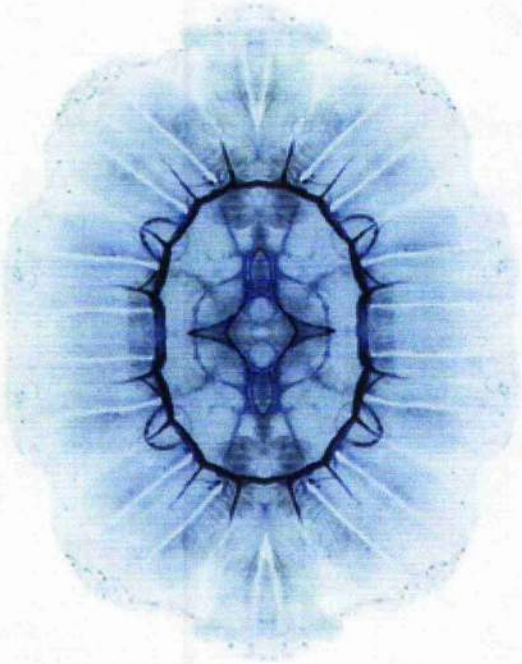












Breathe

Breathe is a video piece of 2.5 mins duration which can be shown looped on a screen or television monitor or be projected in a viewing space.

The slow and sometimes almost imperceptible movements of the central elements are offset by the 'breathing' of the membrane itself.

Please turn 90° clockwise for viewing.