

# The Changing Nature of the Photogram: Comparing Historic and Contemporary Examples of Camera-less Photography

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## Introduction

The photographic technique of the photogram (as we know it today) can be traced back to a period before the invention of the camera. The process involves placing an object between a piece of paper and a light source. The resulting image is unique, and resembles the shadow or silhouette of whatever object has been used. The ranges of tones achieved in the image are dependent on the transparency-opacity of the object.

A photograph is not without its limitations, and how well one of these images can be trusted as an accurate representation of an object is questionable: how much can you distinguish about an object from the image of its shadow? Therefore, what I am aiming to achieve through this research project, is to gain a better understanding as to why contemporary practitioners are revisiting this technique, especially now, in an age completely dominated by technology and consequently, digital photographic devices.

Using historic examples of camera-less photography, in the first section, will give me a basis to refer back to when analysing contemporary work. Specifically, I am going to look at William Henry Fox Talbot's 'Photogenic Drawings' which will then lead on to the work of Anna Atkins, who drew inspiration from Fox Talbot and produced the first photographically-illustrated book 'British Algae: Cyanotype Impressions' (1843-1853).

Looking at Talbot and Atkins, whose work both draw on Botanical subjects and ideas, will give a starting point to my next section. Here, I will be exploring the tension between photography used in science contexts, and also in art contexts. The link between the photogram and science (specifically the natural sciences) has been used and investigated since the origins of the medium itself. So much so, that it could be argued that without the 19<sup>th</sup> Century's fascination with Botany and the scientific desire to record natural specimens, the history of photography could have been very different.

Historically, science was regarded as a 'true' way of knowing the world, as opposed to religion or

mythology, for instance, and the photogram was linked to this. As will be discussed more fully below, this link to ‘truth-telling’ goes hand in hand with the idea that a photogram cannot be easily manipulated, with it being a chemical photographic process.

In section 2(d), I will further explore this idea of ‘truth-telling’ through the use of the photogram, by discussing the Photographic Index. The indexical nature of a photograph refers to the physical relationship between object and image; with a Photogram, there is direct contact between the two. This section considers whether this indexicality enables a photogram to be trusted as ‘truth’ or whether, because of the loss of representation, it actually hinders it: we know that an object was there in the making of the photograph, but can we really be sure what that object was? Possibly for these conflicting reasons, the development of the photogram process came to a stand-still, with the realisation that it could not efficiently fulfil its scientific or documentary role.

Section 2(e) briefly considers the ‘second incarnation’ of the photogram, the re-appearance of the medium during the Surrealist art movement of the 1920s. I will use Man Ray and his ‘*Rayographs*’ as my prime example, and this will allow me to comment on the medium’s change of context throughout history. At first, it was thought of as a means to document botanical specimens, and therefore, a scientific recording device: it was here re-discovered as an artistic medium, used and admired for its abstract qualities: the reasons why the process was disregarded in the 19<sup>th</sup> Century.

The focus of the second half of the essay is on contemporary camera-less practice, the ‘third incarnation’ of the photogram. Section 3(a) will discuss the *Shadow Catchers: Camera-less Photography* exhibition (held at the Victoria and Albert museum in 2010) and book that was published to go alongside it will enable me to find out more about the medium’s renewed popularity by both professional and amateur photographers.

Next, in section 3(b), I will look at how processes such as the Photogram and the Cyanotype, first used in the 19<sup>th</sup> Century, have in recent years become fashionable among amateur photographers and

hobbyists. I will conduct first-hand research here, looking at photo-sharing apps and websites to consider how these hobbyists are using these social media platforms in order to display their work and get it seen by a wider audience. This will allow me to compare the work of amateurs and professionals, alike, leading me to talk about the work of Susan Derges in my final section.

Susan Derges is a working artist who uses photography (specifically the photogram), as her preferred medium. She has based her whole career upon the technique, which makes her an ideal case study for my research project. Looking at her work will enable me to make comparisons from the use of the medium in the 19<sup>th</sup> Century, and also to how hobbyists may use the medium today. Using a contemporary artist, like Derges, also means I will be able to explore how far the process has been updated since its origins. For example, the numerous print-processes and photosensitive materials now available mean artists like Derges have a lot more scope with the process.

## Origins and Historic Uses of Camera-less Photography

### William Henry Fox Talbot: *The Photogenic Drawing*

The ‘photogram’ could be argued as the first photographic medium, it dates back to the 1830s when William Henry Fox Talbot, a British scientist and linguist, started making his ‘Photogenic Drawings’ (see fig. 1). Talbot had conducted many photographic experiments in his time, and when he was disappointed with results from the camera lucida, he decided he would try again, a method that he had worked on previously. He wrote ‘how charming it would be if it were possible to cause these natural images to imprint themselves durably, and remain fixed on the paper’ (Daniel). So that is what he aimed to achieve. Talbot used objects that he wanted to copy, normally natural specimens or lace, and placed them directly onto the light-sensitive paper, and exposed them to light. He would often flatten the object with glass so that it would form more of a direct contact with the paper. After exposure, Talbot tried various chemicals to fix the image, eventually he found out that he could use salt, which was also used when sensitizing the paper. Talbot referred to this process as ‘Photogenic Drawing’, meaning light-caused drawing. This was to be the start of the photogram as we know it today.

### Anna Atkins: *British Algae: Cyanotype Impressions*

Anna Atkins was an English Botanist and photographer who drew inspiration from Talbot's 'Photogenic Drawings' (which included a botanical example). She is famed for being the first female photographer, and published what is said to be the first book to be fully illustrated using photographs alone. This book was titled 'British Algae: Cyanotype Impressions' (1843-1853), and held in it photographs of seaweed specimens, (see fig.2 and fig.3). Instead of using Talbot's 'salt print' method, Atkins used the Cyanotype, (pioneered by Sir John Herschel, which was a cheaper and more permanent photographic procedure), to obtain scientific record of fine specimens that she deemed too intricate to draw. The resulting images were white silhouettes on the striking Prussian blue that is now heavily associated with the Cyanotype process.

Atkins used her 'British Algae: Cyanotype Impressions' book to present to other scientists and institutions throughout Britain, meaning her work was made with the intention for it to be a scientific record. However, it has since been argued that Atkins's lack of specific details including the location where the specimens were found and no mention of the species' colour, meant that it could not be used as a completely scientific case study. Nevertheless, what the work did is prove that Atkins enjoyed the process of the photogram and the freedom this gave her. John Hannavy (2007: 94) quotes what Atkins wrote in the preface of her book, 'I have intentionally departed from the systematic arrangement that I might give specimens of very various characters and shapes', this shows that she cared for the aesthetic quality of her prints and demonstrating a cross over between the science and art contexts within the medium of photography, right at the very beginning of the process's invention/ discovery.

### The link between photography and science

Since the discovery of photography, the connection with the medium and science has forever been apparent. If we go back again, to the origins of photography, we see that the pioneers of the medium all stated how it was nature alone that created the images. ‘Talbot wrote that photography depicts its images “by optical means alone”; the image is “impressed by Nature’s hand”. (Warnier Marien, 2002: pg 73). Both Daguerre and Niepce also released similar statements. Because photography was seen as nature revealing itself, it was deemed totally independent from the photographer. This meant that for generations to come, photography would struggle to be accepted as a fine art medium. However, it also meant that photography was accepted as truth compared to other illustrative mediums such as drawing, and there were no means for manipulation because the medium was integrated with the Western belief that knowledge should be based purely on observation and not opinion.

Nature revealing itself is an interesting way to describe the process of the photogram, especially when we consider the photograms link with Botany. Carol Armstrong (2004: 87-88), talks about how Beaumont Newhall: art historian, curator and writer, “associated the origins of photography with the organic process of photosynthesis (discovered likewise in the eighteenth century) and the chemical changes wrought by light on certain substances.” The reason for this association is because, and I quote, “the ancients had already observed that light not only forms images, but changes the nature of many substances. The chlorophyll of vegetation becomes green on exposure to it; coloured fabrics fade. Among the substances radically altered by light are certain salts of silver, especially the halides...” Considering this link between photography and photosynthesis further helps to explain why the medium was used by Botanists for the recording of plant specimens: light had the power to both alter and record nature.

Photography has been used as a means to illustrate natural forms since the very beginning of the medium. As Gennochio (2004) explains, it was ‘a demand for more efficient ways to make detailed reproductions of plants, mostly for scientific study, [that] was a catalyst for photographic experiments.’ Therefore it is safe to assume that without this demand from Botanists, photography may not have taken the same direction that it has taken up until now. ‘Photographic experiments’ is the term used here, because camera-less photography in the day of Anna Atkins and Henry William Fox Talbot, were just that: experiments before the invention of photography as we know it today. Photography is so deeply rooted in science, that before there were photographers, there were scientists and experimentalists, working on ways for nature to reveal itself.

Talbot wrote an influential paper titled ‘The Pencil of Nature: A New Discovery’, which was published in six instalments between 1844 and 1846. Hershberger (2014: 44) suggests the subheading is an important indication of Talbots scientific position, “if photography is a discovery, then it seems more natural and objective; if an invention, it seems more cultural and subjective”. Photography, as this suggests, really was deemed as a means by which natural objects illustrate themselves and therefore it was also deemed the perfect medium for documentation. There could be no manipulation because the illustrations were caused by chemical process, the object itself and not the artist’s hand.

During this time, in the Victorian era, learning about new scientific discoveries and plants was a science that was deemed acceptable for women. Before the 18<sup>th</sup> Century, women had used plants in order to make home-based health care, so the continuation of learning about new scientific discoveries and natural forms was deemed as an acceptable science for women and children to learn about. Michigan State University Libraries write on their webpage about Botany, that ‘botanical knowledge made a woman a better conversationalist, a better mother-teacher of her children, as well as a better illustrator of beautiful things.’ As already suggested, this need for the illustration of Botanical specimens led to the invention of photography, as some plant forms were deemed too intricate to draw.

Anna Atkins was at first a Botanist, then a Photographer: the so-called ‘first female photographer. As Atkins was a Botanist, the only science respectable females were able to pursue during the nineteenth century, her work may have been taken less seriously than the work of for instance, John Herschel or William Henry Fox Talbot, who were male chemists: a gender and science all taken more seriously during this time frame. De Zegher (2004: 79) states that’ botanical illustration was thought of as a “domestic” art form’ undertaken by women, as it was a ‘pastime that allowed women to develop their intellectual and artistic activities’ and was often used to assist in ‘legitimizing the scientific treatises of their male relatives and colleagues’. This could therefore suggest that Atkins’s work was deemed to be less informative, (there was no detailed information in her book- only her ‘cyanotype impressions’) and more aesthetically pleasing, which is where the crossover of science and art based contexts within camera-less photography originates.

Atkins also belonged to the upper classes of society, and so was able to explore her passion for Botany and photograph, and more importantly, she had the means by which to do so. Atkins learned about Talbots “photogenic drawings” and “calotypes” directly from the man himself, and it has also been suggested that she learned her medium of choice, the cyanotype, directly from its inventor Sir John Herschel, (who was a friend of her father, John George Children).

The visual language of Botany is so distinct and memorable in the history of photography, that conceptual artist Joan Fontcuberta, has used the visual conventions associated with this genre of photography- to challenge ‘photography’s own workings as a system of representation’ (Batchen, 2013: 27). Fontcuberta’s series of work titled ‘Herbarium’ (see fig.4), published in *The Photography of Nature and The Nature of Photography*, ‘may or may not depict flowers, but they do certainly represent ‘botanicity’, a term we might henceforth use to describe the visual conventions of botanical study and the authority of science they conjure, and with it the truthiness that makes botany plausible as a body of evidence’ (Batchen, 2013:7). ‘Herbarium’ consists of a series of images which appear to depict flowers, but instead are made up of other forms. Throughout *The Nature of*

*Photography*, a photographs ‘truthiness’ is discussed: *truthiness* refers to what you want the facts to be, rather than what they are: with ‘Herbarium’, we believe that the photographs are truthful because we already associate this visual language with science and fact. This can also be related to Barthes theory of photographic meaning: dividing it between denotation and connotation. Denotation being the mechanical recording of things in the world and connotation being the symbolic associations we have with these things.

### The Photographic Index- the “truth” in the photograph

As this reference to Barthes suggests, when discussing the photograph, it is important to think about photography and its “truth claim”. Traditional chemical photography has been associated with being free from subjectivity and manipulation, meaning it has often been thought of as being truthful, and therefore making it the perfect medium for science-based illustrations. We can then take this further with the photograph, and talk about the photographs indexicality. The indexical nature of a photograph refers to the physical relationship between the object and the image. Armstrong (2004: 94) suggests that Botanical photographs possess ‘an authenticity based on their being in direct touch with nature’s specimens’. When using a camera, this physical relationship between the object and the resulting image is obstructed by the lens and film.

However, because of this direct contact, the image’s representational value is sacrificed. Batchen (2013: 7) suggests that ‘While photography always provides an indexical truth- to presence, it doesn’t necessarily offer a truth-to-appearance.’ To clarify, a photograph reveals that there was once something present, but we cannot be certain what that something was. As Gunning (p.41) suggests, ‘Our evaluation of a photograph as accurate (i.e. visually reflecting its subject) depends not simply on its indexical basis (the chemical process), but on our recognition of it as looking like its subject.’ With the photograph, it could be argued that the resemblance to the object that they are supposed to represent is not very strong. Photographs only show us the shadow cast by the object, and any detail is evidently lost. A photograph may depict the accurate size and shape of the object it represents, but all information regarding colour and surface texture is lost. For these reasons, it could be argued that Anna Atkins’s work could be disregarded as a scientific manual: her Prussian blue cyanotype prints may not be accepted as a scientific record because we are given no information regarding colour, surface texture or location. However, to this day, they are still deemed as an important milestone within the history of the photographic medium, and referred back to because of their strong aesthetic stance at a time when photography was not regarded as an artistic medium.

It is because of these limitations of the photogram that the process took a stand still. Lyle Rexer (2002: 128) states that the process ‘inevitably came to be regarded as nothing more than an infant stage of negative-to-positive photographic representation. The process was not superseded; it simply became unimportant to photography’s documentary role.’ It is therefore important to understand what is meant by photography’s documentary role. Warner Marien (2002: 23) states, ‘Photography’s neutral vision was conceived not only as a boon to science, but as a socially symbolic anticipation of a future in which the world could be better known by more people- a means to democratize knowledge’. Photography’s neutral vision refers to the belief that photography allowed nature to be both revealed and understood. Therefore, if photography’s role was to document, and a photogram meant losing detail and information- then the medium was not fulfilling its role. This meant that the process of the photogram was to come to a standstill, and experimentation that worked towards understanding photography as we know it today was to begin.

### The Photograms Second Incarnation

The medium of the photogram was forgotten about for so long that in the 1920s, artist and photographer Man Ray was to use this technique of image making in order to produce his so-called '*Rayographs*'. The process of what we call the 'photogram' today, had been unused for so long that Man Ray actually believed he had invented the technique. His *Rayograph's* (see Fig. 5), put him 'on par with the avant-garde painters of the day' (Metropolitan Museum of Art), with his images hovering on the borders between the abstract and the representational. Lyle Rexer (2002: 129) states that 'In its [the photogram's] second incarnation, the precursor of photography became a quintessentially modern art form'. In a time where photography was beginning to be accepted as an art form and did not have a purely documentary role, the image-making process that existed before the camera became some artist's medium of choice. It could be argued that these surrealist artists were drawn to the process for the reasons that it was abandoned in the first place: its abstract, dream-like qualities.

In some instances, it is possible to determine what objects had been used by Man Ray to create the resulting images, and in others it is less clear. His work was a form of abstract art so it would be argued, therefore, that how well the image resembled the object was not important. Man Ray was an artist with primarily no background in the sciences. Laszlo Moholy-Nagy and Christian Schad also worked with the photogram technique and produced similar imagery to Man Ray during this era. Even so, this 'second incarnation' of the photogram was relatively brief, only lasting in the 1920s and 30s.

As will be discussed further in the next section, this loss of visual accuracy and the abstraction of images created via camera-less photography has meant contemporary artists and photographers such as Susan Derges and Adam Fuss who have been able to build their whole careers using this medium more metaphorically to produce art works embedded with concept.

## The Third Incarnation of the Photogram: Contemporary Practice

### Shadow Catchers

This camera-less image-making technique has become popular for a third time in history, with contemporary artists rediscovering the medium during what is a highly-digital age. In 2010, an exhibition was held at the Victoria & Albert Museum in London that showcased the work of five international contemporary artists, this exhibition was titled 'Shadow Catchers: Camera-less Photography' and was curated by Martin Barnes. The term 'camera-less photography' is quite interesting if we consider the origins of the word 'photography'. In the original definition of the word, we get 'photo' and 'graphy': 'photo' being Greek for light, and 'graph' meaning writing/ drawing. Therefore 'photography' meant 'light-drawing', to create an image using light alone. Nowhere here is there a mention of the camera. Barnes (2010:8) writes in the exhibition-accompanying book, that each of these five artists, (Floris Neussuss, Pierre Cordier, Susan Derges, Garry Fabian Miller and Adam Fuss) has 'consistently challenged the assumption that a camera is necessary to make a photograph'. In other words, artists today are still challenging the new norms that photography has acquired by using traditional, historic image-making techniques that were used before the invention of the camera, as we know it today: a 'man-made mechanism or technology', (Armstrong, 2004: 87).

The extent of the renewed popularity and interest in camera-less photography can be seen from the need to produce a second edition of the 'Shadow Catchers' book. Barnes (2010: 10) states 'Both the first edition of the *Shadow Catchers* and the exhibition proved extremely popular' and that 'Since the exhibition closed, numerous artists, students and scholars worldwide have been in contact... They have confirmed that this subcurrent to the mainstream- this hybrid of photography, painting, science and art- runs deep and wide...', this observation suggests that this type of image-making is being practiced widely and is once again in popular demand. Barnes(2010: 10) also states that 69% of the exhibitions visitors "identified themselves as being involved in the 'creative industries'" and many of

these were students who are seeking a much more tactile approach to image-making in this digitized era of lens-based practice.

The idea of camera-less photography being much more hands-on could also be a reason as to why contemporary artists are revisiting the process: enjoying the historic, chemical-based aspect that camera-less photography employs. In recent years, many historical photo-processing techniques have become fashionable again, as Jill Enfield (2013) writes in the blurb of her book, 'in the world of photography, a passionate crowd of professionals, students, and hobbyists is returning to the darkroom in search of a more authentic, handmade feel to their art.' This statement supports the suggestion that creatives are seeking methods of image-making that feel a lot more tangible, in comparison with digital imaging that has rocketed in recent years. This coincides with current debates about whether or not 'we are all photographers now', at a time where cameras are so readily available that they are even in our phones and tablets. It could be suggested that it is for these reasons that creatives are seeking different ways of producing photographic imagery, so that their work stands out from the vernacular photography we see every day.

## Historic Photography as a Modern Hobby

In addition to historic photography processes making a comeback within the professional art world, they have also been explored by amateur photographers who enjoy the techniques that have almost become a craft/ hobby, and the aesthetics associated with these techniques.

It could be argued that this amateur-interest in alternative photography is fairly recent and has not attracted very much research as of yet, so finding sources for this area of study was fairly difficult. However, I found it too relevant to dismiss entirely from the project, so have conducted first-hand research using social media sites such as Instagram and the photo-sharing site Flickr, using the hashtag system to find examples of camera-less photography. I have also referred to articles posted on sites such as Vogue to gain an insight into how these sites are used by artists, whether professional or aspiring.

When discussing these historic, often referred to as ‘alternative’ methods of image-making, (see *Jill Enfields Guide to Photographic Alternative Processes: Popular Historical and Contemporary Technique*, 2013), it is important to remember these are not limited to the art of the photograph, but also include the cyanotype, salt printing, pinhole and many more.

Like artists who are using similar processes, it could be suggested that these working methods are so appealing and have regained popularity in the digital age, because they give the medium of photography back the tactility and objectivity that it was once associated with. It is interesting to notice, therefore, that these three-dimensional prints made by amateurs, are often re-photographed by digital media and uploaded to internet forums and social media platforms (see Fig. 6): meaning techniques that give a photograph back its object status are inevitably and ironically being turned into data. Instagram offers filters to its users which can alter the appearance of a photograph: whether that is to dim the colours of the photograph or to create a vignette/ border (see Fig. 7). So, if

someone has spent time creating a beautiful Prussian blue print, they can often lose their striking colour after being edited and uploaded to the social media site.

This then suggests that it is not just the craft aspect of alternative process that these amateurs enjoy, but it is also the aesthetic. Techniques such as the cyanotype and the photogram would be difficult to recreate digitally: especially the cyanotype, which involves the photographer/ print-maker having to apply their own photosensitive chemicals onto their material of choice. The application of chemicals is often done using paintbrushes and so can leave brush strokes (see Fig. 8), which some users of the process find desirable as it certifies that the prints have been made by hand.

Re-photographing and uploading to the internet, for artists, both amateur and professional, is a great way for them to display their work and to get it seen by others who have similar interests. Often amateur artists will upload their work to sites such as Flickr, Pinterest and Instagram, using the hashtag system in order for potential viewers to access the imagery. Fleming (2014) suggests that ‘The social media platform is not only launching the career of under-the –radar artists it is providing the world with an entirely new way to access art... today artists use Instagram as their own virtual art gallery...’ This online platform allows artists to showcase their work without having to have a huge budget or a high-profile that would lead to their work being seen in a major, curated exhibition such as *Shadow Catchers*.

As will be suggested more fully in the following section, another major difference between alternative processes being used by amateurs and professional artists is the issue of the concept. While artists will make a whole series of work which are all embedded with conceptual meaning, paying attention to every detail (such as scale, materials used, how many prints within the series etc,) amateur photographers will often print for printings sake, because of the enjoyment the craft brings and the aesthetics that are achievable. The differences between amateur and professional alternative process work could also be down to budget; where professionals will often be commissioned to make works or have arts council funding, amateurs will only have what spare income they have, and will

presumably also not have the same amount of time to spend on works because making this work is not their full time job. Bearing these factors in mind also suggests why the cyanotype process is favoured by hobbyists, because of its reputation (and suggestion by Mike Ware, 2004) as a cheap and easy alternative print process. Cyanotypes are made by exposing the sensitized paper to UV light, so can easily be made using sunlight, meaning no expensive photographic equipment is required and therefore making it the perfect medium for hobbyists.

With a lot of the material posted on Instagram under the hashtag 'CYANOTYPES', I have found the majority of these to also be photographs of natural forms. This implies that direct inspiration is still being taken from the work of Anna Atkins, with hobbyists producing images using exactly the same method she will have used some one hundred and fifty years ago. This is another difference between amateur photograph-enthusiasts and contemporary professional artists, who are often pushing the medium to its limits: updating and refining the method as they work. This will be discussed further in the next section.

## Susan Derges

Looking at the work of Susan Derges, it may not be immediately clear that it has similarities to the work of the late Anna Atkins. From close analysis, it is clear also that Derges' work is embedded with concern for both science and aesthetics. Martin Barnes (2010: 94) argues that Derges' work draws 'some of its power from its association with science, [yet it] has retained a strong aesthetic stance, balancing systems of enquiry with a formal concern for beauty'. Atkins's work, as discussed earlier, was deeply rooted in science- after all she was a Botanist before a photographer, and she produced photograms before the invention of the camera: when it was thought that photography was there to inform and not for art's sake. However, we realise that she too cared for the aesthetic of her prints, stating in her book's preface that she intentionally strayed from the customary scientific arrangements of particular plant forms. Derges' work, instead of being made for a scientific audience like Atkins's, is made bearing an artistic audience in mind, however, her work draws significant inspiration from the sciences. According to Barnes (2010: 95) 'numerous commentators have drawn attention to the visual language and techniques of scientific investigation that Derges uses in her art'.

Derges' work is a perfect example of how, with time, the photogram process has been expanded and modified. Barnes (2010: 96) states that 'Her camera-less work stretches the definition of photogram to such a degree that it is easy to overlook the fact that most of her images are made within narrow and demanding constraints'. Here, Barnes is referring to Derges' working methods, often producing work outside of the darkroom, creating photograms of intangible subjects.

She produces her large-scale prints by submerging photo-sensitive paper into the depths of rivers, oceans and streams. She then exposes this paper using a split second of flashlight to freeze the water in motion. Derges' method of image-making shows how far camera-less photography has been updated and modernised since its birth: now it is possible to produce images that document what is often too fast for the human eye to even comprehend. This shows how Contemporary artists are

expanding upon the camera-less techniques, rather than merely imitating them, which was suggested in the previous chapter.

The 'River Taw' series (see Fig. 9) is a perfect example of this visual language of scientific investigation and was produced between the years 1997-1998. The concept stemmed from her great interest in the natural world, which was to grow even more after her relocation from the city to the Dartmoor countryside in 1992. The River Taw rises close to the location of her studio and so she began to study it in great detail. With the passing seasons and the weather changes that these brought with them, Derges began to acquire knowledge of the water's flow, and used this knowledge to figure out the best places to transport her black and white Kentmere paper to make prints with. It has been suggested by Danziger Gallery, that 'her practice reflects the work of the earliest pioneers of photography but it is also contemporary in its experimentation and awareness of both conceptual and environmental issues'. So, where Atkins and her fellow 19<sup>th</sup> Century pioneers used the medium purely for documentation, Derges is concerned with current environmental issues, which is why revisiting the same places over a length of time and through the passing seasons is so important. Patterns that the water would create onto the light-sensitive paper post-exposure would change depending on when they were made. Fig. 10, for example, shows the water frozen as ice, which differs from Fig. 9 because of the different season (and therefore temperature) that the two prints were made. Barnes (2010: 96-97) suggests that her work is an illustration of her 'deep desire to fix ever-changing, constantly renewing forms', which is why water has become such a recurring metaphor within her work. This is also why, as an artist, Derges uses photography as her preferred medium, she stated that 'photography is kind of tied up with death in many respects... you're looking at absent moments-they're no longer there' (Derges, 2010). She used water as 'an artistic morphology of water as a universally recognised force' (Barnes, 2010: 95). It gives her a metaphor to use for the idea transformation, to capture what is too fast for the human eye to comprehend, and what is often overlooked. She uses water to talk about 'what underlies the visible rather than to just show the visible', (Derges, 2010).

Continuing the theme of water in her work, and again using her pioneering technique or immersing paper into the water, Derges began to create photograms on the beach which resulted in her ‘Shoreline’ series, (see Fig. 11). Derges used dye-destruction paper to achieve boldly coloured prints, which would take on coloured tints from the ambient light; again suggesting her interest in time-based environmental issues, as different colours were achieved depending on when the prints were made (see Fig. 12 and Fig. 13): the tones range ‘from blue at full moon to green at new moon’, (University of Warwick, 2010).

What Derges was doing by creating these unique pieces of art, as Barnes (2010:95) states, is ‘sampling the natural world, lifting pieces of rivers and waves out of their natural environment to be honoured as marvels of nature in the context of art.’ This art-based context is an important observation of the current use of the photogram-process. Where the photogram would have once been made for photographic and scientific purposes, it is now used as a preferred medium by artists, rather than photographers: it is important to note that Derges was a trained painter before she turned to this method of image making, which explains why she could have been drawn to the photogram in the first place: for its painterly qualities.

Where the work of Derges and that of the 19<sup>th</sup> Century photography pioneers has its similarities, is they all took specimens from the natural world, whether they be tangible or not, and presented them photographically. An essay written by Richard Bright, (1997) is titled ‘River Taw: Nature Revealing Herself’, this title alone suggests the similar themes within Derges’ work to the 19<sup>th</sup> Century use of the photogram, where Talbot would also refer to his ‘photogenic drawings’ as nature revealing itself.

## Conclusion

Camera-less photography can be traced back to the 1830s, before the invention of the camera. Since then, technology has advanced hugely and cameras have become part of everyday life: whether that is in the form of a DSLR or hidden in our mobile phones. Therefore, what I intended to achieve through conducting this research project, was to find out how contemporary artists and hobbyists are using this basic, historic method of image-making, in this technologically advanced age. I used both historic and contemporary case studies to gain a real insight into what the process has to offer, and to enable me to make comparisons between the uses of the photogram both now and then.

Historically, the method was used primarily to gain scientific record. It was then realised that, although a photogram could provide some authenticity, (there has to have been an object there in order to make the image), it did not always hold any representational value. Therefore, it could not fulfil its documentary role.

This process then came to a halt, until it was picked up again by Man Ray in the 1920s. The photogram was ironically favoured by Man Ray and other surrealist artists, because of the qualities that meant it was forgotten about in the first instance: it was abstract and dream-like.

I have found that the photogram has a place in both science and art contexts: the work of Atkins was produced for scientific purposes, but now photography has been accepted as a legitimate art form, it is now admired for its strong aesthetics. Photography's legitimisation as an art form, therefore, has meant that the Photogram has had a third incarnation, and is favoured by contemporary artists such as Susan Derges, who was my final case study. Derges has built up her whole career on the use of the photogram and she has favoured it for both its associations with science and because of its abstract, painterly qualities. The process also enables her to make photographs of intangible subjects (often water), which become metaphorical, suggesting transformation: life and death.

Where contemporary artists have updated the process, pushing it to its technical boundaries, I have found that the use of historic photography as a hobby often takes direct inspiration from the 19<sup>th</sup> Century context: often producing prints exactly how Anna Atkins would have done, (cyanotype photographs of natural specimens).

This is where I believe the practices I have looked at to hold similarities. There are examples of Atkins, Derges and amateur photographers all lifting fragments of nature out of its natural environment, and present them photographically, whether it is intended for a scientific or art based context.

The process also offers a way of producing work in a more tactile manner, offering a much more hands-on approach in comparison to digital imaging. It is also often seen as being free from subjectivity or manipulation, because of its indexical qualities and the fact that it is chemical photography.

I have found there is not much written about the photogram (and other historic image-making methods) being used by amateurs. This is why a lot of the research I did for this section was indeed first-hand research. I therefore believe that this could form the starting point for more research to be done into this area of study.

## Illustrations



Fig.1. Talbot, William Henry Fox. 1839. Wrack: From the "Bertoloni Album. [Photogenic Drawing]

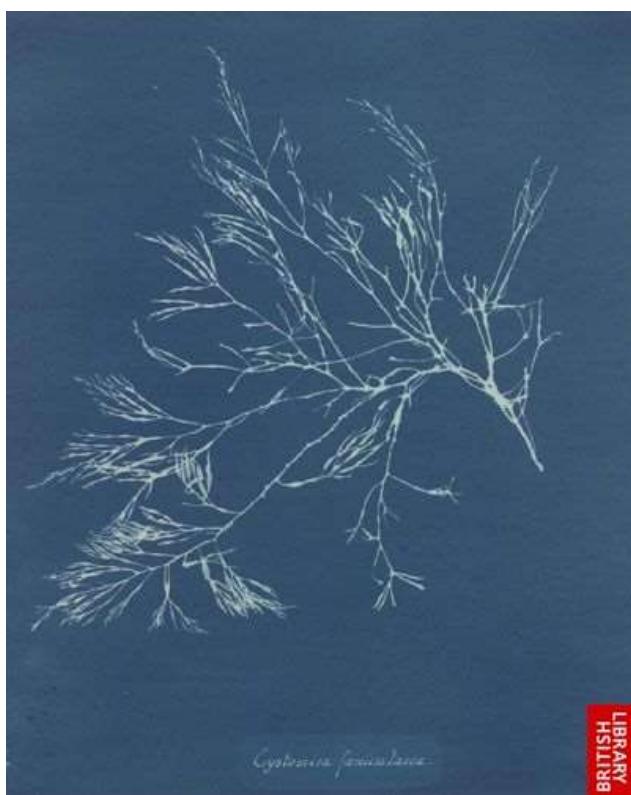


Fig 2. Atkins, Anna. (1843-1853) *Cystoseira foeniculacea*. [f. 16]. [Cyanotype]

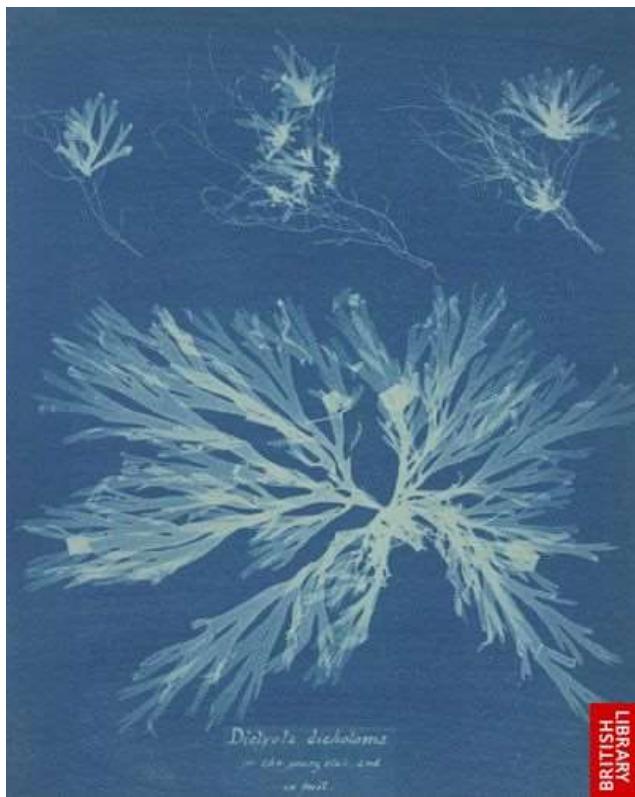


Fig 3. Atkins, Anna. (1843-1853) *Dictyota dichotoma*, on the young state and in fruit. [f, 55] [Cyanotype]



Fig 4. Fontcuberta, Joan. (1984) *Lavandula Angustifolia*. [Gelatine silver print]



Fig 5. Ray, Man. (1922) *Rayograph*.[Gelatin silver print]



Fig 6. Screenshot from Instagram App. [Accessed 19 Jan. 2015]



Fig 7. Screenshot from Instagram App. [Accessed 19 Jan. 2015]



Fig 8. Screenshot from Instagram App. [Accessed 20 Jan. 2015]

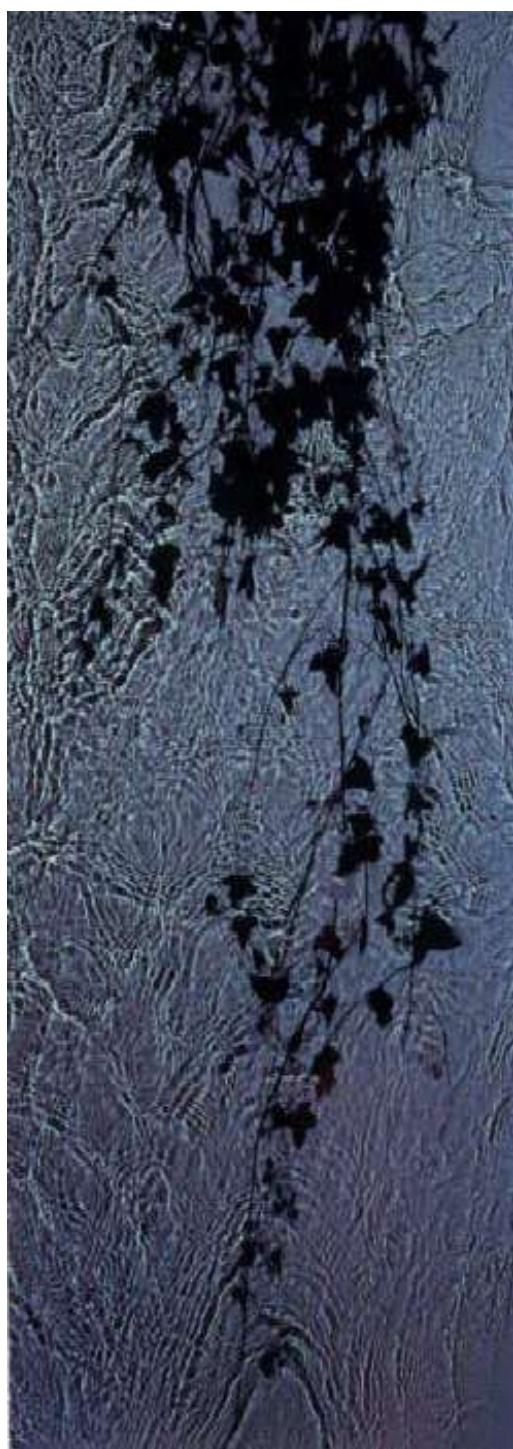


Fig 9. Derges, Susan. (1997) *River Taw*, 16 July 1997. [Photograph]



Fig 10. Derges, Susan. (1997) *River Taw (Ice)*, 4 February 1997. [Photograph]



Fig 11. Derges, Susan. (1998) *Shoreline*. [Photograph]

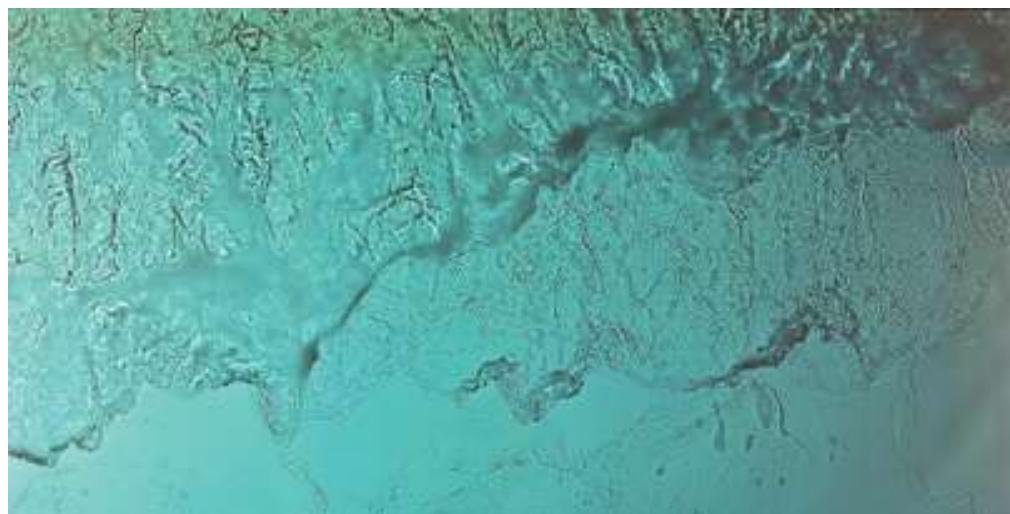


Fig 12. Derges, Susan. (1998) *Shoreline 5<sup>th</sup> October 1998*. [Photograph]



Fig 13. Degres, Susan. (1998) *Shoreline, 30 October 1998*. [Photograph]

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Fig 2. Atkins, Anna. (1843-1853) *Cystoseira foeniculacea.* [f. 16]. [Cyanotype] Available at:<http://www.bl.uk/catalogues/photographyinbooks/Photo.ASP?PhotoID=18756> [Accessed: 20 Jan. 15]

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Fig 5. Ray, Man. (1922) *Rayograph.* [Gelatin silver print] Available at: <http://www.metmuseum.org/collection/the-collection-online/search/265487> [Accessed: 20 Jan. 15]

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Fig 12. Derges, Susan. (1998) *Shoreline 5<sup>th</sup> October 1998.* Available at: [http://www.fotofest.org/ff2004/exhibitions\\_derges.htm](http://www.fotofest.org/ff2004/exhibitions_derges.htm) [Accessed 20 Jan. 15]

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