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ALCHEMY: RE-VISIONING PHOTOGRAPHY IN A DIGITAL AGE

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Bachelor of New Media Arts (First Class Honours)

Doctor of Philosophy

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ABSTRACT

The history of photography is presented traditionally as one which is driven by a desire to refine the medium, as each new photographic process or device rendered older technology redundant. Contemporary photographers are living in an age where there is an immersion into digital photographic technologies, and a camera built into a smartphone is commonplace. Some photographers, though, are choosing instead to engage with traditional and historical photographic processes from the early 19th and 20th centuries, now referred to as alternative photographic processes.

While one may consider this engagement a result of established photographers who opted not to move from analogue to digital processes, that is not quite so. Research suggests there is a range of practitioners who commenced to work with these processes within the past decade, despite the availability of digital photography and associated technologies.

Through the use of mixed-method research design, this study aims to discover why this engagement with alternative photographic processes is occurring. It will also explore the processes used, and whether this engagement has impacted on the production of a contemporary photographic aesthetic.

Initial findings of the research include a range of common critical concepts which have flowed throughout the research. These concepts include the co-dependent relationship which exists between the process: object and the aesthetic. Furthermore, the study revealed an underlying concept of authenticity, and the significance of the link between the subject, light, time and place as a reason for this engagement.

Keywords: Alternative photographic processes; Analogue photography; Photographic History; Alternative photographic processes; Aesthetics, Contemporary Art Photography; Authenticity.

CHAPTER 1

INTRODUCTION

...photography is faced with two apparent crises, one technological (the introduction of computerised images) and one epistemological (having to do with broader changes in ethics, knowledge, and culture). Taken together, these crises threaten us with the loss of photography, with the 'end' of photography and the culture it sustains. But exactly what kind of end would this be? (Batchen, G., 2001)

1.0 CHAPTER ONE - INTRODUCTION

After three decades of experience working as a professional and exhibiting photographer who began their career working with analogue photography before moving to digital, there appeared in the past few years a noticeable shift in creative photography practices. This shift was from a redundancy-based, technology-dependent convention, to an all-encompassing practice which included current (digital) technologies as well as traditional and historical photographic methods and materials, referred to as alternative photographic processes or techniques, was the inspiration for this research.

In the 21st century, contemporary creative photography appears to be represented by a more diverse range of practices, processes and materials than at any other point in the history of photography. On the walls of a gallery, one may view (along with other visual art mediums) photographic art created by a range of lens-based techniques. These include a variety of media or forms including hardcopy prints on various materials, projections and screen-based media displayed on monitors, phones and tablet devices along with immersive installations. Also present are works produced with a variety of historical and traditional photographic processes, including wet-plate collodion, daguerreotypes and traditional film Type C photographs. Interestingly, a diverse range of wet-chemical printing techniques from the very birth of photography itself; that is cameraless methods, or photogenic drawing are also present. Furthermore, works generated through the engagement with a camera obscura delivered either as an immersive installation or a print made within the dark body of the device are visible.

Photographic processes and methods outside the present-day photographic technologies have often been referred to as alternative photographic processes or techniques. During the era of analogue photography, alternative processes were considered to be the more historical

wet-chemical methods including cameraless and photogenic drawing techniques. However, since the establishment of digital photography, analogue (film) photography methods are now also included in this category. ¹

The presence of some of these images created using alternative processes could be considered a result of creative photographers who chose not to transition to digital and have continued to work with non-digital processes. However, as many younger practitioners are working with these methods, there may be other reasons for this engagement. This research intended to discover the causes and explore the result this engagement has had on contemporary photography.

The history of photography, since its earliest iterations, has been aligned to and dependent on innovation and experimentation. Hardt and Brennen (2013) note that photography, "...is a product and witness of the industrial era". The original era, known as the Industrial Revolution, bridged that time in human history when agrarian society and ways of production were replaced by one driven by innovation and the introduction of machine-made mass production (Hardt, H., Brennen, B., ed., 2013, p.2). These changes ultimately led to a more consumer-driven society with which we are familiar now, a time "... most clearly characterised by accelerated social change and driven by technological innovation" (Shaw, D. B. 2008, p. 3).

Although, of course, tool use has been part of the definition of human from prehistory, the late modern period is most clearly characterized by accelerated social change driven by technological innovation. ...from the late eighteenth century onwards, social structures in the developed West have to be understood as organised according to the development of new technologies that changed patterns of work and social life and influenced cultural institutions and their expression in art forms like painting, architecture, dance, drama and literature. (Shaw, 2008)

Marien (2006) continues this discussion, suggesting that at this time in history there was a link between photography and a "desire for reliable visual reproductions ... linked to the needs of expanding commerce and industry, and the wish of the emerging middle class for realistic portraits" (Marien, M.W. 2006, p. 2). Marien affirms furthermore, that the camera, while perceived as an "image-making machine", really only began to take shape after 1855, "through

the combined effect of technological changes, the development of networks for production and the consumption of images” (Marien, 2006, p 7). The first photographs were more akin to handcrafted products using traditional means of representation, with the production of unique, singular hand-made objects. This experimentation was initially chemically based, with early attempts to permanently capture and fix the fleeting image observed with the camera obscura. However, as photography progressed, this focus moved to refine the mechanical capture devices associated with photography, as well as the light-sensitive material. More recently, this dedication to innovation was with digital technologies. The ongoing changes in photographic technologies, with the release of each new process, or camera, as described in the history of photography, served to make old techniques and technology redundant (Romer, G.B. 2008, p.3). Romer continues, suggesting that while the contemporary photographer acknowledges that photography’s origin is in the “distant past”, and “that photography has progressed and transformed over time, they also believe the current system of photography must be superior to that of the past” (Romer, 2008, p.3).

Panofsky suggests: “It was not an artistic urge that gave rise to the discovery and gradual perfection of a new technique; it was a technical invention that gave rise to the discovery and gradual perfection of a new art” (Panofsky, E. 1959, p.15). What he is suggesting is that the technical innovation within lens-based practices impacted on how the creative photographer engaged with their craft, and how the final image or object appeared. While Panofsky’s essay was referring to the moving image, the history of both still and moving imagery were, and continue to be, interrelated.

The focus of contemporary visual culture and academic discourse is on the notion we are now in a “post-photographic” era and have been since the early 1990s (Fontcuberta, J., 2015, p.10). That is, traditional forms of photography as we have known them no longer exist and are not relevant in a technology-driven society. The post-photographic era is characterised by the “massification of images and by their circulation and availability online” (Fontcuberta, 2015, p.1). Fontcuberta continues to discuss the impact of post-photography on photography and describes it is a “disruption” while suggesting that “while photography may have caused painting to change, it did not wipe it off the map”, however, in the age of post-photography, “photography seems to have been swallowed up” (Fontcuberta, 2015, p.10).

Fontcuberta (2015) further suggests that because this is a covert form of disruption, and the technological advances in the equipment are behind the scenes, photographers working with digital imaging technology continue to call what they do and how they practice, photography. Batchen takes another stance and suggests that “even though we are in this era of post- or after photography, our contemporary photographic processes and technologies are not

beyond photography” (Batchen, G., 2002, p.109). Batchen (2002) discusses the notion of photography’s demise, and that “photography was haunted by the ghost of painting” (Batchen, 2002, p 109). He continues to suggest that boundaries between photography and other media have diminished. Traditionally art photography, once measured according to “the aesthetic values of the painted image”, is today in a much more difficult position. These changes imply that photography and the object produced, the “objectness” of the photograph may be on the verge of disappearing under pressure from digital technologies (Batchen 2002, p. 109).

While there is quite a structured academic argument to support the disappearance of photography, and the situation of a post-photographic era, this era does not have to be centred simply on the technological advancements in the genre. There is a counterargument which suggests that this era is one of inclusion, instead of rejection of previous technology; an era perhaps when photographers can choose from a wide range of processes and techniques using traditional chemistry-based techniques to hybrid processes which include digital technologies. This way of understanding what photography is and what should be considered photographic in academic discourse has taken us to where we are now, an age where photography is beyond what we had previously understood.

However, this research aims to explore that while there is an engagement and even perhaps a reliance on digital technologies, there is also a parallel engagement with historical/traditional photographic processes, now referred to as alternative photographic processes, by a wide range of practitioners including enthusiasts, professional photographers and photographic artists. Photography, using historical pre-digital processes, has not disappeared; it has been integrated into contemporary practice.

The broader theme of inquiry adopted by this research explores why photographers would choose to work with alternative (non-digital) photographic processes in their contemporary practice? That is, what are the reasons for the engagement with alternative (wet-chemical) photographic processes within our digital age? Furthermore, the project explores the impact this engagement has had on contemporary photographic practice and production of a photographic object. Has engagement led to a shift in the perception of what is photography or considered photographic? Moreover, this research also investigates the unique aesthetic qualities produced as a consequence of using alternative photographic processes.

Contemporary art photography may often appear to be highly experimental and not fitting the norm of traditional camera-based imagery: an image produced by a mechanical device and representative of a subject. Is it possible that photography has shifted from this more normative style, and with that paradigm shift, a new language and better theoretical

understanding are required to describe what may be considered as photographic within a contemporary context?

This research unpacks the reasons behind this shift in contemporary practice within alternative photographic processes and suggests a fresh way to interpret creative photographic practice in the 21st century.

1.2 RESEARCH PROBLEM

The system of describing the medium used to produce an image has always been an essential part of labelling work in gallery exhibitions. This system enabled observation of trends when visiting exhibitions at galleries and museums such as the Australian Centre for Photography, Stills Gallery, Museum of Contemporary Art, and the Art Gallery of New South Wales (all in Sydney), as well as viewing further Australian and international exhibitions online. Labelling or categorising works by their material may be considered as evidence that there was a variation to the processes employed to produce work, and that a shift towards engaging with historical photographic processes, along with digital photography, was becoming prevalent.

In 2015, the Art Gallery of New South Wales organised an exhibition; “The photograph and Australia: the exhibition”, under the management of the gallery’s senior curator of photographs, Judy Annear. This exhibition and combined symposium, “Trafficking images: histories and theories of photographic transmission” was the gallery’s major academic event for that year. The symposium included a range of speakers, including Judy Annear, Erica Wolf and Helen Ennis along with Geoffrey Batchen as well as others. Many speakers actively engaged with research regarding photography, including the history of photography, with a focus on photography’s change of status throughout history from documentation, and production of an object to a focus on transmission.

This exhibition trend, which included non-digital works, was also observable in national and international photographic awards, including the National Portrait Prize. In 2016, The Foam, Paul Huff Award, Moran Contemporary Portrait Award and the Josephine Ulrich and Win Schubert Photography Award had among their submissions a wide range of photographic techniques and processes. The Australian Institute of Professional Photographers added a specific category to their annual awards to accommodate this rise in interest in historical photographic processes within their membership.

There was also an increased presence of photographic workshops explicitly working with alternative photographic processes. Elizabeth Opalenik visited Australia to run a Mordancage workshop as part of the Ballarat Photo Biennale in 2013, hosted by the FIER Institute. Elizabeth raised awareness of a much more diverse range of processes as well as the wider international community of alternative photographic practitioners. Gold Street Studios in Melbourne have championed alternative photographic processes successfully under the management of Ellie Young. The opportunity to participate in workshops with a range of

specialist practitioners from Australia and overseas, an annual symposium and exhibition, is well supported.

These observations of a shift in trends suggested that chemical-based photographic processes have never entirely disappeared, and that there may be a turn towards, or a contemporary engagement with, these processes.

Hulick (1990) suggests that “Digital photography is to analogue photography, what photography was to painting in the 1840s”. (Hulick, D., E., 1990, p. 322). While the advent of digital photography may have been touted as the death of film, there is evidence of a visible subculture of enthusiasts, photographic artists and creative photographers who have clung valiantly to alternative processes (non-digital methods). This area of engagement with photographic processes has grown, not diminished.

A range of notions of why contemporary photographers are working with alternative processes includes the following:

- Photographers have become bored or disengaged with digital processes. Digital processes have become repetitious, predictable and are focused on a perfected image. Also, there is a lack of tactility in both the process and the result.
- Alternative process practitioners are nostalgic for old processes. The engagement may be among older photographers returning to traditional or historical photographic processes which they have used before professionally or as a hobby in their earlier years.
- Purists photographers have never embraced digital as they do not see it as a worthy manner of working, not authentic or real photography. The end object produced through these processes was important for those working with alternative processes.
- Photographers are looking for something new, exciting and unique, aesthetically and creatively and are looking to be different, to stand out in the crowd. They are looking for that magic, that “wow” element which is missing in digital processes and present in the hand-made object.
- Digital photography is too easy. They are looking to be challenged and also have a pride in mastering a complex chemical-based process.
- The engagement is mostly with enthusiasts and not at a professional level.

These possible scenarios have led to the development of the following research questions.

1.3 RESEARCH QUESTIONS

PRIMARY QUESTION:

Why are contemporary photographers engaging with alternative processes?

SECONDARY QUESTIONS:

What processes are used and applied in a contemporary context?

How has this engagement influenced the creation of a contemporary photographic aesthetic?

1.4 AIMS, OBJECTIVES AND SCOPE OF THIS RESEARCH

This research explores the reasons for a renewed interest in historical (wet-chemical) photography, known as alternative photographic processes. The research also investigates the processes used and the impact on creative photography and contemporary practice. The notion that contemporary photographic artists using these processes are developing a distinctive contemporary aesthetic form is also investigated.

The research provides information about who is working with alternative photographic processes, how long they have worked in this way, and where they are. This data assists in providing a snapshot view of the alternative photography network both in Australia and internationally.

1.4.1 AIMS AND OBJECTIVES

1. Identify why, in a technology-driven society, contemporary creative photographers are embracing alternative (wet-chemical) processes from the 19th and 20th centuries in their practice;
2. Determine the use and application of alternative processes in a contemporary context; and

3. Explore what influences alternative and hybrid practices have had on contemporary photographic aesthetics.
4. Critically analyse data from a broad selection of participants via an online survey;
5. Interrogate qualitative data from interviews conducted with a range of practising photographic artists; and
6. Analyse information collected through a series of case studies of contemporary fine-art photographers.

1.4.3 SCOPE

The research includes input from a range of photographers engaging with alternative processes including photographic enthusiasts, professional photographers, exhibiting photographers and art practitioners, academics, and gallery owners and curators. It includes a diverse range of alternative photographic processes. The research suggests four distinct paradigms exist in contemporary creative photography:

1. Digital capture to a digital output which includes hi-tech processes such as coding and mapping the image to sound, projections and installations.
2. A hybrid paradigm of digital capture with alternative/analogue printing process;
3. Analogue capture and output which employs darkroom techniques either traditionally or experimentally; and
4. Historical photographic processes including cameraless (photogenic drawing and photograms), direct positive processes (wet-plate collodion, daguerreotypes, tintypes or ambrotypes) and alternative photographic printing processes.

The first paradigm (digital processes and hi-tech output options) is beyond the scope of this research project. Instead, the focus of this research is with processes as described in points 2, 3 and 4.

1.5 DEFINING ALTERNATIVE PROCESSES

This research project defines alternative photography as those historical photographic processes specifically from the 19th and early 20th centuries, including cameraless, direct positive and analogue photography. The research includes contemporary practitioners using traditional materials and equipment in a non-traditional or experimental manner such as hybrid practices including digital and alternative processes.

The alternative processes included in this study are:

- Cameraless: The image is created without the use of a camera or capture device;
- Historical/traditional: Wet-chemistry photography processes including daguerreotype and forms of wet-plate collodion;
- Analogue: Non-digital, film and silver gelatin processes;
- Hybrid process: Mixture of digital and alternative processes; and
- Experimental: Alternative photographic processes used in a non-traditional manner.

Appendix A provides a detailed description of alternative processes.

1.6 SIGNIFICANCE OF THE STUDY

Technology has enabled a new wave of creative photographers to work in ways never before possible. Contemporary discourse as discussed in more detail later in this chapter, suggests that traditional forms of photography no longer exist. This research investigates why, in this era of technological advancement, there is an ongoing and even increased engagement with alternative (traditional and historical) photographic processes, some centuries after their invention and replacement by more accurate technologically advanced methods and materials. A component of this research unpacks what photography has become, or what we consider as photographic in the 21st century.

Digital capture and output have become productive, stable and easily repeatable processes. They are clean and safe with no requirements for wet-chemical, light-sensitive photographic treatments and specialised spaces. Digital photography provides instant feedback with the

ability to view images immediately after or even during the capture stage. For the novice or amateur photographer, it provides an element of confidence in their ability to take a photograph.

However, for some practitioners, digital photography may be regarded as a clinical, perfection-driven medium. The invention of new paper stock of varying texture and colour for use in inkjet printers has provided some form of bridging between digital and historical photographic processes. There are also filters and apps available for use in the digital post-production stage, which replicate or emulate traditional photographic processes. These digital tools provide an effortless way to change the appearance of the digital image. The advent of filters and apps also indicates consumer demand to change or customise the look of a digital image or even a desire for the digital images to take on the appearance of these historical processes. However, for some, these faux photographs lack authenticity and so a return to the more traditional hand-made object is evident in the past few years.

1.7 OVERVIEW OF KNOWLEDGE SOURCES

Preliminary research revealed the existence of a community of practising artists engaging in alternative and hybrid processes. This existence was evident by the extensive range of publications which focused on the technical aspects of alternative and historical photographic processes, as well as exhibition documentation.

An initial search for literature revealed a significant lack of publications relative to the research questions, beyond studies in aesthetics and visual communication or why a photographer selects a process or technique to communicate an idea. Other critical areas of concern in academic discourse include photography in the 21st century and topics such as the digitisation of photography and photography as a capitalist construct. That is how the (traditional) photography and photographic apparatus were considered a machine of the industrial age, which did not arguably suit the requirements of our current information era.

Additional sources of knowledge were employed to support the study. These sources included artist statements and curatorial essays for exhibitions which featured alternative photographic processes, symposium and conference extracts, featured newspaper articles by art critics, specialist websites, industry networks and social media (Figure 1).

Hence, this research provides an opportunity to examine the reasons photographers and artists are embracing alternative processes in the age of digital imaging.

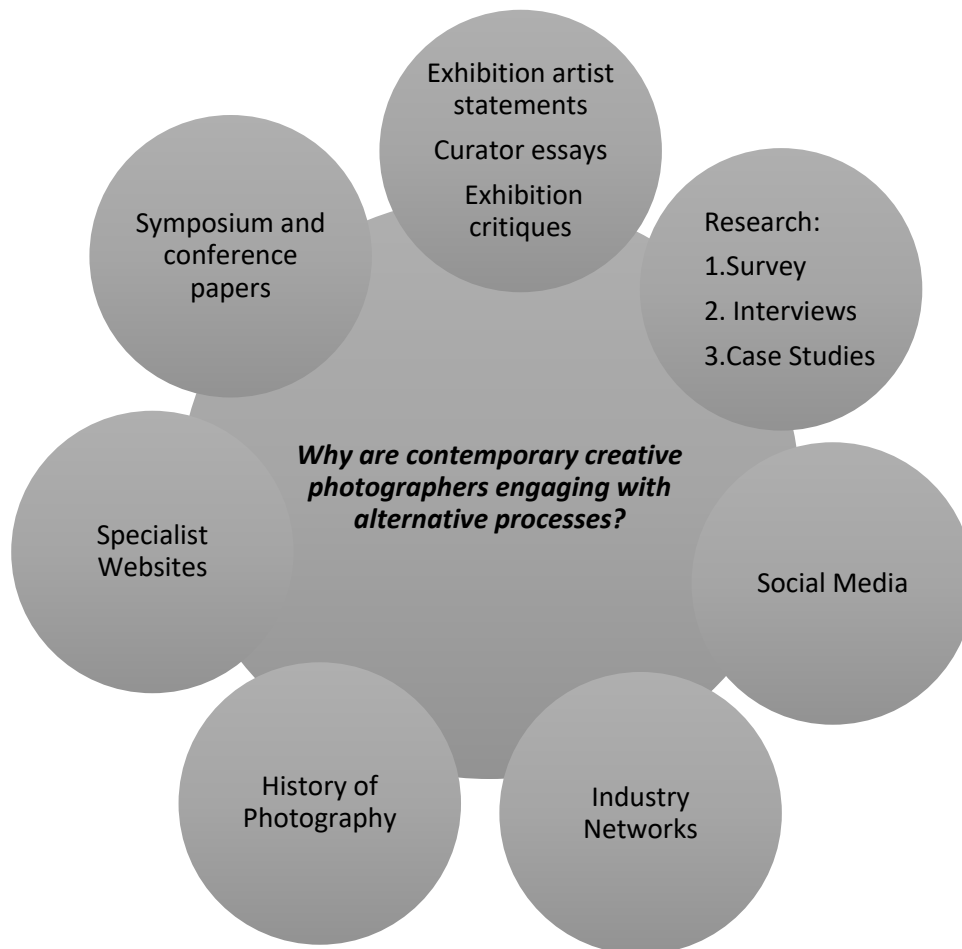


Figure 1 – Overview of knowledge sources diagram

1.8 BACKGROUND TO THE STUDY

1.8.1 A SHORT HISTORY OF PHOTOGRAPHY

The phenomenon of an image produced from light passing through a small opening and into a darkened space was first observed by Chinese scholars as early as the 4th century BC (Coe, B., 1976, p 9). However, it was from the Arabian scholar Alhazen, in the 10th century AD, that we derive much of our fundamental knowledge regarding how the camera obscura works. Alhazen's research included topics such as the physics of light, optics, and the mechanics of the eye as well as early investigations regarding the camera obscura. It is the knowledge from his research which formed the basis for how the camera aperture works to manage the amount of light which intersects with the light-sensitive medium. It would be some centuries before the invention of the camera occurred to make use of this knowledge.

The camera obscura, also referred to as a pinhole camera, was the earliest documented of all photographically based investigations, and was primarily a darkened room with a small opening through which light could enter, enabling the projection of the outside view inside the room and on to the wall opposite the opening (Coe, 1976, p. 9). The modern camera originates directly from this invention. The camera obscura and later the smaller, more compact camera lucida allowed the viewing of an image and assisted traditional visual artists with the reproduction of a likeness, especially in portraiture. Moreover, Hockney and Falco (2006) suggested the use of optical devices by artists pre-photography from as early as the Renaissance era as an aid for correct representation of perspective and supported realism. These devices were purported to be used by painters such as Leonardo da Vinci, Caravaggio, Johannes Vermeer, Jan van Eyck and others during the Renaissance, mostly to aid their investigation into perspective (Hockney 2006). They identified a link between the camera obscura and other optical devices as a pivotal influence in the advancement of realism in Western art from as early as the early 1400s.

From the 1700s the aim was to mechanically reproduce an image visible through the camera obscura or camera lucida using light-sensitive formulas, in order to bypass the need for hand-drawn impressions (Coe, B., 1976, p.9). At this point, the camera had not been invented yet as a capture device. Instead, the experiments used a technique, later described as photogenic drawing, where an object when placed on to the sensitised surface, eliminated light contact with this surface (under the object) and allowed light to impact on areas not covered, and in doing so to produce an impression of that object. Notably, Thomas Wedgwood, Fox Talbot and Sir John Herschel (England), as well as Johann Heinrich Schulze (Germany), Hercules

Florence (Brazil), Joseph Nicéphore Niépce (France), and others, worked to find chemical formulas through which they could permanently fix their fleeting images. Their experiments included materials such as paper, leather and ceramics coated with light-sensitive solutions, mostly variations which included silver nitrates. The images still faded and refused to last as permanent reproductions.

This experimentation led to a range of successful early (cameraless) processes which employed this contact printing method, including salt printing, heliotypes and cyanotypes, which were used mainly for scientific documentation. Anna Atkins, who worked with salt printing, as well as the cyanotype formula under the tuition of both Fox Talbot and Sir John Herschel, reproduced images for her father's scientific experiments. It is this collection of cyanotype studies of algae (*Algae: Cyanotype Impressions*, 1843) which still appears in international exhibitions. These printing processes, referred to as photogenic drawings, are categorised now as one of the many cameraless processes used by contemporary photographers. Photography has since this earliest time spanned the dual purposes of scientific study and artistic endeavour.

It was the Industrial Revolution in the 18th century in Europe and England, along with the intervention of inventors and gentlemen scientists as evidenced throughout this discussion, who made the invention of photography possible. Interestingly, the camera obscura, as it projected a moving image, and the Lumiere Brothers, also provided a starting point for cinematography as we know it today as well as the autochrome, the first known colour image process (Romer, G., B., p. 25). This era may be referred to as the pre-history of photography.

Photography has advanced considerably since 1839, which is an agreed date for the birth of photography (Gernsheim, H., 1955, p. 43). It was a time of energy and experimentation as the technology evolved from cameraless impressions to the earliest cameras, adaptations of the camera obscura, with the addition of lenses and employed a range of light-sensitive materials to capture an image. Technology evolved to include daguerreotypes, wet- and dry-plate collodion (tintypes and ambrotypes) which enabled the production of a direct positive in-camera capture of a subject or object. The investigations continued to focus on the production of a photographic object, a permanent representation of what was before the camera lens. Fox Talbot endeavoured to create a process where more than one reproduction of this image was possible with his work with paper negatives. It was his experiments in this two-step, negative-to-positive imaging, which were the precursors to modern film photography. During the 1800s, further experimentation and innovation saw the invention of the glass-plate negative. Then in 1898, the cusp of a new century saw the patent of celluloid photographic film by Reverend Hannibal Goodwin.

George Eastman provided affordable access to photography for the amateur with his invention of the Box Brownie in February 1900, which used this new film. Finally, photography was not only accessible to scientists and professionals: it was in the hands of everyday people. Eastman ensured the developing and printing processes became automated, which meant photographs were able to be mass-produced. That is, it was possible to produce multiple copies of each image from a negative, unlike the single images produced with previous technology.

Ongoing advancements of light-sensitive material enabled exposures from several minutes' duration to a fraction of a second. This degree of sensitivity also changed the culture around image capture, particularly the ability to capture moving subjects and to work in low-light situations. Similar advancements in lens design resulted in faster lenses with a wider range of aperture settings to enable more accurate exposures. The cameras were still quite bulky, which compromised photographers' ability to move quickly and they had a limited number of possible exposures even when working with roll film.

However, it was the invention of smaller 35mm film and cameras in 1913 which enabled the photographer to take more photographs at one time: up to 36 images per piece of film, processed and printed with relative ease compared with initial processes which required a single plate, each to be developed separately. The 35mm camera itself was less bulky than its predecessors and allowed the photographer much more freedom to move around quickly. This enabled the rise of the photojournalist, documentary and war photographers, such as Henri Cartier-Bresson and Robert Capa. These photographers brought the world to the people and war to the front pages of daily newspapers and the attention of the general public.

Steve Sasson invented the first digital capture device in 1974. It was an experimental device which captured the images using a charge-coupled device (CCD) sensor (black and white images only). The device recorded images on to a digital cassette case, and viewing the images was only possible on a television screen (Estrin, J., 2015). Digital capture technology went through a series of changes, from capturing small image files to floppy disc with the Sony Mavipics through to the Fuji DS-1P, developed in 1988 but which did not go on sale. Digital scanning and capture backs were attached to traditional analogue (film) cameras. However, because of the resulting file size, these had limited use. Most significantly, the capture of images from the 1984 Olympics, the Tiananmen Square protests (1989), and the Gulf War (1991) employed this new digital technology. Digital imaging brought with it the ability to capture and view, however, it also required additional and quite expensive software and hardware. It was not until the late 1990s that digital began to be the camera of choice for most consumers. While the marketing of digital photography presented it as the way forward, the

future of photography, it took some decades before digital capture and output would match the quality and convenience of traditional analogue photography. Modern digital cameras can capture up to 100 MP (megapixels) in the case of the Hasselblad medium-format digital camera which captures an image 11600x8700 pixels (409.22x306.92cm @72ppi). This file size is a long way from Steve Sasson's consideration that photographers would only ever require 2 megapixels in a camera (Kodak history of the digital camera).

Ongoing innovation in digital photography and allied technologies, along with the invention of the world wide web, began to change how we interact with photography forever. Digital photography technologies were initially focused on the fast and reliable transmission of an image and were used mainly by sports and media photographers. Because of this change, the production of an object, a photograph, was no longer the primary aim. This change alone produced a substantial cultural shift in photography and photographic practices, and for some was the end of what was considered traditional photography.

Digital photography in its early days produced as many problems as solutions for early acceptors. At an industry level, lack of information regarding how to process, print and archive this data created huge problems. Kodak and Fuji ran advertising campaigns encouraging consumers to print so as not to lose meaningful memories. Eventually, achieving solutions for these issues progressed, regarding the printing and storage of digital files at the consumer, professional photography, and the fine-art levels. Commercial, as well as fine-art papers and printing processes, are now available. These solutions are for the most part replicas or replacements for what was available pre-digital. Digital, even today, continues to mimic analogue technologies and output.

When considering the changes in just over a century, photography has evolved from the very first (cameraless) impermanent photogenic drawing, through to the daguerreotype and wet-plate processes, each limited by their singularity of capture or production, as each was a direct positive representation of the subject. This problem was resolved initially by the introduction of paper negatives, which were quickly replaced by glass, which in turn was replaced by celluloid (film) negative to mechanise the reproduction of multiple copies. Orthochromatic black-and-white films were soon replaced by panchromatic, which allowed a correct representation of the tone of the subject in black and white photography. While there were processes available to add colour to these black and white images, it was not until 1935 that colour photography and film became available. The invention of 35mm film and cameras eventually replaced medium and large format because of convenience and cost. It was, however, the invention of the digital camera which changed the face of photography forever, or so we thought.

Digital cameras (photography) democratised our engagement with photography in a similar fashion to how the release of the Kodak Box Brownie in 1900 enabled the general population easy and affordable access to photography. While Kodak's Box Brownie allowed the general public to shoot, process and print their images, the digital camera enabled a fast and convenient method for capturing and sharing images. Digital photographic technology removed the need for specialised skills and spaces and these were replaced by computers and software. The digital cameras with their built-in software to process the photograph in the camera provided the consumer with the instant gratification which analogue photography could never offer. The introduction of digital photography had a significant impact on the professional photography industry, as well as the retail community specialising in supporting film processing and printing. The age of the specialist professional photographer may have ended at this point, or at least have been significantly impacted. Cameras themselves had become more and more advanced and easier to use with a program mode or automatic shooting modes which in many cases alleviated error on the part of the photographer.

Cameras became smaller and more sophisticated as the technology progressed and were eventually even built into the primary communication device of the 21st century, the mobile or smartphone. Digital technology created a generation of camera phone users. This mobile technology, as it becomes more refined, challenges the need for a camera and has replaced the camera for many consumers. There were reports of sales of cameras decreasing by 84% since 2010 (Statistics Portal, 2019). The ability to shoot then either upload to a social networking site or send the file via a text message resulted in a saturation of visual images as never before. Photography and the internet, especially social media, has become the dominant way for us to interface and communicate with each other. It became the medium of choice over every other, beyond the dreams of George Eastman when he invented the Box Brownie. Photography now as never before is in the hands of the masses. It is in this context that we discuss the future of photography.

However, while photography appears to follow a progressive, linear history from chemical processes to digital technology, with each new invention or innovation making the former redundant, initial research indicates this is not quite the case. Observation of exhibitions, as well as the professional (commercial) photography community, suggests there is an ongoing engagement with traditional photographic processes. Furthermore, in the past decade, there has been a significant resurgence of interest in early analogue and historical processes by a younger generation of photographers, who have only ever known digital photography. The Lomography story is one of those examples.

1.8.2 THE LOMO REVOLUTION

The Lomo camera has had a presence in the fine art, hipster area of photography since its inception. The original Lomo LC-A was released originally in the 1980s as a Russian response to the cheap Japanese Contax 35mm camera. Initially, the Lomo LC-A camera began mass production in 1984 and was most popular in Communist countries such as then-Czechoslovakia, Cuba and Poland. However, a chance encounter with this camera by a group of Viennese students began its growth in popularity in the Western world. Lomography with its range of films and plastic cameras became part of the contemporary photography world. Lomography is ensuring its analogue future by producing and releasing a wide range of 35mm and 120mm films as well as a trendy range of cameras and accessories (Lomography.com).

Established in 1992, the Lomo group continues to grow with more than 1 million users currently (Lomography.com). Lomography photography embraces the ideology of experimentation and innovation. They continue to release new film stocks as well as cameras and accessories. Lomography describes their aesthetic as “quirky”. With colour shifting films and bespoke art lenses, plastic cameras and lenses, the Lomo look is challenging and at times impossible to emulate with digital imaging. One could describe the look as an anti-aesthetic, at least an anti-modernist aesthetic, from the modernist perspective where photography was a statement about technological advancement.

A survey conducted by the Lomo group in 2008 revealed some interesting trends among their users. The survey amassed 5,676 responses from 82 countries. There was nearly an equal amount of responses from males (2,749) and females (2,922). The age group represented in the survey was quite varied (from 0-19 to 50+) however, the majority sat within the 20-24-year age group (27%), closely followed by the 25-29-year age group (23%) (Lomo.com). These results suggest that initially there is a good representation of Lomo users in the younger age group, with little differentiation by gender. A large number of responses to the survey suggests that the following for this company and the style of photography is active in the general community.

A further survey run by the Dutch Alternative Photography community supported the findings of the Lomo survey. The location of the most significant representation of participants for this survey was in the United States (36%) and Europe (16%) followed by the United Kingdom (13%), with the majority of the age group in the 25-45 years (41%) and 45-65 years (41%) with under-25s only 9% and over-65s 9% of the overall survey population. This information aligns with the original notion that there are two groups of photographers working with

alternative processes: (i) those who have just found the processes (25-45 years group); and (ii) those who have returned to, or never stopped working with, the processes (45-65 years group).

The strong presence of the Lomography community at art fairs, on social media and within the younger demographic suggests that an ongoing engagement with film exists, despite the availability of digital photography technologies. Working with analogue processes for this community is a choice driven by the distinctiveness of the aesthetic associated with the range of films available. The trendy, brightly coloured, sometimes plastic cameras, are accompanied by a range of analogue and art style lenses and come with a committed support network within the community.

The question is still why this is happening and what is the result of this engagement.

1.8.3 ONGOING ENGAGEMENT

Visual artists, especially in the Western world, and to a lesser extent in Australia, have had an ongoing engagement with traditional photographic processes. The list of photographic artists is quite extensive. However, most notable of these would be Chuck Close and his work with the 20x24 inch Polaroids. Elsa Dorfman, Masao Yamamoto and Sally Mann and Jerry Uelsmann, Tim Rudman and Bill Henson work exclusively with traditional analogue processes. Rudman is renowned as a master printer as well as a creative photographer, who handprints his work using traditional printing methods including lith printing, and traditional toning of silver printing techniques. Mann works with historic cameras and wet-plate collodion. Michael Kenna photographs only with medium format film and cameras. Joni Sternbach (jonisternbach.com) and Jerry Spagnoli (jerryspagnoli.com) have worked with daguerreotype processes continuously for some decades now. Jerry also conducts workshops internationally. Then there are others such as Christina Z Anderson, an academic and practitioner who works, researches and publishes on the use of gum bichromates, and Mike Ware (www.mikeware.co.uk/mikeware) from the United Kingdom who works with and bases his research on the cyanotype process. Mike has revised the formula for cyanotype as part of his practice and research. Elizabeth Opalenik specialises in working with the Mordancage processes, a darkroom process which is reliant entirely on a high-contrast silver gelatin print as the starting point.

For these photographers, their engagement with traditional and historical photographic processes it is a continuation of their practice which began pre-digital. It was necessary to continue working with their chosen medium (process) to maintain or stabilise their aesthetic or the personal style within their work.

Understandably, there is a range of artist practitioners who would prefer to continue to work with their chosen medium and who will never embrace digital technologies. For each of these artists, their work has a distinctive and identifiable aesthetic, which relies on the use of these processes, even when new digital technologies are available which could emulate the same aesthetic. Others such as Robert Farber (www.farber.com) have been able to successfully move from shooting 3200 ISO film to small-format digital and retain its original and distinctive style.

While this research acknowledges this ongoing engagement with historical photographic processes which began in pre-digital times, that group is not the focus of this research. Instead, this research addresses the question of why, in a digital technology-driven age, is there a renewed interest in the earliest photographic processes. It is an investigation of why, in this digital era where digital equipment, workflow and output provides photographers and artists with a hugely diverse range of ways to envision their creativity, contemporary art photographers turn away from digital technology and embrace instead alternative processes including historical photographic processes from the birth of photography itself. Many of the creative photographers who feature in the research were born in an age where digital technologies reigned and the photographic processes they use now, for the most part, are considered redundant. It was a concerted choice to work with non-digital, that is alternative, photographic processes.

The argument presented in this thesis is that contemporary photographers have been, within the past decade, increasingly engaging in their practice with a range of historical photographic processes, some from the very birth of photography. This argument challenges the documented sequential or linear nature of photographic history.² While the thesis describes how photographers are using alternative photographic processes³ and the demographics of this engagement, the main focus is to discover why these photographers are using these

² This thesis suggests that the introduction of new and improved photographic technology or process led to a redundancy-based consumer model and a linear history of photography. The reader should note though, chemistry and equipment required to work with alternative photographic processes continued to be available even with the advent of digital technologies.

ancient processes and what is the outcome of this engagement on the photographic object itself.

This thesis provides an insight into the world of the creative photographic enthusiast, professional and art photographers, their materials and processes. It most importantly explores the extent of contemporary engagement with alternative, chemical, hybrid and analogue (darkroom) processes by a range of practitioners within the past decade.

1.8.4 PHOTOGRAPHY IN THE 21ST CENTURY?

There is considerable contemporary academic discourse about the state of photography in the 21st century. Significant amounts of this discourse centre on the death of photography as we know it in its traditional format, and how technology has impacted on the perception of photography as a visual art medium. Interestingly, the rise of the machine is not a new discussion topic, with Marinetti's *Manifesto of Futurism* from 1909 still front and centre in these current discussions, especially with regards to the philosophy of photography.

Daniel Rubenstein (2015), advocates that we are in a post-industrial age and are now firmly ensconced in one which is dominated by "fibre optics, algorithms and the need for information". Rubenstein states that the "Age of Information" is characterised by the emergence of another kind of machine, "one that replicates the activities and the processes not of the human body, but of the brain" (Rubenstein, D., 2015). The rise of artificial intelligence (AI) and computer-generated imagery is now a constant reminder that a visual image does not necessarily require a subject, a referent, in the first place. The production of this type of image instead is through a series of programmed algorithms. Contemporary visual communications embrace all these forms of representation.

While the need for a subject/referent is very much embedded in photographic history and forms the basis for most photographic criticism from the 20th century, it appears that this authority is under challenge. Rubenstein suggests that "The four horsemen of the photographic Apocalypse: Index, Punctum, Document, and Representation, can no more account for this process than a printed page can explain the operation of a computer screen" (Rubenstein, D., 2015). Rubenstein continues, stating that "... even if some parts of this form of photography are still visible, they are in a state of advanced decay; maintaining a holding pattern, while simultaneously being transformed by a new set of forces" (Rubenstein, D., 2015). The contemporary rhetoric is that "photography is dead, and in fact, it has left the room" to make way for more contemporary ways of making and viewing. Mitchell continues in this

stance, suggesting that (photography) “From the moment of its sesquicentennial in 1989 photography was dead – or, more precisely, radically and permanently displaced – as was painting 150 years before” (Mitchell, W.J., p. 19).

However, while this is a stance in Rubenstein’s essay, he also steps back from this statement, suggesting, in reality, that this is far from the truth. Visual media, produced from a wide range of digital and non-digital sources, including and dominantly photographic based, are still prevalent at all levels of society. Contemporary ways of engaging with photographic activities are varied, and we have as creative beings found new ways of working with material and non-material (virtual) processes. A new age of materiality has emerged, new materialism, embedded firmly in technology-based ways of making.

In response to Rubenstein’s essay, Andrew Dewdney suggests that while he supports the idea that it is time to debate the future of 21st-century photography, in doing so he does not automatically support all the precis of the essay. The original essay suggests that “the knowledge paradigm of the European Enlightenment and its representational logic in photography is unravelling ... a consequence of the new conditions of global neoliberal production ... linked to technological apparatuses of computing” (Rubenstein, 2015). Perhaps then, technology has the power to disrupt forever traditional ways of making, especially photography, a dominant manner of visual communication. Alternatively, is the technology just changing the face of how we engage, share and enjoy photography, in a similar manner to when the medium changed from wet plate to celluloid, 35mm film and camera bodies became available or when the first mobile phone was built to include a digital camera? It (digital) is not the death of photography, but instead, an extension.

Dewdney does make some impactful points in his closing argument, however. Firstly, it is suggested that “... modernism, as the aesthetic and historical logic of progressive time, is now confronted by the internet as the default of knowledge and communication” (Dewdney, 2016). This change has placed some strain on more traditional means of not so much communication but more importantly education, how we learn and how we access knowledge. It is at this point that Dewdney is in some agreement with Rubenstein, suggesting technology-based (visual) mediums are seen now as contemporary ways of making and viewing. Traditionally a photograph was considered a mechanical means to represent of a single time and place and a way to document a person, place or event. However, now the internet and social media platforms have shifted this understanding of a photograph as a shared moment, and also interfaces where knowledge is kept and distributed. Dewdney continues on this topic, also suggesting that “modernism as a rationale of contemporary art has reached its critical limit

because it has no means of engaging with the decentred nature of networks and data” (Dewdney, A., 2016).

There is hope for traditional forms of photography in this essay though, as Dewdney also states that “... it is not the stark choice between the past and the future we are presented with but a new complex moment of recycling the past and inventing possible futures” (Dewdney, A. 2016). Perhaps we are instead at a time when any mode of making is acceptable, and there are no longer the boundaries of modernism to limit the contemporary photographer artist. He continues in this manner, suggesting “... In a time where the future horizon has shrunk to that of the present, and the past is endlessly memorialised, it is not a choice between a photographic past of representation and a future of immersive subjectivities” (Dewdney, A., 2016).

The stances of both Rubenstein and Dewdney are made more attractive on the reading of Walter Benjamin's 1920 essay, *A Little History of Photography*. It appears that the discourse regarding photography and technology has not shifted significantly since the publication of this essay, which links the engagement with old photographic processes to “a crisis of capitalist industry” (Benjamin, W., 1920) in a similar manner to Rubenstein and Dewdney.

It would not be surprising if the photographic methods which today, for the first time, are harking back to the pre-industrial heyday of photography, had an underground connection with the crisis of capitalist industry. (Benjamin, W., 1931, A Short History of Photography)

Rubenstein and Dewdney both advocate that we are in a post-industrial age, that is we are now firmly embedded in an “information” age, one defined by the use of and dependence on technology. All three, Benjamin, Rubenstein and Dewdney agree that photography as a mechanical device from a Marxist perspective is connected to consumerism and has become the basis for a capitalist adventure. That is, photography, with its reliance on innovation, invention and change, especially in contemporary times, has built-in obsolescence. It appears to have been a shift at some point from the need for innovation in order to advance technology, to a consumer-based environment which instead entices consumers to acquire the latest technology continually. It is an economy based on customer expectation. Photography and its bits and pieces are big business. It is also an era focused on the business of selling information, visual communication; we are so reliant on visual data every day from advertising, news and social media propaganda.

Photography (lens-based practices), along with the technology employed for distribution of these images, is at the centre of this ebb and flow. Are we also now in a crisis of capitalist industry, one that has been building from the very first hint of the industrial era?

Perhaps with the observable trend to unplug from this technology-driven age and return to some semblance of pre-digital normality, is a direct result of this 24/7 bombardment of imagery and information. Perhaps also, it is in some part the weariness created from this digital, technological age that some creative photographers and artists are seeking another way to work.

The quote at the very beginning of this chapter by a Geoffrey Batchen (2002) alludes to the situation of contemporary photography: "... photography is faced with two apparent crises, one technological and the other epistemological (having to do with broader changes in ethics, knowledge, and culture" (Batchen, G., 2002, p. 9). What is the state of photography or – more so – digital imaging, that is the creation of visual documents through the use of digital technology? Should one consider this work photographic? Alternatively, should it be determined as a very different way of producing an image? In this statement, Batchen (1999) also suggests that the second part of this crisis is "epistemological, having to do with broader changes in ethics, knowledge, and culture" (Batchen, G., 1999, p. 207). The rise of digital imaging (photography) and the ease by which images may be scanned and altered (edited), led to a rise in public concern regarding the integrity of that image, especially in documentary-style work. Batchen voices his concern regarding viewers' inability to "spot the fake from the real". For that reason, "photography may lose its power as privileged conveyor of information" (Batchen, G, 1999, p. 10). Further to Batchen's concerns in this essay is that digital images, that is computer-generated imagery, may look so much like photographs that "photography may also be robbed of its cultural identity as a distinctive medium" (Batchen, G., 2000, p. 129).

Is this current post-industrial era a determiner of a post-photographic era as well? William J. Mitchell's 1992, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era* states that (photography) "... from the moment of its sesquicentennial in 1989, photography was dead– or, more precisely, radically and permanently displaced" (Mitchell, W., 1992). In his introductory essay to this text, Mitchell provides an overview of the current debates regarding photography. Here, in a manner similar to that of Batchen, he suggests that debate falls into two categories: the impact of digital technologies on the current analogue processes and how it impacts locally, that is how photographers go about their work and how consumers will consider this work. While this debate was somewhat radical at that time, history has proven this stance as warranted as the apparent devaluation of photography as a medium because of the volume produced. The second debate centres on "ideas about historical shifts in

science, technology and visual culture” (Mitchell, 1995, p. 3). The series of essays aims to distinguish between these two stances and deal precisely with the issues which surround the current and future place of the still, wet-chemical photograph.

Mitchell continues to suggest that in an “image-based economy, these (photographic) images have an imperious scope: they are enlisted to produce desire, encourage commodity, consumption, entertain, educate, dramatise experience, document events in time, celebrate identity, inform and misinform, offer evidence” (Mitchell, 1995, p. 4). No wonder that since that time, over two decades, there is a change happening. Are we asking too much of a photographic image? Alternatively, is it that the definition of, or what is, an image, the ontology, has become so muddled that many photographers have sought change. Mitchell continues, with an awareness of the importance of this debate to state that, “... change, then, in how such artefacts are produced, consumed and understood, is a matter for some historical moment” (Mitchell, 1995, p. 4).

This idea leads once again to the question: what is photography and to be considered photographic in the 21st century? Has contemporary photography at last found the way to unlink itself from that linear and device-dependent and redundancy evidenced in the history of photography from its earliest inception? Is this current engagement with alternative processes an outcome of the chaos within the contemporary photographic practice?

While this research is not an investigation into the critical theory of the past decades with regards to the photographic image, it is hard to imagine that this discourse has not affected how contemporary photographers understand and engage with their practice. Has this academic discourse regarding the state of photography led to its downfall and its devaluation? Is this then a reason for the contemporary engagement with alternative (historical and traditional) photographic processes in the 21st century?

1.8.5 A SEARCH FOR THE AUTHENTIC AND THE LONGING FOR TRADITIONAL PHOTOGRAPHY

In an editorial for Artsy, Molly Gottschalk (2016) wrote that we had reached the “peak in what was a revolutionary technology, that is digital imaging and post-production”. It is for this reason that a “renaissance in analogue photography” has emerged (Gottschalk, M., 2016, para. 3). In this editorial, Gottschalk discusses how a new generation of photographers is working with traditional photography processes, namely film. This contemporary engagement includes both

those who used film in their earlier creative life as well as photographers who “grew up with digital at their fingertips” (Gottschalk, 2016). This shift is evident in many genres of photography; however, for Gottschalk, it is emphasised in the fashion photography genre.

For Gottschalk, it is authenticity which these photographers seek, and which has led to the rise in film-based photography by a group of young and influential photographers. The authenticity which Gottschalk speaks of is not the same as truth or truthfulness, the terminology used to refer to photography at times. Truth in photography is a long-contested concept somewhat relative to this research and incredibly crucial in the genres of photojournalism and forensics. However, in creative photography, this traditional notion of truth may not be as important as the underlying narrative and the aesthetic. It is how the subject, captured through the mechanical device of a camera along with the authentic look of the film, which she is perhaps considering as authenticity. Gottschalk is alluding to the authentic rendering of the subject, not the formulaic liquefying of limbs, faces and bodies in general, which incidentally had been a practice for decades before the invention of the digital camera and or Adobe Photoshop in the fashion genre. Gottschalk continues in this vein, suggesting that, “in a time when pre-packaged photo filters mean it has never been easier to imitate the look of film, we are aching for the real thing” (Gottschalk 2016).

Gottschalk (2016) also asks, “what happens when tools originally designed for professional use are released for an amateur?” The magic, once the realm of the master retoucher, is now available on smartphones or home computers. This democratisation of the technology has led to a new generation of photographers, or amateur photographers having access to the same tools as the professionals. This change in itself has managed to undermine what was an industry specifically for professional photographers and has led to the current state of this industry, where there is a blurring between the two groups.

The second part of Gottschalk’s position is the demystification of retouching processes. In the hands of everyday people, they are now able to replicate (to varying extents) the processes and procedures which were previously hidden from view. The wide-ranging application of these procedures does two things. Firstly, it is that demystification and secondly, there is an acceptance or even assumption that all images are edited or need altering in post-production. These assumptions build distrust in the community as they feel that the work done by professionals is achievable by even the uneducated, and secondly that all images are edited and are somehow not authentic. How does this stance then impact on what is considered authenticity in photographic artefacts when there is an expectation an image is edited, changed from how it appeared in its original capture?

What Gottschalk has observed is a turning away from these digital technologies and a return to “grassroots” photography, that is analogue (film-based) photography. Gottschalk suggests that “we are at a point which the photos we see are both indecipherable from reality and not representative of it. Trust suffers. Viewers and creators alike crave authenticity” (Gottschalk, 2016).

With a generation of photographers who have grown up with digital photography and smartphones, with editing apps at their fingertips, why are they then sidestepping this technology to work with film? Gottschalk describes working with film as “slower and harder to use”, however, “... that’s precisely what an emerging demographic, one met with constant virtual stimulation and flooded with digital images, is looking for” (Gottschalk, 2016).

Hayley Phelan (2016) has also written about this topic. With the headline reading, “Fashion Photographers Return to Film”, the article examines the work of several fast-rising fashion photographers who are shooting film. It suggests that the reason behind this change is to differentiate their work, to regain control over their craft and find a more human pace. Perhaps, in just this first sentence, there is an indication of why some photographers are working with alternative processes, that is non-digital photographic processes in our contemporary times. The motivation to stand out, to be different and to have a unique style in photography is an ongoing challenge. This group of photographers has decided to work with analogue technology to achieve this aim.

Phelan in this article quotes the director of British *Vogue*, Jaime Perlman, who suggests that “... the move away from digital photography is part of a backlash to what has been going on in our culture, which is not so digitally savvy” (Phelan citing Perlman 2016). Pearlman describes the images in “Moonage Daydream”, by Colin Dodgson as “refreshing” and that there is a “purity to film” (Pearlman, 2016). With fashion photography, there is a suggestion of alignment between the return to shooting film and the shift in aesthetics in the fashion industry itself. Although Ken Miller, curator, creative director and editor of *Shoot: Photography of the Moment* suggests that it is not all about aesthetics (Miller, 2015). Acknowledging that digital processes can emulate the unique look of any film, there have to be other reasons why these young photographers are engaging with the medium. Miller believes that it is instead a search to be different, an attempt to stand out in the crowded industry, and to “hold on to the specialness of their images and their medium” (Miller, K., 2015 quoted in editorial). He continues this discussion suggesting that young photographers are not trying to differentiate themselves from their peers but rather from the millions of digital images shot and shared each day.

This return to analogue or traditional techniques and methods is not isolated to photography, however. In the 21st century, we have seen a return to more traditional lifestyles and an interest in hand-made crafts. Simon Reynolds (2011) discusses this phenomenon. He speaks about a contemporary generation, who once again embraces music from the pre-2000s, in content and form, the retro generation. That is the style of music as well as the artists they engage with or listen to: this music has become popular. Live tours of pre-2000s bands and contemporary releases on vinyl as well as digital formats are now available. Discussions abound regarding the pureness of sound on vinyl versus the compressed sound available from digital music. Is this quest concerning an authentic or realistic representation of sound also observable within photography? Reynolds acknowledges that this is a societal shift and describes it as an “obsession” (Reynolds, 2011, p. 21).

Not only has there never before been a society so obsessed with the cultural artefacts of its immediate past, but there has never before been a society that is able to access the immediate past so easily and so copiously. (Reynolds, S., 2011, p 21)

In this book, Reynolds differentiates between the notions of nostalgia as a “longing for a happier, simpler, more innocent age” and Retromania, which he describes as “an addiction to popular culture”. Reynolds states that “nostalgia for the past” also intensified because the world was changing faster. “Economic transformation, technological innovations and sociocultural shifts meant that for the first time there were increasing stark differences between the world that you grew up in and the world in which you grew old” (Reynolds, R., 2011, prologue). Retromania though is a phenomenon of popular culture where music and fashion are sampled and resampled, each time presented as a new concept.

We’ve become victims of our ever-increasing capacity to store, organise, instantly access and share vast amounts of cultural data. Not only has there never before been a society so obsessed with the cultural artefacts of its immediate past, but there has never before been a society that is able to access the immediate past so easily and so copiously (Reynolds, Retromania, p. xxi).

Gareth Leaman, in his 2014 essay, “Rethinking Retromania: temporality and creativity in contemporary popular music”, believes that Reynolds’ mistake is to “... leave unanalysed the relationship between the past and the present, and the subsequent implications for artistic

creativity” (Leaman G., 2014, para. 3). Perhaps it was the tensions associated with a new century which encouraged this need to look backward, to sample the past. Andreas Huyssen (1995) continues with this discussion in stating that, “As individuals and societies, we need the past to construct and anchor our identities and to nurture a vision of the future” (Huyssen, A., 1995, p. 250).

This research explores a contemporary engagement with historical photographic processes. However, it appears that this situation may be a small part of a more significant trend towards embracing traditional arts and crafts, and not centred just on one medium. Perhaps though, it is the increased access to information which has facilitated this fascination or at least assisted through the sharing of information.

Social media platforms such as Facebook, blogs, websites and image sharing sites such as Flickr all enable the community of practitioners who are interested in working with alternative or historical photographic processes. YouTube is a wealth of information for “how-to”, even if some of the instructions omit the need for safety equipment when working with these toxic chemicals. A search on Facebook revealed the following groups who were involved with alternative or traditional photography: Large Format Photography, 6,900 members; Van Dyke Brown and Kallitype Printing, 789 members; Alternative photographic processes, 25,236 members; Alternative Photogaphy.com, 9,122 members; London Alternative Photography collective, 9,200 members; Wet-Plate Collodion – Friends of Frederick Scott Archer, 2,300 members; Wet-Plate Collodion Photography, 6,500 members; The Daghouse, Home of the Modern Daguerreotype Practice, 1, 200 members; The Darkroom, 21,400 members; Traditional Film Photography, 17,000 members; Antiquarian Avant-Garde Art & Processes, 4,200members; The Fox Darkroom & Gallery, Melbourne 10,057 members; The Daguerreian Society, 3,900 members. This membership tally is a result of a search on social media, and only represents a sample of the alternative photographic groups on social media. A web search results in a much more significant number of groups in many countries, including the United States, United Kingdom, Europe, Russia, Slovakia, Australia, Philippines, Japan and Asia. The highest incidence appears to be in the United States and the United Kingdom then Europe, which is not surprising as they have the most extensive history with photography. Each of these groups is a portal for sharing work, information and exhibition opportunities. Social media groups enable the sharing of work as well as an international support group for newer practitioners to assist with troubleshooting. Digital technologies, the era of information sharing, could be a possible reason for the contemporary engagement with these old processes. No longer are they hidden in library shelves but instead the imagery is visible, and the instructions accessible.

The sleeping giant Kodak had in 2017 announced it would begin the manufacture of a number of its film stocks including Ektachrome colour reversal film stock, both super 8 with 16mm versions to be released in 2018 and 35mm colour transparency (www.kodak.com press release September 2018). It has been more than a decade since Kodak discontinued the production of these film stocks. The decision for Kodak to return to production of these film stocks, primarily the colour reversal film stock, was attributed to some influential movie directors who prefer to work with film and not digital image capture. This group of directors includes big names such as Steven Spielberg, Quentin Tarantino, Martin Scorsese, J.J. Abrams, Wes Anderson, Woody Allen and Chris Nolan. Furthermore, in 2019, Fuji also announced they would recommence production of their most famous black and white film, Neopan Accros by the end of the year (dpreview.com/news).

The article by Riccardo Basso on the *Taste of Cinema* website discusses the pros and cons of shooting digital or analogue. In a similar manner to still photography it is in the grain, or lack of it, in analogue which is attractive to some. Digital images are formed with square pixels. Film grain or the texture of the film is a result of the molecules in the light-sensitive medium which are softer with barely discernible edges. This article refers to the difference in the look, or the aesthetic, produced by the two mediums. Digital is still more cost-effective than analogue, whether it is for moving image or stills. However, as a point of difference, and if that is what the DOPs (directors of photography) and directors are looking for, then the expense and inconvenience perhaps are worthwhile.

There is an idea to be explored within this research project about whether this is the case with creative photography and photographers are following these same trends. That is, it explores whether there is a defined aesthetic produced by using analogue film and alternative processes, and this aesthetic is which they are looking for to replicate, however, in an authentic manner, within their current work.

The Australian Institute of Professional Photography (AIPP) introduced a category specifically for alternative photographic processes in their awards system in 2015 in response to requests from many of the members who had started to or had returned to work with these processes (<http://aippappa.com/past-appas>). This move was surprising, as the organisation (AIPP) is representative of the commercial and professional photographers of Australia, who as a group had embraced digital technology at the earliest of stages as a more efficient and contemporary way of conducting a photographic business model (no film processing cost and the ability to access images instantly as examples). It was the introduction of digital photographic technology which reset the way professional photographers worked, and the overall aesthetic of their work. Observation of trends within the awards community saw single-capture images

replaced with multiple images of composited works. There was a trend towards post-production techniques which, while creative, produced an image with a heavily edited aesthetic. This change in production techniques required a review of the rules. Retouching or the range of retouching allowed on an image in the early days was strictly defined and all entrants had to supply an unedited RAW file along with the finished print for verification that no post-production or retouching had occurred outside the set guidelines. The 2019 awards saw a range of highly experimental photography produced using traditional and alternative photographic processes.

The introduction of digital imaging technologies also impacted on photojournalism and documentary photography; more so on the photojournalists than documentary photographers who do not have to abide by the same set of strict image processing guidelines. For these photographers, it was the authenticity of the image, the need to provide an image which truthfully described the event, the subject of the photograph, which was necessary. With digital imaging and its link to post-production and retouching techniques, the culture of presenting the truth in the photojournalistic image was called into question. It was up to the photographer to prove their image was original and not edited, instead of it being considered an accurate representation of the facts as was the culture in analogue photography.

Editorial photography must adhere to a set of industry accepted rules; commercial and fine-art photography don't share the same standards.
(Leen,2019, p 3, para. 11)

In 2016 photographer Steve McCurry was ostracised after the revelation his images were “Photoshopped”. The controversy continued for quite some time with McCurry revealing *National Geographic* had also adjusted one of his images in the past. In an online essay (Time LightBox, time.com) Olivier Laurent quotes Sarah Leen, *National Geographic's* DOP who stated that, “... these types of alterations are in the magazine's past, 32 years ago, a different era, it would never happen now” (Leen, 2016, p. 2). It appears then that the distrust for digital capture and imagery has not reduced but instead continues to this present day. Leen continued by stating, “Blurring these areas of photography creates confusion, scepticism and damage to all reputations involved. In the end, honesty and transparency are essential and are setting the boundaries between fine art and editorial photography” (Laurent quoting Leen, 2016, p. 3).

1.8.6 THE REJECTION OF REDUNDANCY

With the rise of a consumer-driven technological age, the hand-made product has fallen into the realm of the boutique and specialist master artisans. Desire drives this consumerist society, where possession of the newest device is necessary to function within this contemporary space. Moreover, there is also an association between the possession of the latest devices and success. However, there appears to be an emerging change over the last decade, where we are slowly becoming aware of how this consumer-driven, materialistic behaviour is impacting on the earth. Studies in sustainability and awareness of the impact which manufacturing has had on the earth are now a global concern. In a recent article for *Motherboard*, a report from the World Economic Forum (DAVOS), Matthew Gault notes, “The material value of e-waste alone is worth US\$62.5 billion, three times more than the annual output of the world’s silver mines and more than the GDP of most countries” (Gault, 2019). Gault continues to explain this point throughout the article. It is that built-in redundancy of contemporary electronics and technology which is to blame for this problem. Consumerism is the driver, consumers’ obsession with the newest and latest hardware fuels this mass consumerism: “Electronic waste is a growing threat to the environment” (Gault, 2019).

This acknowledgment of these concerns is changing how we view that hand-made object. It is a change in behaviour in some areas of society which is pushing for a change of ideology from purchase and redundancy to repair and repurpose. It would be hard not to align the contemporary engagement with historical photographic processes to this overall societal change. However, this research explores whether it is just a smaller group of enthusiasts who are returning to or continuing to work with alternative photographic processes or is there a change, a push back against the digital technologies, some of which were only the ideas of science fiction writers in the past century.

1.8.7 THE HAND-MADE VERSUS THE MACHINE-MADE

It is feasible to suggest that this rejection of redundancy or obsolescence in a technology-driven society may also flow over to the production of a photographic object. The rejection of contemporary technology may result in the embrace of the unique hand-made object. Perhaps these changes are leading towards a perceived difference in value between a machine-made (photographic) object and one which is crafted by hand. This return to values, one may describe as nostalgic, could lead to the situation where photographers yearn to feel more connected to their creative work.

While the “hand of the artist” may not be removed entirely from the machine-made, digital image, through concept and decisions regarding technique, for some, perhaps it is working with a machine (computer) which produces a barrier between them and their creative output. Is the contemporary photographer looking to have more control over their work, and for this reason, have they turned towards alternative photographic processes which are a tactile, hands-on range of processes?

Digital photography is now at the point where the processes and techniques and post-production for output refined to the point the results are predictable. There is any number of online tutorials and pre-packaged systems which plug into such programs such as the Adobe Suite which provide the practitioner of any experience level some success. However, the downside of this convenience is that images begin to look the same. It is nearly a “rubber stamp” type of post-production. With this type of automated production, the uniqueness in the final image is limited, and in its place is a stylised image which is recognisably digital. This situation may pose a problem for a dedicated creative practitioner who is looking to be different, to stand out in the crowded space of contemporary photography. The search for this difference or uniqueness is perhaps where the hand-made image and engagement with alternative or historical photographic processes has an advantage over digital photographic techniques.

Analogue (film) photography was the dominant photographic process before the introduction of digital technologies. However, it is included now within the description of alternative processes. In pre-digital times, this photographic process was considered the most efficient machine-made photographic process. The negative produced provided the photographer with unlimited opportunity to print. However, it was an automated process where the photographer did not have any control over the aesthetic beyond the capture techniques. However, there was a downturn in this section of industry post-digital, the opportunity to process and print at a commercial level reduced, and photographers who choose to work with film are limited to process and scan to print (digitisation of their analogue images) or set up a darkroom space and upskill in order to develop and print their work. It is feasible to consider the time spent working in the darkroom with the necessary specialised skills required to produce a hand-made print which has led to this idea that a hand-made photographic artefact is more valuable than a machine-made. This idea of an original hand-made print having more value than the machine-made is a point which this research explores as a reason for creative photographers to engage with alternative processes in our times.

Correlation between the perception of the value of a hand-made image, and an original, unique singular image, along with a limited amount of copies, is a model which already exists

in photography. When examining the pricing structure of works such as Andreas Gursky's *Rhein II*, although captured with a digital camera, it was noted that the original image was sold in a limited edition of six. This means that there were only ever going to be six copies of this image in existence at any one time. With the majority of Gursky's images already in collections all around the world, only one copy remained in the market. While the limited availability of the prints is one of the reasons behind the increase in value, the other valuations of other photographic works by the same artist supports this stance.

1.8.8 APPLICATION OR USE OF PHOTOGRAPHIC TECHNIQUES AND PROCESSES

Photography, throughout its history, has been assigned to a broad range of applications. Benjamin states that the technology which began as a way to fix the fleeting image of the camera obscura permanently became the "... handmaiden of the science and the arts" (Benjamin, W., 1934, *A Little History of Photography*, p 527). The continuation of objections to photography's mechanical representation of a subject meant the medium constantly battled to be recognised as art, an argument which continues today in some circles. The struggle for photography to be recognised as anything more than the mechanical representation of a subject began at the earliest history of photography with a group of photographers including Julia Margret Cameron, Edward Steichen and Heinrich Kuehn. Their work sought to emphasise the mood and emotion in the photographic image with a particular focus on the beauty of the subject matter and composition. Their style was known as Pictorialism, and their work aimed to disguise that it was the result of a mechanical device, the camera and instead attempted to be considered art.

As cameras and photographic processes became more technically refined, the artistic style of Pictorialism was replaced by Modernism, which instead embraced the evidence of the mechanical device, the camera in the final image. Ansel Adams developed the zone system, which made it possible for the photographer to not only capture an image mechanically to a refined level, it also assisted in the printing of the same image, to an even more perfected state. Modern digital photography emulates this search for perfection and embraces some of the processes in its post-production techniques. Pre-set techniques, sharing of post-production techniques, has led to a state where images, though plenty, are beginning to look the same. This systematisation of post-production and production of digital images along with the sheer number of images taken, made and shared every day, makes it harder for creative photographic work to stand out in the crowd.

The question is: Has the introduction of digital imaging and camera phone photography, along with the ease of use of post-production apps, made us as a society begin to devalue the photographic image? Has this overall devaluation of images produced through digital technologies led to a stance of: "I can do that too, it is just a photograph"? Also, here is the app which will emulate that look, dramatic black and white, dramatic high contrast colour faded antique colour, it is all at our fingertips, no training needed. Perhaps too, when Rubenstein and others say this is the end of photography as we know it, they are correct, as the next new thing will not be new, but old.

Is this current trend towards engaging with alternative photographic processes just photographers looking to present photography in a new light? Is it an attempt to be distinctive or to stand out from that very crowded space which embraces all things photographic? The engagement with alternative processes may also be a result of growing boredom with, or even rejection of, digital technology. Furthermore, photography for some may have become too easy, too repeatable, too predictable and so to alleviate this situation, they are instead embracing processes and techniques perceived as more arduous, complex and unpredictable in the output.

1.9 ALTERNATIVE PROCESSES IN EXHIBITION

1.9.1 THE ALCHEMISTS: REDISCOVERING PHOTOGRAPHY IN THE AGE OF THE JPEG

A 2015 exhibition at the Australian Centre for Photography was a celebration of alternative and experimental photographic processes. It was a collaboration between the Australian National University, the University of Sydney, Sydney College of the Arts and the Australian Centre for Photography and the exhibition and associated symposium, digital publications and masterclass featured work from emerging as well as established photographic artists. The symposium featured speakers from academia, Professor Geoffrey Batchen, industry, Ellie Young (Goldstreet Studios) and exhibiting artists. The feature event at the close of the symposium was a series of interviews with exhibiting artists.

Curated by Suzanne Buljan, Cherine Fahd and Dr Martyn Jolly, the exhibition included work from both Australian and international artists. These included Daisuke Yokota, Ben Cauchi

and Todd McMillan. The exhibition included both traditional and experimental forms of alternative photographic processes.

1.9.2 LIGHT PAPER PROCESS, REINVENTING PHOTOGRAPHY

The same year a major exhibition was held in the United States, *Light Paper Process, Reinventing Photography*, organised by Virginia Heckert, curator and department head of photographs at the Getty Museum. The aim of the exhibition and accompanying publication was to bring together work which focused primarily on living artists and work made over the past 15 years. “This exhibition is the first time that the galleries were dedicated to works by living artists,” wrote Timothy Potts, director of the J Paul Getty Museum (exhibition publication foreword in exhibition catalogue). The exhibition also included historical work from some of photography’s most significant, including Man Ray, Laszlo Moholy-Nagy Edmund Teske and others.

... As new technologies, equipment and materials expand the possibilities of what a photograph can be, numerous artists have chosen to explore the materials that remain fundamental to the beginnings of the medium: light-sensitive papers and chemical processing ... Heckert (*Light Paper Process*, 2015)

The exhibition was a celebration of “... the spirit of inquisitive exploration ...” (Potts, T., 2015, p. 7). The exhibition was also a celebration and exploration of light. Virginia Heckert in the exhibition essay describes the processes used by each of the artists but seems to stop short of exploring the reasons for this engagement beyond their desire to “interrogate and reinvent the medium of photography” (Heckert, V., 2015 p.13).

1.9.3 EMANATIONS: THE ART OF THE CAMERALESS PHOTOGRAPH

A book accompanied this exhibition and artist interviews were shared online, and this process provided another viewpoint on alternative processes and contemporary engagement. Geoffrey Batchen, in the introduction to the book, explores the art of cameraless photography and also delves into the history of photography, focusing on work made without the use of a camera. While the majority of the introductory text focuses on describing and interpreting the work of each artist, there are some small glimpses which may assist with this current research project. Batchen suggests (2015) that “artists making cameraless photographs today assume that the photographic medium is and has always been a politically charged field; to engage the visual and chemical grammar of the photographic is to dispute and challenge that politics at a very basic level” (Batchen, 2015, p. 47). This stance is evident also in the essays by Rubenstein and Dewdney at the beginning of this chapter. However, Batchen then approaches the subject from another direction:

... apart from anything else, to make such photographs returns photography to a unique, hand-made craft and away from an automatic subservience to global capitalism, and its vast economies of mass production and exploitation. Offering us the tactile other to the evanescent digital image, contemporary makers of cameraless photographs are making art that is all about the digital age, some of them explicitly so (Batchen, 2015, p. 47)

In any case, by slowing down the photographic act, many photographs made without a camera also slow down our perception of this act. They ask us to pause a moment and think critically about the consequences of our post-industrial information economy (Batchen, 2015, p. 47).

The interviews which accompanied the exhibition documentation were an opportunity to hear first-hand from the artists about their work. However, the interview content stopped short of answering that question of why they are working in this manner.

1.9.4 ANNA ATKINS AND THE CYANOTYPE

While Anna Atkins is regarded widely as the first female photographer (1852), some may not know she was also the first person to publish a book of photographs. But Atkins did not use a camera; instead, she worked with both the cyanotype and salt-printing processes in the

photogenic drawing style. Her cyanotypes of botanical forms and scientific documentation assisted her father in the publication of his work. These cyanotypes, once positioned firmly in the sciences, now serve as inspiration for contemporary artists who work with alternative processes. Atkins' cyanotype prints, and book are currently travelling the world and exhibited in specific sites including the New York Public Library in their exhibitions program.

In 2018, an exhibition of cyanotype prints from contemporary Australian alternative process practitioners at Monash University in the Atrium Gallery space drew more than 9,500 visitors within a month. Aptly named "Anna's Garden", it was part of the World Cyanotype Day 2018 celebrations.

In 2019, Maud Gallery in Brisbane hosted the exhibition, before shipping it to the United States as part of a travelling exhibition celebrating contemporary cyanotype practice and World Cyanotype Day 2019.

1.9.5 VICTORIA AND ALBERT MUSEUM

While significant galleries and museums all have collections of photography, in 2018 the Victoria and Albert Museum in London went one step further by adding a permanent exhibition of historical photographs, equipment and negatives to document the change in photographic processes. This space is dedicated to photography from its earliest forms through to digital imagery. The opening exhibition was aptly named "Collecting Photography: From Daguerreotype to Digital". Their new Photography Centre, which opened in 2018, allowed the museum to expand significantly their range of photography displayed.

The second phase of this development includes plans for studio and darkroom space along with learning and event spaces and a library.

1.10 OVERVIEW OF THESIS CHAPTERS

Chapter 1, Introduction: This chapter presents the research problem and research questions, as well as the aims and objectives of the research project. This chapter is also an opportunity to provide some background to the project including an examination of the history of photography, overview of the current state of creative photography, and introduces current discourse regarding the philosophy of photography relevant to the research problem.

Chapter 2, Research Design: This chapter presents the research design for this project and discusses the reasoning behind the choice of research methodology. It presents and discusses the application of each step of the selected research methods, along with methods for the analysis of resulting research data. Furthermore, as the research relies on interaction with research participants, how these participants are selected is also outlined.

Chapter 3, Survey Results, the first of three data presentation chapters. Here data collected from the first phase of research investigation, the online survey, is presented and unpacked with the research questions in mind. The final stage of the chapter presents the findings and indicates critical areas of further investigation for the next research phase.

Chapter 4, Interview Results, data and results from the second phase of the research, the interviews. Here the data are considered in response to the research questions and concerning the online survey. Findings from these two phases informs the final phase, the case studies.

Chapter 5, Case Studies, a series of case studies in which the practices of a group of photographic artists are presented, examined and discussed. The case studies and this chapter represent the final stage of the research.

Chapter 6, Discussion: This chapter examines and synthesises the information gathered during these research phases and develops a position on the research questions. Presented also is a range of reflections on the research findings from the three phases of data collection.

Chapter 7, Conclusion: This provides links between the research question and the outcomes, indicating the location of this information in each chapter. It offers concluding remarks, suggestions for further research and implications of this research for the field of photography research.

CHAPTER 2

RESEARCH DESIGN

2.0 RESEARCH DESIGN

OVERVIEW

a focus on interpretation rather than quantification; an emphasis on subjectivity rather than objectivity; flexibility in the process of conducting research; an orientation towards process rather than outcome; a concern with context — regarding behaviour and situation as inextricably linked in forming experience; and finally, an explicit recognition of the impact of the research process on the research situation. (Cassell, C., and Symon, G., 1994, Qualitative methods in organizational research, a practical guide, p.7).

This chapter defines the research methods employed in this study, to investigate the research questions, aims and objectives investigated. It describes the research design and the attributes used during the research. Overall, this study employs an exploratory, sequential mixed-method research design in three distinct phases. These phases included the collection of quantitative and qualitative data using the following methods:

- An online survey (qualitative/quantitative);
- Face-to-face or phone interviews (qualitative); and;
- A series of case studies (qualitative).

Each research phase is undertaken as a stand-alone activity. Data acquired and analysed from each method is interrogated and then informs and is used to produce a framework for the next step (Figure 2). The sequential nature of the study is an important point, as the outcome of each of the steps shapes the direction of the following phase to fulfil the research aims. Information derived from the survey data was used to develop the interview questions. The information derived from the interviews assisted in the development of an examination framework for the case studies. Finally, knowledge derived from the three phases is used to unpack and discuss the outcomes using the research questions.

Mixed methods as a research methodology is a relatively new and at times contested concept in research design and is used primarily in social sciences and humanities (Johnson, Onwuegbuzie & Turner 2007). Creswell (2003) specifies three basic mixed-method research designs: convergent; explanatory sequential; and exploratory sequential (Creswell, J.W., p. 6). The choice to use an exploratory sequential mixed methods design was based on the

advantage of the sequential collection and examination of both qualitative and quantitative data in an empirical manner. A mixed methods approach was considered as the best choice of research design for this study because the distinctive attributes of this method were considered an advantage to achieve the desired outcomes: the need to collect, interrogate and distil data at each of the research phases, and then to use any findings to inform the next phase of research.

Working with a pragmatic paradigm approach permitted the collection of quantitative and qualitative data sequentially from a broad range of participants, which enabled particular questions to be addressed such as the “who, what, where, when and why” elements of the research question from a diverse sample. Creswell, Plano and Clark, (2011) suggest “Mixed methods research encourages the use of multiple worldviews, or paradigms (i.e. beliefs and values), rather than the typical association of certain paradigms with quantitative research and other for qualitative research” (Creswell et al. 2011, p. 9). Furthermore, it enabled the researcher to explore a range of viewpoints, from a selection of associated creative practitioners throughout the three research phases. This study employed a mixed-methods approach, which enabled a combination of heuristic and positivist ideas within the research design to examine and report on the observed trends.

An interpretivist/constructivist model, as described by Creswell (2003), provides researchers with an opportunity to interpret data through personal observations to resolve the research problem. Observations made during the research phases assisted in resolving the primary as well as secondary research questions. This research model provided a significant advantage as it permitted the researcher a voice into the critical-thinking components of the study.

Social media was used as part of the research to enable searching for and connecting with specialist groups who engage with alternative photographic processes. David Lazar (2015) notes that “social algorithms size us up, evaluate what we want, and provide customized experience” (Lazar, D., 2015). Social media algorithms work with traces of data and are designed to track users’ preferences and to target them with marketing and other services (Lazar, 2015). Social media networks, aided by the background algorithms, assisted to procure participants in academic research, is relatively new. The ethical considerations regarding using the platforms for the recruitment of participants in health or medically related research are under discussion (Gelinias, L. et al., 2017). However, this research project was assessed as “low risk”, and where there was no personal, especially medical or health information sought, the use of social media was considered to be a sound.

While this algorithm and the associated data are not verifiable beyond a basic understanding

of how it works, the results were notable. Contact and ongoing networking with interest groups and artists enabled the reach of the surveys beyond any expectations. Otieno and Matoke, (2014) suggest the use of social media may assist in the “persistent problems associated with questionnaires and surveys and the possibility of a high rate of non-response and enables the sampling from a wider population” (Otieno, D., Matoke, V., 2014, p. 963).

2.1 RESEARCH PLAN – A VISUAL MODEL

This section provides an overview of the research design and methods employed. Figure 2 presents a visual model of the research design, along with the aims of each research phase.

Phase One, the online survey, was conducted to collect information from a diverse population locally, nationally and internationally. The survey collected a broad range of information with regards to the demographics of the alternative process community before exploring the processes used and then finally, the reasons for this engagement. Data analysis allowed the augmentation of focused interview questions for the next phase. The final part of the survey offered participants an opportunity to continue to engage with the study by continuing with the interview phase.

Phase Two, the interview series, aimed to work with a more focused group than in the first phase. The interviews were an opportunity, through a directed discussion, to explore and then understand the nature of contemporary engagement with alternative photographic processes. These conversations provided a better understanding of the practices and how the processes are used in a contemporary manner. Information distilled from the interviews supported the development of an examination framework for the case studies.

Phase Three consisted of a series of case studies which investigated the creative practice of four successful contemporary fine-art photographers who engage with alternative processes. These artists were selected using a set of criteria including their choice of process, practice and creative output. The case studies allowed an examination of contemporary aesthetics in the highest level of creative photography possible.

Detailed discussion regarding each of these phases continues within this chapter.

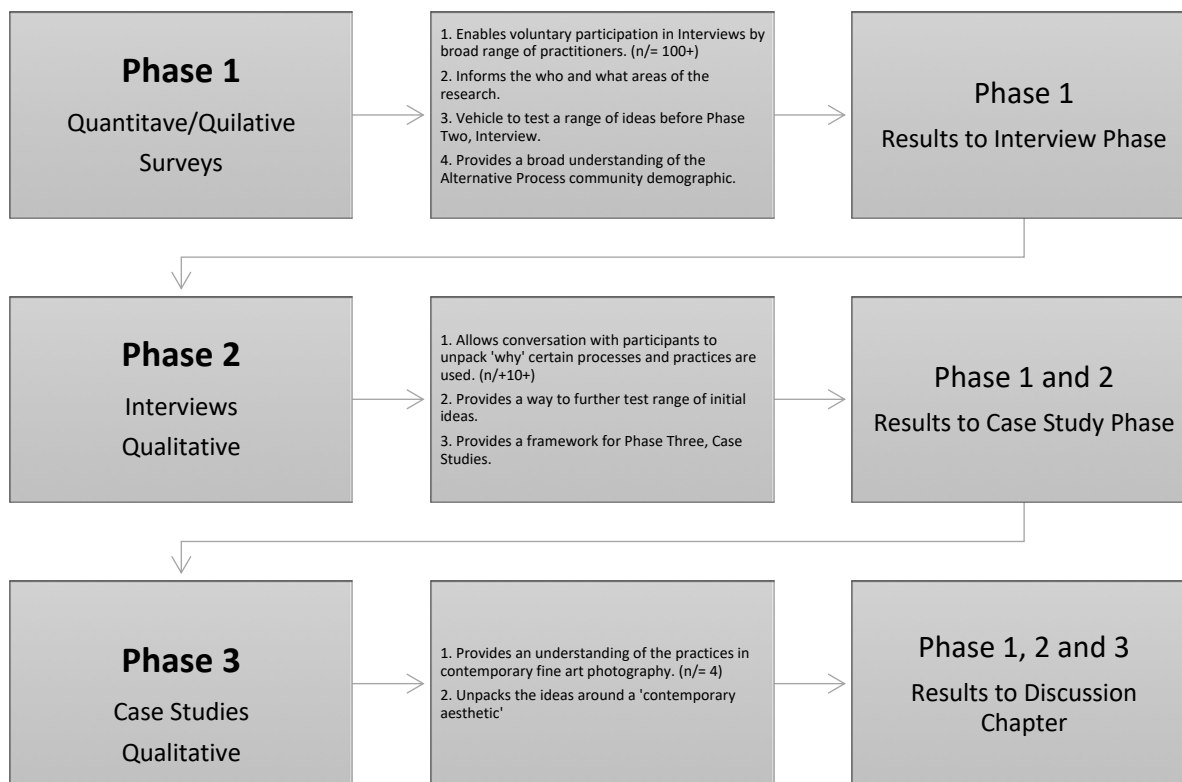


Figure 2 Research Plan – A Visual Model

2.2 PHASE 1 - THE SURVEY

2.2.1 RECRUITMENT OF SURVEY PARTICIPANTS

The survey included over 100 participants and was distributed both in Australia and internationally. The recruitment was through a range of approaches including direct email invitation via Google Forms using contact information in the public domain. The survey was also distributed by a former colleague who now works in a London University; to members of a specialist alternative processes website (alternativephotography.com); and Gold Street Studios mailing list. Some specialty photographic groups on Facebook social media pages also agreed to distribute the survey. The algorithms embedded in Facebook assisted with this phase, as the interconnectedness of these groups meant that the survey was able to be delivered to a wide range of participants and beyond the original scope. These groups included London Alternative Photography Collective; Christina Z Anderson; The Tintype Traveller; The Hand (online magazine); 2016 Northwest Symposium for Alternative Photography; Australian Alternative Photography; APAP (Analogue Photography & Alternative Processes Network); Australian & International Alternative & Experimental Photography. The aim was to attract

interest from a range of practitioners from enthusiast through to professional artist and educators.

The original survey sample size was set to gather responses from a minimum of 100 and a maximum of 150 participants. The survey reached its minimum target respondents within a week of its release. A longer duration and multiple attempts at the distribution assisted to increase the number of respondents slightly. The aim was to ensure a large enough sample of participants to ensure input from a diverse selection of the alternative process community.

This research was deemed “low risk” ethically with participants able to voluntarily opt in or out of the online survey without having any contact details collected.

2.2.2 SURVEY DESIGN

The survey was designed to explore a specific number of topics about the nature of contemporary engagement with alternative photographic processes. These topics included: who is working with the processes; what techniques are used; why these creative photographers choose to work in this manner. The formation of each of these is a response to the research questions, and the aims and objectives of the study. The survey questions were designed to gather both quantitative and then qualitative data from the survey population, representative of all levels of the photographic community as described in the overview of research participants.

Research into effective survey design was the starting point for this phase. Shannon (2002) provided valuable information on how important the first question is as well as how the following questions are grouped and sequenced to allow the survey to flow (Shannon, D. M., et al., 2002).

It was determined that having clear instructions at the beginning of the survey as well as an option for the participant to opt out at any time were essential. Furthermore, Rattray and Jones (2005) suggested that “... questionnaires to enable the collection of information in a standardized manner which, when gathered from a representative sample of a defined population, allows the inference of results to the wider population” (Rattray and Jones 2005).

The survey design facilitated the collection of information which, once analysed, would determine which of the ideas proposed as reasons for this contemporary engagement with alternative photographic processes would remain in the next research phase.

The survey structure consisted of 42 questions divided into two sections. The first section (questions 1-11 inclusive) included a range of closed-ended questions. Bowling (1979) does suggest “this may restrict the depth of the participant’s response” and this element was consistent in the survey design. However, the data collected through the first three questions in section 1 were primarily about the demographics of the alternative photographic community which require only one choice of answer, regarding age, gender and location. This provided a benchmark for the diversity, or lack thereof, within the alternative process community. The first questions in the survey were an exploration of whether the alternative process community and its contemporary engagement with alternative processes, was a local, national or international phenomenon.

The remainder of the questions in section 1 explored the demographics of this community. These questions investigated current practices of the survey population, such as how long they have worked with these processes, and whether they had only used alternative processes exclusively, or had returned to these processes; and had they previously used, or did they continue to use, both digital and alternative processes together in some manner. The questions investigated topics such as what was their experience and education level and what was their first introduction to alternative processes? These questions were designed to explore a range of ideas including the notion that photographers working with alternative photographic processes did so exclusively because of their disinterest in, or rejection of, digital technologies.

This group of questions in the first section allowed participants to choose their responses from multiple-choice answers and an “other” option for additional comments. The comments option with this group of questions alleviated many of the perceived problems associated with closed-end questions and provided supplementary information regarding the alternative process community.

Question 11, the final question in section 1, specifically investigated the variety of alternative photographic processes most commonly used. Here the survey participants were able to select single or multiple responses with an option for comment or to add a process which was not listed.

The second section of the survey design focused on developing an understanding of why this engagement is taking place. It provided a range of statements based on original ideas which formed the research questions. The survey participants responded to the statements via a Likert scale from one to five, where (1) indicated strong disagreement, and (5) indicated strong agreement. This scale, first developed in 1931 by Rensis Likert, is a way to measure opinion or attitude to carefully worded statements and convert those responses to numerical data for

later analysis (Likert, R., 1932, pp. 1-55). Use of the Likert scale instead of multiple-choice answers provides an opportunity to measure the attitude to a statement and allows the survey population to voice their opinion on the topic. It is this second section of the survey which shaped the direction of the interview questions.

The survey also addressed questions such as whether alternative processes transformed the production of the artist's final image or artefact (photograph), it appeared (aesthetic), and further conceptual questions regarding the authenticity of the image/work. It also asked whether using alternative processes changed their attitude towards their level of creativity in their work. Some survey questions focused on the aesthetic of the photographic artefact, and the complexity of the contemporary subject matter and historical processes.

Among the outcomes to the survey was an opportunity to gauge the current status of creative photography and how artists are using alternative/analogue or chemical-based processes, and/or hybrid processes. The survey was designed to provide initial information about the who, where, what, when and why of alternative processes. It provided background information about the alternative processes community and offered further network connections for the researcher. The survey included the researcher's contact information, which enabled participants to continue in the study through volunteering for an interview.

The survey served as a fact-finding tool, assembling information regarding who was engaging with these processes; where are they situated globally; when they began to work with alternative processes; what methods are used, and finally some indication of why they are using or engaging with alternative processes. Information derived from the survey assisted with the development of the questions for the second research phase, the interviews.

2.2.3 SURVEY DELIVERY

The decision to use online digital instead of a paper-based survey was made for several reasons including the following:

- The ability to distribute the survey to a broader audience in a shorter length of time;
- The ability to push out the survey if the responses declined;
- The immediate access to answers; and
- The initial presentation of raw data in an Excel spreadsheet directly from the survey software.

Other advantages of working with electronic, web-based surveys are that it can include a wide range of response options such as multiple-choice answers, Likert scales, along with pull-down menus and an option for further comments. The most significant advantage was that the “data may be downloaded and exported into a spreadsheet or statistical analysis software program” for further exploration (Shannon et al., 2002).

Google Forms was used to conduct the surveys as it offered no limit on the number of questions, was compatible with a range of digital platforms, and was easy to use. Google Forms also provided the initial analysis of the data, which was displayed in a visual format (graphs) and was downloadable in Microsoft Excel spreadsheet format. The Excel format allowed further interrogation and analysis of the data. These options were possible as Google Forms online provides a range of survey and analysis tools aligned to the data collection.

The limitation of using an online method for distributing the survey was that it only reached those persons who had internet access or digital capability. Advantages outweighed limitations. The advantages included a quick turnaround of information; the convenience of having information which was delivered in a digital format and downloadable to permit further analysis; and the diversity of the groups for the distribution of the survey.

2.2.4 SURVEY DATA

Survey data consisted of responses to a range of questions and statements which made up the online survey. The survey, as discussed previously, was divided into sections, the first section gathering quantitative data followed by qualitative data in the second section. It was considered, based on examples of how Google Forms visualises data, that both types of data would be displayed effectively in Google Forms. These graphics would enable a first look at the initial findings, which could be used to develop draft questions for the second research phase, the interviews. A more in-depth examination of the survey data would be undertaken at a later stage.

The first series of questions (quantitative) was displayed using either bar or pie charts, while the second section (qualitative) which collected responses using Likert scales, displayed the data using only bar charts. All the charts included numerical and percentage values. Because of the size of the charts displayed online, the numerical values were not easy to read, especially when there was a large number of responses or significant variation in the responses. This size made drilling down into this detail challenging. However, the ability to download the online data from Google Forms, as a .csv file, which is viewable using Microsoft

Excel, overcame this limitation. The survey data (responses) could also be printed and or saved as a PDF version to archive. Google Forms as a tool for online surveys had proven itself efficient not only in the development, distribution stages and also in the analysis stage.

Consideration of the survey data was necessary as a component of the research design to enable the development of focused interview questions and discussion points for Phase 2 of the research, the interviews. A detailed discussion regarding the survey findings is available in Chapter 3, Presentation of Survey Results.

2.2.5 DATA ANALYSIS

The decision to work with Google Forms during the survey phase was made because of the ease of use and distribution and because of the flexibility in how the ensuing data may be viewed initially and then downloaded for further analysis.

Data from the survey consisted of responses to 42 questions. These responses were able to be viewed online in Google Forms as a graphic representation, including numerical and percentage values, which provided an initial overview of the responses. Initial visual analysis of the data enabled quick identification of the participant demographics (age, gender, location) and what processes the artists use and how long they have worked with the methods. This data allowed an insight into the alternative process community.

The initial data visualisation provided by Google Forms was easy to understand, because of its visual nature. However, because of the number of questions, some of which are relative to each other, it was determined that further steps would be necessary to understand what information the survey results had yielded. The analysis of the survey data, it was thought, would be a multiphase exercise.

The first phase of this analysis consisted of this examination of the data visualisation, followed by the export of data from Google Forms to a .csv file, which is readable in an Excel spreadsheet. Here, presentation of each question and accompanying answers were in written form, that is either text or number, with each question assigned a column and each survey participant a row. This clear presentation of information made it possible to undertake a close interrogation of the data. The interrogation process included an examination of specific answers to each question and the comparison of responses from questions in search of any association. The responses for the first section of the survey questions were quite easy to understand, especially those questions which explored the age, gender and location of the

survey population. However, even with these questions, working with the information in the Excel document, relationships between age and gender could be explored.

In order to explore and unpack the survey information, a close examination of the responses to each question, as well as a comparison between other questions and their responses, was undertaken to ensure there were no possible anomalies with the automated data analysis. It was found, by undertaking a manual analysis using the original data and then scrutinising the comments in the “other” responses, that the Google Forms data analysis was at times averaged. It was not able to take in or include this information effectively. The use of Excel spreadsheet format to analyse data allowed the inclusion of this information.

In section 2 of the survey, when dealing with the Likert scale responses, data in the Excel spreadsheet was still quite dense and detailed. In order to make sense of this information, a table was developed in Microsoft Word. Data extracted from the Excel spreadsheet including the number of responses and numerical and percentage values of each were laid out in a more graphic format to assist in the analysis of the data. This step provided an easy reference tool of the survey results.

Chapter 3 provides a commentary on the survey results, including the application of descriptive statistics to unpack the results of the Likert scale questions. A detailed consideration of the survey data was necessary as a component of the research design and to enable the development of focused interview questions and discussion points for Phase 2 of the research, the interview.

A detailed consideration of the survey data was necessary as a component of the research design and to enable the development of focused interview questions and discussion points for Phase 2 of the research, the interview.

The survey was approved by the James Cook University Ethics Committee (approval number H6540)

2.3 PHASE 2 – INTERVIEWS

The interview stage of the research was designed to allow for exploration of a range of concepts which emerged from the survey results, focussing on why photographers are engaging with alternative photographic processes and what is the result of this engagement.

The interview participants included several from the survey population who volunteered to continue with the study. However, other alternative process practitioners were invited to participate as well.

While the surveys were successful in determining topics of interest that should move forward and continue to be included in the research, that method of enquiry is limited in its ability to unpack and explore the personal creative practice. The surveys provided numerical values and further exploration via an interview provided verbal and anecdotal responses from a range of alternative processes practitioners, in order for a more thorough understanding of the reasons for engagement to be determined.

The series of interview questions assisted in understanding the “why” in the research question. The interview questions focused on the following themes:

- What processes does the artist use?
- Why does the artist work with these processes?
- What was their inspiration to work with these processes?
- Did they consider the object created using alternative photographic processes was unique and of more value than a machine-made image?
- How would they describe the aesthetic of their work? and
- Whether alternative and hybrid processes had a “unique” visual aesthetic?
- Whether the use of alternative processes with a contemporary subject matter created a distinctively contemporary look?
- Interviewees were invited to comment on complexity in alternative processes in their practice, along with the selection of subject matter for their work.

2.3.1 INTERVIEW PARTICIPANTS

The aim was to have a similar level of diversity in the interview participants, as was present in the survey population. For that reason, at the end of the survey, contact details were provided and an invitation delivered asking the survey respondents to consider continuing to participate in the research. Initially, the interview participants were volunteers involved in the online survey and who indicated they were interested in continuing with the study.

However, when it was time to conduct the interviews, there was a lack of desired numbers from the survey population who, even though interested in participating, were no longer available so I invited other potential participants to participate based on their industry connection, their hierarchy in the fine-art community, their status as emerging practitioners, their position as a gallery owner, curator, workshop convener and or academic. Additionally, artists who did not have an opportunity to respond to the survey in the first place then approached the researcher to become involved in the study when they heard about it through alternative process networks.

2.3.2 INTERVIEW DESIGN

A semi-structured method was used to conduct the interviews. All the participants were provided with the same list of questions which were asked in the same sequence, grouped under “discussion topics”. While the questions provided a structure for the interview session, this structure was not so rigid that it did not allow the researcher or the interview participant to explore topics further as necessary. That was achieved by providing flexibility during the interviews. Listening to the information provided by participants allowed a more in-depth exploration of topics which emerged during the interviews.

Furthermore, it was possible to gain more information outside of the original parameters in the questions, especially when describing their practice and reasons for working with alternative photographic processes. The semi-structured design provided an opportunity in the interview to further explore interesting points, not necessarily envisaged in the development of the interview questions.

The survey data were anonymous, which made it impossible to cross-reference survey results to interview participants who had also participated in the survey. To understand how the interview participants worked, at the beginning of the interview, each was asked a series of

questions which in the first instance provided information regarding their background, what alternative processes/s they use and for how long. This first discussion point served three purposes. It provided the interviewee with an opportunity to talk about themselves and their practice, a topic familiar to them. This, in turn, allowed them to become less anxious or nervous about the interview itself. It also provided a basic understanding of the processes used by the participants and their background.

The interview questions included five main topics as below:

1. Background information about the artist and their practice;
2. Why they work with alternative/chemical or analogue processes;
3. Is there is a unique aesthetic in work associated with the process?
4. Subject matter and the work; and
5. Exhibiting or exhibition history.

These questions were organised under discussion topics, and each question had a series of sub-questions which assisted in the continuous flow of conversation during the interviews. The open-ended design of the questions allowed a conversation to ensue regarding each participant's practice, their artistic philosophy and reason for engaging with their particular method, the aesthetic in their work, and how they make this antiquated process viable in contemporary times. The discussion continued with the subject matter of their work, as well as the outcome from mixing contemporary subject matter and alternative process, whether they exhibit, and finally, whether they are observing trends in this area of creative photography.

2.3.3 INTERVIEW DATA

Original interview data consisted of audio recordings made with the permission of each of the interview participants and following the ethical clearance guidelines. For this reason, each audio recording required transcription before analysis could begin. The interviews were transcribed to a Microsoft Word document before being archived in multiple locations along with the original recordings. The decision not to outsource the transcription of the audio recordings meant the process of transcribing was slower and took up valuable research time. However, it enabled a better understanding of the interview content in the first instance, which then assisted when examining the data at an in-depth level.

2.3.4 DATA ANALYSIS

Scrutiny of the transcribed audio recordings was the first stage of analysis of interview data. At this time, areas of interest were highlighted and then marked with the associated timecode for reference and further examination.

Following this initial stage, each of the interview scripts was examined more closely to enable the comparison of the results with both the questions asked and against the research questions and looking for responses which either supported or challenged the research aims. The second step allowed for other areas of interest in the transcript to be identified, highlighted and the audio file accessed to match the area with a timecode once again. This timecode, relative to the location of the information in the interview recording, was a way to reference the position in the audio recordings where these statements may be found in when writing the discussion in Chapter 4, Interview Results and to assist in the validation of the interview data during the examination process.

It was through working with the interview data in this manner, and through handling each of the interview transcripts in the same manner, that development of an examination framework became possible with responses extracted from the original audio recordings, grouped to match the questions. This examination framework assisted in the initial analysis of the interview transcripts and allowed the alignment of information extracted from the interviews to both the interview participant and the concepts under examination.

The next step required the implementation of some form of identification for each of the interview participants which protected their identity and allowed easy reference to them in the Chapter 4 discussion. This was achieved by the allocation of a number relative to their order in the interview schedule. Each participant one through to 11 (i.e. IP_1; IP_2, etc.) was an identifier. In the transcript document, identification of the participant was possible but in this subsequent analysis stage, they were only referred to by their numerical indicator.

The final stage of this preparation included the creation of an Excel spreadsheet for each of the interview discussion points. Analysis of the interviews was possible through the identification and association of responses within the interview transcripts, relative to the research questions and aims. Chapter 4, Interview Results, contains a presentation and detailed discussion regarding these responses.

The interview questions and methods were approved by the James Cook University Ethics Committee (approval number H6540).

2.4 PHASE 3 - CASE STUDIES

Phase 3, the final phase of the research design, consisted of a series of four case studies which explored the art practices of some of the most successful contemporary photographic artists. They investigated whether any of the concepts identified during the first two phases of the research were evident in their photographic practice at this level of expertise.

The case studies were an opportunity to examine the concepts collected during the previous two phases, against the practice, processes and creative output of a range of contemporary photographic artists. They focused firstly on how and why they work with an alternative, or chemical-based, process. Furthermore, they explored how this engagement is impacting on the development of a contemporary aesthetic in contemporary creative photography.

The case studies were designed to explore the reasons contemporary photographic arts practitioners are engaging with alternative photographic processes and practices, some over a century old, within the 21st-century era of digital technology.

2.4.1 ARTIST SELECTIONS FOR CASE STUDIES

The artists for this final phase were chosen by the researcher using a set of criteria based on diversity in process, gender, location and exhibition history.

While the initial research indicated that there was a broad community of elite creative photographic artists who work with alternative photographic processes, the decision to focus on photographers who have commenced working with these processes within a set timeframe permitted an examination of contemporary and emerging photographic practices which was more suited to the research aims.

The aim was to choose photographic artists who each work with a different alternative photographic process and who, through their practice, are bringing something new to how photography is considered within the contemporary creative community internationally.

The photographers chosen for the case studies were considered using criteria that supports the research inquiry. These criteria included that each artist was:

- An exhibiting artist;
- Has worked with the processes for fewer than 15 years (preferably the past 10 years);

- Has an international profile;
- Has their work collected by significant galleries and museums;
- Academic publications or professional critiques based on their work are available; and
- Each photographer works with either an alternative or chemical-based process in either a traditional or non-traditional manner and inclusive of cameraless photography and the hybrid digital/alternative model.

2.4.2 CASE STUDY DESIGN

The case studies employed an examination framework which included an introduction describing the background of the artist, their chosen process, exhibition history and any other relevant information. Information for the case studies came from a variety of sources and literature. These sources included an analysis of any information available such as: biographical information; artists and gallery and museum websites; interviews and critiques; curatorial essays and academic papers; blogs; and gallery press releases. As some of these artists are emerging or early in their career, it was at times hard to find information. Using information from a diverse range of sources enabled an exploration of why these artists work with their chosen process and why engaging with alternative photographic processes is crucial for their particular practice.

The case studies included an examination of artists and their practices using the following criteria:

- The processes and inventiveness;
- The production of photographic objects or artefacts;
- The impact of the process on the aesthetic;
- Why they engage with the processes; and
- How their work is received within the broader contemporary and photographic art community.

Following the initial introduction to each artist, the case studies then examined the relationship between the process, aesthetic and production of photographic objects or artefacts within each unique practice. The case studies also included an exploration of the relationship between the subject matter, the conceptual stance and the process. They were an opportunity to investigate how alternative processes are used experimentally, demonstrating a level of inventiveness in their practice. However, the case studies phases aimed to explore further the reasons there is a contemporary engagement with alternative photographic processes at this

level of practice and the information obtained added to the broad understanding of what is happening at all levels.

The case studies focused on what processes these photographers employ and why they chose to work in this manner. They aimed to unpack the reason/s contemporary art practitioners are engaging with alternative photographic practices, some more than a century old, within the 21st-century era of digital technology, and in doing so endeavour to understand how the engagement at this level has influenced contemporary creative photographers at all levels.

2.4.3 CASE STUDY DATA

Data from this phase of the research is the case studies. They consist of a critical analysis of the practices of four highly successful, contemporary creative photographers who work with alternative photographic processes.

To create order and synchronicity between the case study artists and their work, each of the case studies was presented logically with each area under examination used as a heading. These headings used in the case studies included the following concepts:

- The object;
- The aesthetic;
- The process; and
- The conceptual basis for the work and its link to alternative processes.

These concepts for the case studies were distilled from the previous two research phases. For this reason, the case studies were an opportunity to prove or disprove many original notions, as stated in the research questions as well as the research aims. It was an opportunity to examine whether any of the findings from the first two phases of the research are applicable at this level of practice.

2.4.4 DATA ANALYSIS

The case studies were designed to collect qualitative data, as in the interviews. For this reason, the method employed for the analysis of the case studies was similar. Each of the

case studies addressed concepts distilled from both the survey and interview results. The design of each of these case studies used these concepts, organised under a range of headings. These headings provided an examination framework which allowed an investigation of the artists' similarities and differences in how they work with alternative photographic processes.

Through employing the framework as a guide, an examination was possible of each of the photographer's work, their exhibition history, practice and techniques in the case studies. This examination was the first step requiring completion before a comparative analysis of their work with regards to the research topic was undertaken. As each photographer and their practice was unique, it required this focused line of enquiry, which enabled the examination of the case study data at this final stage.

The final step in analysing the case studies was to undertake a discussion, using excerpts extracted from the case studies themselves to support the arguments. The final step in analysing the case studies was to undertake a discussion, using excerpts extracted from the case studies themselves to support the arguments. It was necessary to interrogate and then consolidate the information contained in each case study before drawing any conclusions.

The analysis of these artists and their work in a case study format provided clarity regarding the information relevant to the concepts under investigation and research questions. The information in the case studies, once analysed through discussion, allowed for a range of conclusions to be drawn at the end of Chapter 5, and provided a direction for Chapter 6, the Research Discussion.

2.5 INTERNAL AND EXTERNAL VALIDITY

The interpretation and comparison of data sets from each of the three research phases corroborated but also discounted some original ideas which supported the ideation behind the research project. Any of the ideas not supported by the survey data were identified and removed from subsequent research tasks. However, assumptions supported by the survey data or ideas which required further examination became part of the next phase, the interviews. Confirmation of information gathered from both the survey and interview phases then allowed a refinement of the research terms in order to produce the case study framework.

During all three phases of data collection, by maintaining the same intent throughout and through continually referencing the research questions, aims and objectives, allowed for the compilation of a sound body of data from which to draw information and concepts for the final discussion and conclusions.

Each phase aimed to:

- Use survey data to form interview questions;
- Interpret survey and interview data to form a basis for the case studies framework;
- Produce a series of case studies which enabled external validation through an intense examination of each artist's history and practice;
- Explore the practice and success of contemporary artists who use alternative photographic processes; and;
- Observe the of growth in business opportunities associated with alternative photographic processes.

Some ambiguity or misunderstanding existed in some of the survey questions and subsequent answers. In retrospect, when examining the data, some errors occurred within the development of a minimal number of the survey questions. Identifying these problems allowed modification of the interview questions. Adjustments were also made to researcher expectations, including indicated bias and assumed truths. Alterations to the management of interview questions allowed participants an opportunity to bring up any points not previously identified.

The case studies provided an opportunity to explore topics of interest which arose both at the beginning of the research and during the first two research phases. This phase allowed the testing of previously identified critical concepts for integrity against real-life practitioners, their processes and practice.

The research produces an alternative discourse regarding the state of contemporary photography in comparison to the overall history of photography, including the engagement with traditional/historical photographic techniques, equipment and materials.

CHAPTER 3

SURVEY RESULTS

3.0 SURVEY RESULTS

3.1 OVERVIEW

This chapter presents the results of each question from the online survey, including an overview of data, accompanied by initial analysis. A summary of the results identifies a range of critical concepts for inclusion in Phase 2 of the research design.

3.1 PRESENTATION OF DATA

3.1.1 WHO IS WORKING WITH ALTERNATIVE PROCESSES?

QUESTIONS ONE AND TWO

QUESTION 1

When examining the results for question 1, data indicated only three (2.6%) responses in the 15-24 age group, followed by 36 (31.30%) aged 25-44. A small majority 63 (54.80%) of the survey population chose the 45 and 64 years option, with only 13 (11.30%) choosing the 65-74 age group (Table 1).

Question 1 What is your age? (n/ = 115)				
15-24	25-44	45-64	65-74	Other
3	36	63	13	0
2.60%	31.30%	54.80%	11.30%	0%

Table 1 - Question 1 data with percentages

The results from question 1 indicated an average age for practitioners working with alternative processes is between 45 and 64 years of age. This information supports one of the original research ideas, which suggested that a majority of the alternative process community may be older practitioners. This challenged the idea of contemporary engagement with alternative processes by younger creative photographers.

However, data suggests that the next highest number of practitioners according to the survey population, is aged 25-44. These creative practitioners, at the lower end of this age bracket, would have been young photographers during the introduction of digital technologies. Their decision to work with non-digital processes is one of the points explored in this research. Furthermore, the top end of the 25-44 age group would have had the opportunity to experience and choose between analogue or digital processes.

QUESTION 2

Data from question 2 provided information regarding gender and indicated that a majority of the survey population 70 (61.9%) identified as male, with 43 (3.1%) female. There were only two “no responses” to this question, and zero responses in the “other” category. These results support an initial statement in the introduction regarding a gender imbalance in the photography community. The question of whether this contemporary engagement with alternative processes is by an older male photographer who for sentimental reasons enjoys working with antiquated photographic processes and cameras will be considered further in the interview phase. While gender is not part of the research aims, it does assist in understanding who is actively working with alternative processes (Table 2).

Question 2 What is your gender? (n/= 113)			
Male	Female	Other	No response
70	43	0	2
79.1%	48.59%	0.0%	2.26%

Table 2 - Question 2 data with percentages

3.1.3 WHERE ARE THEY?

QUESTION 3

The observation of changing trends in creative photographic practice visible in a range of exhibitions along with the rise in advertising for alternative process workshops and symposiums provided some evidence of an active alternative process community in Australia. Question 3, however, was designed to explore the location of the survey population by country and to investigate whether this trend, observed in Australia, was mirrored in other countries, and to what extent. The question explored whether engagement with alternative processes was a local, national or international phenomenon.

As illustrated in the table (Table 3), when examining the number per country, there is no clear majority. There was an equal number of the survey population in the United States 34 (30%) and Australia 34 (30%). The United Kingdom followed closely with 23 (20%) and Europe 14 (12%). Only one participant did not provide a location. Given the long history of photography in both the US, Europe and the United Kingdom, there was an expectation of some clustering of the respondents from these locations. However, the figures from Australia were surprising. These numbers are perhaps more indicative of the support the survey received from Australian alternative process practitioners and groups.

Question 3 What is your location? (n/= 115)					
Australia	Asia	The United Kingdom	The United States	Europe	Other
34	2	23	34	14	8
39.1%	2.3%	30.42	39.1%	16.1%	9.2%

Table 3 - Question 3 data with percentages

When examining the data classified as “other” for question 3 (Table 4), there were four participants based in South America, one in Canada and one in Belarus. There was no data from either Russia or China, even though there is evidence of alternative process groups in these countries. Perhaps as the survey distribution was through online sources including email, internet and social network sites, censorship limitations limited the distribution of the survey.

Question 3 Expanded data including “other” category										(n/ = 115)
Australia	Asia	United Kingdom	USA	Europe	Argentina	Brazil	Canada	Mexico	Belarus	Latin America
34	2	23	34	14	1	1	2	1	1	1
30%	2%	20%	30%	12%	1	1%	2%	1%	1%	1%

Table 4 - Question 3 detail from “other” category

3.1.3 WHEN DID THEY BEGIN TO WORK WITH THESE PROCESSES AND WHAT WERE THEIR GENRES, EXPERIENCE LEVELS AND EDUCATION STANDARDS?

The following series of questions, four through to 10, explored some critical concepts including: practitioner experience; the level of education; type of engagement; and whether a hierarchy of photographic genres exists within the alternative process community. The questions began to build an understanding of how and what type of engagement exists within the alternative photographic process community.

Furthermore, the questions explore whether a reaction against digital technologies offers a plausible reason for a return to alternative and historical photographic processes. This assists in understanding the reasons behind the decision to work with alternative photographic processes instead of digital technologies.

Question 6 asks explicitly when the respondent began to work with alternative processes. This question becomes pivotal in supporting or challenging the initial assumption present in the primary research question that there was a contemporary engagement with alternative processes. When there is a comparison between information about when they began to work with alternative photographic processes and the age and gender data, it forms a much clearer picture of the alternative process demographic.

At times, the questions and subsequent answers are interdependent. In order to examine the broader underlying concepts for these questions, each is presented individually, followed by a combined dataset, which may be compared and then analysed.

QUESTION 4

Question 4 asks the participants to rate their experience level in photography from amateur to exhibiting and or professional photographer or artist. The question was designed to investigate whether engagement with alternative processes was at an amateur level, or whether other areas of professional industry, exhibiting practitioners or academics were also working with alternative processes.

Initially, data from question 4 (Table 5) suggests that there is a small majority of 57 (50.9%) participants who identified as exhibiting or professional artists. The group identifying as an experimental photographer was the second highest with 44 (39.3%). Those who identified as an educator and or academic ranked only slightly lower at 26 (23.20%).

Question 4 How would you best describe your experiences in photography? (n/=112)				
Amateur with a strong interest in photography	Exhibiting and or professional artist	Educator and or academic	Experimental photographer	Other
18	57	26	44	12
20.16%	63.84%	29.12%	49.28%	13.44%

Table 5 - Question 4 data with percentages

The category “amateur with a strong interest in photography” recorded the second lowest number of responses with 18 (16.10%) and the “other” category was lowest with 12 (10.9%). Table 6 below provides details of responses in the “other” category. Interestingly, three in the “other” category are former professional photographers who identify now as emerging photographic artists. Another is a photographic technician and one a dye transfer technician. Three failed to respond to this question. These initial results suggest that within the alternative process community, many of the practitioners are working with the processes and identify with an experience level of professional artist practitioner and not as an amateur. This information suggests a serious engagement with the processes and not casual dabbling at an amateur level. The numbers of the survey population who identified as an experimental photographer is an exciting outcome. This outcome suggests there is a group within the survey population who work with photography in a less mainstream manner.

Detail of 'other' category question 4						
Dye transfer technician	Formerly commercial photographer - reverted by economics and technology to a more artistic approach	Professional ceramic artist with limited photographic experience. Emerging photo artist.	Professional photographic technician	Professional photography over 30 years, emerging photo artist	Retired photographer	Experimental Filmmaker
1	1	1	1	1	1	1
Chemistry workshop educator	Artist filmmaker	Contemporary artist working in multimedia	Artist	Semi-professional	Professional ceramic artist limited photographic experience	
1	1	1	1	1	1	

Table 6 - Detail view of question 4 'other' category

Question 4 – Detail of data including primary, secondary and tertiary selections (n/=112)					
1. Amateur with a strong interest in photography	Amateur with a strong interest in photography/ Exhibiting artist or professional photographer	Amateur with a strong interest in photography/ Experimental photographer	2. Educator and or academic	Educator and or academic/ Experimental photographer	Educator and or academic/ Exhibiting and or professional artist
18 (20.16%)	11 (12.32)	6 (6.72%)	9 (10.8%)	3 (3.36%)	3 3(36%)
3. Exhibiting and or professional artist	Exhibiting and or professional artist/ Educator and or academic/ Experimental photographer	Exhibiting and or professional artist/ Educator and or academic	Exhibiting and or professional artist/ Experimental photographer	4. Experimental photographer	Experimental photographer/ Artist/ Semi-professional/ Workshop educator
31 (34,72%)	7 (7.84%)	7 (7.84%)	9 (10.8%)	15 (16.8%)	3 (3.36%)

Table 7 - Question 4 Detailed interpretation of data

The design of question 4 enabled the survey population to choose multiple options to explore whether they worked at more than one level of practice. The responses were further analysed and grouped (Table 7). The single responses and percentages are highlighted in the darker grey with the combination responses directly following and highlighted in the lighter grey.

BREAKDOWN AND DISCUSSION OF TOTALS IN TABLE SEVEN

1. Amateur with a strong interest in photography

A total of 18 (20.16%) of participants chose this category as their only response. However, another 11 (12.32%) selected this category along with “exhibiting artist or professional photographer”, with a further six (6.72%) participants choosing the primary category along with “experimental photographer”.

2. Educator or academic

Of the survey population, nine (10.8%) participants indicated they worked as solely educators or academics. However, another three (3.36%) also selected “experimental photographer” in their responses and three (3.36%) chose the primary category as well as “exhibiting and or professional artist”.

3. Exhibiting and or professional artist

A large number, 31 (34.72%) chose “exhibiting” and or “professional artist” as their primary manner of engagement with alternative processes. However, seven (7.84%) added “academic as well as experimental photographer” to this primary category and a further seven (7.84%) added “educator and or academic” to their selection. Another nine (10.8%) described themselves as an “exhibiting and or professional artist” as well as “experimental photographer”.

4. Experimental photographer

In this category, 15 (16.8%) chose “experimental photographer” as their primary manner of engagement, while another three (3.36%) added “artist or semi-professional” or “workshop educator” as secondary categories respectively.

Results from question 4 suggest fluidity in how practitioners situate themselves within the alternative process community. This manner of engaging in a creative practice is not an unusual phenomenon. In the photographic industry, practitioners often develop an exhibition history along with a professional career and others use their skills as educators to teach many

levels from enthusiast workshops to higher education, at the same time producing their creative work.

QUESTION 5

Question 5 was formulated to discover background information about the genres most commonly associated with alternative processes. This data provided further background information about how alternative practitioners work and whether there was a preferred genre within alternative process community.

As illustrated below (Table 8) 43 (49.02%) of the survey population indicated they work with landscape imagery. The numbers in the other options were nearly equal, with Abstract or Surreal 30 (34.2%); Natural or botanical form 29 (33.06%); Portraiture 26 (29.64%) and the “Other”; category 27 (30.78%). While none of these numbers provided an absolute indication of a dominant genre in alternative processes, they did provide an interesting insight into the range of genres represented within the creative practitioner’s work.

Question 5 – How would you describe your photographic practice or genre? (n/=114)				
Portraiture	Landscapes	Natural or botanical form	Abstract or Surreal	Other
25	43	29	30	27
28.5%	49.02%	33.06%	34.2%	30.78%

Table 8 - Question 5 data with percentages (original data extracted from Google Forms survey)

Examination of comments in the ‘other’ category (Table 9) shows some noteworthy information. Quite a few of these responses in the “Other” category could be included within categories in the multi-choice answers. However, there was also quite a diversity of practice provided in the “Other” category, further to the set answers. Some of the responses were well outside the first understanding of alternative photographic processes. The most unusual of these practices would be “Moving image - incorporating analogue photographic processes” and the “very mixed, macro to micro” genre (Table 9 provides an expanded view of “other category”). There also seemed some confusion among the survey population about how to describe their genre.

Question 5 Expanded view of 'Other' category					
Conceptual	A mix with no one genre dominating	Abstract and or surreal, street	All genres	Street	Very mixed, micro to astro
3	1	1	1	3	1
Images	Mundane human world everyday items	Objects and places	Process rather than genre	Can't really describe it	
1	1	1	1	1	
Wide ranging	Across the board.	Moving image - incorporating analogue photographic processes	Stared with portraits but abstraction is what I am working towards	People in their context	All of the above
1	1	1	1	1	1
Cross platform of many	Documentary	I am interested in time	Urban cityscapes	Urban landscape and still life	
1	2	1	1	1	

Table 9 - Question 5 Expanded view of 'other' category

The survey results for question 5 (Table 9) initially suggests the survey respondents have a clear preference for a range of single genres with a good spread of preferences. Table 10 provides an overview of the survey population who work exclusively in a single genre.

As seen elsewhere (Table 10) though, a close examination of each response reveals only a small number of the survey population works in this fashion. The number of practitioners working in the “landscape” genre, for instance, fell from 43 in the original data to 23 in the re-calculated data. Those working with “abstract and or surreal” genre fell from 30 to 14; “natural or botanical form” fell from 29 to 14, and “portraiture” numbers went from 26 to 11. The numbers in the survey population who are working in a single genre nearly halved from the information in the original data (Table 8).

Question 5 Number of participants working with single genre (n/= 114)			
Abstract and or surreal	Work mostly with landscapes	Work mostly with natural or botanical form	Work mostly with portraiture
14	23	14	11

Table 10 - Question 5 Number of participants working with single genre

Question 5 offered the survey population an opportunity to choose more than one category. The resulting information required a more detailed examination (Tables 10 and 11). This examination supports the notion that alternative process practitioners choose to work across any number of genres more often rather than specialising in only one.

Question 5 – Overview of survey population working across multiple genres (n/= 114)					
Landscapes abstract/ surreal	Landscapes, natural/ botanical form	Landscapes, natural/ botanical form, surreal/ abstract	Natural botanical form/ abstract and surreal	Portraiture, abstract and surreal	Landscapes, abstract/ surreal
3	5	2	1	3	3
Portraiture, landscape	Portrait, landscape, botanical form,	Portrait, landscape, botanical form, abstract or surreal	Portraiture, botanical form	Portraiture, natural or botanical form	Portraiture, natural or botanical form, abstract and surreal
5	2	2	2	2	1

Table 11 - Question 5 - Survey population working across multiple genres

QUESTION 6

Question 6 asked the survey population to indicate how long they have worked with alternative processes. The responses here are exciting, as the research question asks why there is a contemporary engagement with the processes, inferring that there is and the results support this.

Question 6 data (Table 12) indicated the most significant number of responses 35 (30.4%) began to work with the processes within the past five years with 30 (26.10%) within the past five to nine years and 19 (16.5%) within the past 10-19 years. Additionally, 26 (22.6%) of the survey population indicated they have worked with alternative processes for more than 20

years, and another five (4.5%) selected the “other” option with comments. Of the responses in the “other” category, respondents indicated they had engaged with alternative processes for more 30 years, one continually for 55 years. One response bore no relationship to the question, and there were two non-responses to this question.

Question 6 – How long have you been working with alternative processes? (n/=114)				
Less than 5 years	5 to 9 years	10 to 19 years	20 + years	Other
35	30	19	26	5
30.45%	26.1%	16.5%	22.6%	4.5%

Table 12 - Question 6 data with percentages

None of the results in these categories on their own is decisive, even with the slight majority swaying towards the “less than five years” group. However, after merging data merging similar age groups, impressive figures emerged (Table 13). After merging the first two data sets (fewer than five years and five to nine years), results provided a combined total of 65 (56.5%) of the survey population who began to work with alternative processes within the past 10 years. This result suggests the existence of contemporary engagement with alternative processes.

Question 6 original and combined data (n/= 114)			
Less than 10 years	10-19 years	20+ years	Other
65	19	26	5
56.50%	16.50%	22.60%	4.50%

Table 13 - Question 6 original data and combined age groups

QUESTIONS 7, 8 AND 9

Data collected from this series of questions are interdependent. The questions explore concepts regarding: experience working with alternative processes; levels of education; whether the photographers are self-taught, or have formal education and qualifications working with the processes; and how the participants first became aware of alternative processes. Information collected from the questions contributes to the knowledge regarding the background and overall demographics of the alternative process community. It also

contributes to ascertaining whether alternative processes are part of the education curriculum at secondary, tertiary or higher education levels. It expands on the experience level of creative practitioners working with alternative photographic processes, as per the survey population.

Results from these data sets are an essential part of understanding why alternative photographic processes are still in use in these contemporary times. It may also add to the discourse and modern theories regarding photography education, lens-based practices whether contemporary or historical, at all levels of education, primary, secondary, tertiary and higher education. With a proven presence of alternative processes in modern photography practices, this data informs the decision to include these processes within a current photography degree or school curriculum.

QUESTION 7

Results from question 7 indicated that the majority 64 (56.6%) of survey participants considered themselves experienced, and 39 (34.5%) had intermediate skill levels. Only a small minority four (3.5%) of the survey population stated they were interested but had not produced work, with another six (5.4%) specified they were at a novice level. Three participants did not respond to the question (Table 14)

Question 7 How would you best describe your experiences with alternative processes? (n/= 113)				
Interested but not produced work	Novice, with basic understanding and skills	Intermediate, have produced some work	Experienced, use these processes as part of my professional and/or exhibition work	Other
4	6	39	64	4
3.50%	5.40%	34.50%	56.60%	3.60%

Table 14 - Question 7 data with percentages

On examination of the four responses in the “other” categories, it was considered these comments were suitable for inclusion in the categories provided initially (Table 15). Two of the four were teaching alternative processes, and one was using the processes to produce work for craft stalls, so perhaps these three could be included in the “experienced” or “intermediate” category. The final participant’s comment in the “other” category indicated “they were still learning but loving it” and so would place them in the novice category.

Question 7 'Other' category detail (n/ = 113)			
Teach alternative processes	Using them in craft stalls	Taught cyanotype	Still learning but loving it
1	1	1	1
0.90%	0.90%	0.90%	0.90%

Table 15 - Question 7 'Other' category data detail

Table 16 illustrates how the data changes with the inclusion of the responses from the “Other” category. Reconfiguring the data in this manner did not change the overall result, which indicates that the majority of the survey population identified as experienced practitioners who use the processes as part of their professional and or exhibition work.

Question - 7 Reconfigured data to include 'other' category answers (n/ = 113)				
Interested but not produced work	Novice, but have a basic understanding and skills	Intermediate, have produced some work	Experienced, use these processes as part of my professional and/or exhibition work	Other
4	6	40	65	5
3.50%	5.40%	35.4%	57.5%	4.5%

Table 16 - Question 7 Reconfigured data to include 'other' category answers

QUESTION 8

Question 8 asks the survey population about their first introduction to alternative processes. This question is designed in a way to understand whether the time frame for learning about and engaging with alternative processes was recent or long term. It is was also a way to explore whether the teaching of alternative processes is part of a course or degree, or if participants are self-taught. Finally, it is also a way to examine whether there are groups actively teaching these processes within the broader alternative photographic process community.

Data collected from question 8 indicated that most of the survey population, 49 (43.4%) learned about these processes at secondary school or college level. Following this, 27 (23.9%) of the survey population selected “magazine or internet” site as an answer, and another 12 (10.6%) learned the processes from an enthusiast group (Table 17)

Question 8 - What was your first introduction to alternative processes? (n/= 113)				
Through a photography or enthusiast group	At or through an exhibition	In a magazine, journal or internet site	At secondary school or college level education	Other
12	5	27	51	12
13.56%	5.65%	30.51%	57.63%	13.56%

Table 17 - Question 8 data table

In the “other” category (Table 18), four of the responses indicated that their first introduction was through a workshop of some type, and another three indicated overseas educational institutions. Those answers could be included with the “at secondary school or university” option. Four answers did not align with the question, and another indicated “all of the above” as an answer. The table below contains the detail of the “Other” category responses. Some of the responses could be grouped with the options offered in the multi-choice answers. However, the numbers in each of these responses are not substantial enough to impact on the original data.

Question 8. - ‘Other’ category detail					
All the above	Agfa-Gaevert Technikum Munich	Love of old family photographs	Could not find a darkroom	My family have been professional photographer since 1890	Part of the process of being an image maker
1	1	1	1	1	1
Through a colleague enthusiast	Public funded workshop	Lottery funded workshops	Through my partner	Through reading on photographic history	To refresh my paintings. I am a plastic artist.
1	1	1	1	1	1

Table 18 - Question 8 data “Other” category detail

QUESTION 9

Question 9 was developed to discover what level of education the survey population had in alternative processes. This question was similar to question 8, which asked the survey population about how they first experienced alternative processes.

The data from question 9 (Table 19) demonstrates a slight majority of the survey population, 34 (29.6%), described their education level with alternative processes as at “university or college degree” level. This number, however, was only slightly above “self-taught from a book or written instructions” with 31 (27%) of the survey population choosing this option. Furthermore, 23 (20%) chose “workshops conducted by an artist”, and 18 (25.7%) indicated they had self-taught from the internet using YouTube video instructions. This data suggests that within the survey population as a cross-section of alternative process practitioners, they can access information regarding how to work with these processes from many sources, both under tuition and self-directed learning.

Question 9 – Would you describe your education in alternative processes as? (n/=112)				
Self-taught from book (written instructions)	Self-taught from internet e.g. YouTube video instructions	Workshops conducted by artist	University or college degree which included these processes	Other
31	18	23	34	6
27%	15.70%	20%	29.60%	8%

Table 19 - Question 9 data with percentages

Of the six respondents represented in the “other”, category three indicated “all of the above” as an answer. Two learned from a friend, and the other was a combination of college and self-instruction. Table 20 below provides detail of this breakdown of numbers.

Question 9 – Detail from ‘other’ category					
All above except the workshop	Combination of the first three	Family trained OJT as well as formal academic (university)	I have a friend that teaches the subject at a local college and I experiment a lot.	Introduced at college for one afternoon but self-taught though experiments	Self-taught before the internet existed
1	1	1	1	1	1

Table 20 – Question 9 detail of ‘Other’ category

QUESTION 10

Question 10 asks the survey population if they have ever worked with digital processes. This question was posed to investigate whether the survey population works exclusively with alternative photographic processes, or whether digital technologies was, or continues to be part of their practice. The question explores whether the current engagement with alternative processes is a reaction against is, or a disengagement with, digital technologies and processes. This investigation is the beginning of attempting to understand why contemporary creative photographers are choosing to work with alternative photographic processes in a digital age.

Question 10. Have you ever worked with digital processes? (n/=113)				
No, I have never used digital capture and or output in my practice	Yes, I embraced digital technology and use a hybrid model of practice	Yes, I have used digital processes, but have returned to alternative and or analogue practices.	Yes, I primarily use digital capture and output, and only use alternative processes as an interest	Other
3	67	17	16	10
3%	59.30%	15%	14.20%	9%
<i>Table 21 - Question 10 data with percentages</i>				

However, according to the data collected in question 10 (Table 21), this idea of disengagement with digital technology was not supported. Only a minority of the survey population indicated they had never worked with digital processes. A majority of the survey population, 67 (59.3%), indicated they actively use digital technology in their practice, employing it as part of a hybrid method of digital capture and alternative process output. The detail left in the comments area indicated that digital capture and output was employed to produce digital negatives, printed via a digital printing method using either inkjet or Xerox printers. The production of digital negatives also allowed the creation of larger images than traditional film negative sizes permit. These digital negatives were a way to produce prints employing a range of alternative process printing methods.

There are two sets of responses through which are interesting. The first set is responses from 17 or (15.00 %) people who indicated they had used digital photography but had returned to analogue. The second is a group of 16 (14.2%) who primarily use digital photographic technology and processes and only use alternative processes as an interest. These numbers

are less than expected in response to these statements. However, the fact there are nearly equal numbers in each category suggests the presence of practitioners working in this manner in the alternative process community, but perhaps in similar numbers. The responses to the “other” option accounted for 10 (9%) out of 113 responses. Illustrated in the table below (Table 22) is the detail from question 10 “other” category.

Question 10 detail of ‘other’ category				
Use both	I use electronic but have no emotional attachment	I have used digital for some prints	I use digital capture to make transparencies	I use digital processes but not for any alternative process
3	1	1	4	1
3%	0.90%	1%	3%	0.90%

Table 22 - Question 10 detail of ‘other’ category

When including these responses (as listed below) with the initial results (Table 23), the overall total for option two, the option “Yes, I embraced digital technology and used a hybrid model of practice” increased to 74 (65.3%). These results included four from the “other” category who indicated they use digital capture to make transparencies, as well as another three responses, which indicated they use both processes.

Question 10 revised data (inclusion of relevant data from ‘other category’				(n/=113)
No, I have never used digital capture and or output in my practice	Yes, I embraced digital technology and use a hybrid model of practice	Yes, I have used digital processes, but have returned to alternative and or analogue practices.	Yes, I primarily use digital capture and output, and only use alternative processes as an interest	
3	74	17	16	
3%	65.30%	15%	14.20%	

Table 23 Question 10 revised data

3.1.4 WHAT PROCESSES ARE USED?

QUESTION 11

The aim of question 11 was to develop an understanding regarding the frequency of use of a range of alternative photographic processes. Question 11 findings, once coupled with an understanding of each process, enabled an informed understanding of whether there was a hierarchy of difficulty within these processes, which may account for the differing levels of engagement. Through the input from the survey population, it was possible to produce an overview of the broad range of processes used by the alternative photography community.

The data assists in answering the second question in Chapter 1, Introduction, about the alternative processes used and how this engagement contributes to the development of a contemporary aesthetic within contemporary photography, especially within the alternative photographic process community.

The design of question 11 allowed the survey population to select multiple answers assuming practitioners may engage with or work across more than one process at any given time. The design also allowed additional comments when specific processes were not listed. Alternative photographic processes include an incredibly diverse range of methods, which expanded on examination of the comments in the "Other" category.

When examining this dataset, there was a clear indication that some processes were more popular than others. Out of the survey population, 88 (75.9%) indicated they worked with cyanotypes and another 63 (54.3%) work with gelatin silver. The results for those working with gum bichromates was 52 (44.8%), which closely followed the previous two processes, cyanotype and gum bichromates, in numbers.

These figures are not overly surprising, as these are all quite simple processes, with the materials readily accessible and only moderately toxic. That means while there is some necessity for specialised personal protection equipment (PPE) when compared with some of the other processes, a safe working environment is manageable without the need for specific working spaces (Table 24).

The division and allocation of each of the alternative processes by type was the next step. That is grouping them into printing methods: historical direct positive capture; darkroom and or analogue processes; and cameraless processes. Completion of this step enabled a determination of what alternative processes are in use, and at what percentages within the

survey population. This step was necessary to understand which of the processes are more widely used, ready to compare and contrast with information gained in the next two research phases, the interviews and case studies. The step provided an insight into a possible link between the process used and the probability of success. It also unpacked whether there was a perceived hierarchy within the processes themselves and the alternative process community.

Question 11 – Which of the following alternative processes are included in your photographic practice? (tick more than one response if applicable) (n/=116)				
Cyanotype	Van Dyke Brown	Salt Printing	Carbon Printing	Daguerreotype
88	38	33	15	8
75.9%	32.8%	28.4%	12.9%	6.9%
Tintype	Wet Collodion	Ambrotype	Gum Bichromate	Gumoil
29	25	20	52	10
25%	21.6%	17.1%	44.8%	8.6%
Mordancage	Gelatin Silver	Chrysotype	Calotype	Bromoil & Oil Printing
8	63	4	5	14
6.9%	64.3%	3.4%	4.3%	12.1%
Albumen Prints	Photogravure	Platinum & Palladium	Polaroid & Polaroid Lifts	Lumen Prints
21	15	26	40	30
18.1%	12.9%	22.4%	34.5%	25.9%
Liquid Emulsion	Anthotype	Add option ('Other')		
39	12	22		
33.6%	10.3%	14.4%		

Table 24 Question 11 Original data with percentages

The most popular methods, as indicated in the survey data, are alternative printing processes, not direct capture, which include historical photographic processes. The reason for this could be that alternative printing processes are easier to master and require less specialised

equipment. Once the image is captured using a digital camera, a digital negative is produced via a post-production technique in Adobe Photoshop. It is then printed using digital printing on to a transparency medium. It may be as simple as a Xerox print on transparency film. The original capture may also be through analogue capture, and traditional negative as well.

Cyanotypes were the most frequently used process, 88 (75.90%) and gum bichromates were the third-highest percentage, 52 (44.80%) of the survey population who work in this manner. The connection between cyanotypes and gum bichromates could provide a reason why the percentages for these processes are so high. Gum bichromate process usually begins with a cyanotype or platinotype print base to which watercolour is applied one layer and colour at a time with the aid of digital negatives representing each colour layer. Gum bichromate has a higher risk factor because of the bichromate, and it is necessary to use skin and breathing protection.

Van Dyke Brown and Salt printing both scored 38 (32.8%) and 33 (28.4%) respectively. As an alternative printing process, the outcome to both of these is a sepia print ranging from light caramel through to a vibrant, warm tone. While the active sensitising chemical in both is silver nitrate, these processes only require the use of gloves and ventilation as PPE. These processes are at the lower-risk end of the spectrum of alternative processes.

Anthotype is the safest of all alternative printing processes, as it uses the photosensitivity of plant material as the light-sensitive medium. After crushing the plants, the juice is filtered to remove fibres and then mixed with pure alcohol. Vodka works well. The paper is coated with the mixture in a darkened work area before making a print. The drawback with this process is twofold. Firstly, it requires prolonged exposure, sometimes days or weeks. Also, secondly, the image fades, in much the same timeframe as the exposure. If kept away from light, it does last longer, but still will eventually disappear. To save the images created through this process, some coat with UV reflective coatings, frame using UV protective glass or scan or photograph and reprint the work.

Analogue and darkroom process is represented well with the second-highest number 63 (54.3%) of the survey population selecting this option. Negative film and cameras, along with darkroom equipment and chemistry, are still easily sourced and are relatively inexpensive. Processing of 35mm negatives is still possible at camera stores, and the negatives are scanned for further use, including printing. There are specialist services available to process and print from other size negatives both here in Australia and overseas.

There was a surprising amount of responses for Polaroid, or Polaroid lifts with 40 (34.50%) choosing this, as Polaroid photographic medium is out of production and so not easily accessible. However, there have been several “start-up” businesses producing this medium via pre-order.

Liquid emulsion is the light-sensitive coating used in photographic papers but in liquid form. That allows it to be used on many substrates, and in a variety of ways including with ceramics. Of the survey population, 39 (33.60%) indicated they work with this process.

Mordancage, also known as an etch-bleach process, is a toxic process which begins with a traditional silver gelatin print. By coating the print with a mixture of hydrogen peroxide, copper chloride and acetic acid, the print is bleached, and the emulsion begins to lift away from the base or support substrate. Mordancage is a unique process with few specialists who will run workshops. The process requires the use of high-level personal protection, including dual filter respirators and has a high level of toxicity. Of the survey population, only eight (6.90%) indicated they work with this process. The decision was made to group Mordancage with the “Analogue and Darkroom” techniques as it begins with a traditional silver gelatin print.

When examining the data for historic direct positive processes, the most popular to least popular are as follows: Tintypes 29 (25%); Wet Collodion 25 (21.6%); Ambrotype 20 (17.20%); Daguerreotypes eight (6.9%); Dry plate one (0.9%). Wet collodion is an umbrella term for both tintypes and ambrotypes. They use the same chemistry and process however, they differ in the base substrate. The dry plate is a similar process to wet plate, but as the name suggests, the plate is left to dry before use. Working with dry plate process would be useful if working away from a developing or darkroom space. Daguerreotypes are the most complex of each of these processes, especially if working with mercurial Daguerreotypes which use mercury fumes to develop the image. Daguerreotypes require specialist spaces and equipment for the coating, sensitising and developing stages. Each of these processes is a direct positive, in-camera process: the image produced in the camera is singular and unique. Daguerreotypes require specialist spaces and equipment for the coating, sensitising and developing stages. While there are some similarities in the preparation, equipment required and slow exposure times in these direct positive processes, each has a unique look and aesthetic.

Processes such as camera obscura only made up a tiny percentage of the survey population, with one person selecting this option. They are the simplest form of alternative processes and do not require the use of a camera. The image may form directly on to a light-sensitive paper or surface or may be ephemeral and experiential.

Any of the processes from the alternative printing category may be employed to produce cameraless images such as photograms: objects placed on paper coated with a light-sensitive medium which is then exposed to sunlight to make the print. The object on the paper stops the light interacting with the light-sensitive paper or object.

The Lumen process uses photographic papers to create photograms. Lumen prints only require traditional photographic paper, sunlight and photographic paper fixer, which makes the Lumen process one of the safest of all the alternative methods. Of the survey population, 30 (25.9%) indicated they worked with this process.

Chemigrams also use traditional photographic paper as the base medium and is another cameraless method. This process employs a resist such as petroleum jelly to coat the paper. The resist is cut into, or scraped away creatively, allowing the light to expose those areas of the paper revealed, or where the resist is still intact, to prohibit exposure and then development. Chemigrams resemble abstract paintings more than a photograph. Of the survey population, only two (1.7%) of the survey population indicated they worked with this process.

Understanding the processes, their complexities, as well as their simplicity, was part of gaining knowledge of what part of the community uses alternative processes before the interview phase. This information allowed an understanding of whether there was a perceived hierarchy or frequency of use of this broad range of processes within the broader alternative process community. The results from this question assisted with this understanding.

The dataset from question 11 is quite complicated because of the multiple-choice options provided to the survey population. The survey participants could choose as many of the options as necessary to describe their practice. This data was complicated further by the detailed responses in the “other” option. To further explore these responses, the data from the “other” option was exported to an Excel spreadsheet and responses for each participant were identified. It was through grouping the responses, including the detail in the comments section, that the information could then be reconfigured in a table format (Table 25) where a more detailed view of the responses was possible. The table was reconfigured to match the description of alternative photographic processes by type as in Chapter 1, the Introduction.

Question 11 - Overview of engagement with alternative printing processes with detail from 'Other' category (n/=116)						
Alternative printing processes						
Cyanotype	Gum Bichromate	Van Dyke	Salt printing	Platinum & Palladium	Albumen prints	Photogravure
88	52	38	33	26	21	15
75.90%	44.80%	32.80%	28.40%	22.40%	18.10%	12.90%
Carbon printing	Bromoil & oil printing	Anthotype	Gumoil	Calotype	Chrysotype	Kallitype
15	14	12	10	5	4	2
12.90%	12.10%	10.30%	8.60%	4.30%	3.40%	0.90%
Ziatype	Caffenol experiments	Printing out process	Combination or layering	Oiltype and inkjet onto prepared papers	Polyester photo lithography	Zerographic transfers to hand-made papers
1	1	1	1	1	1	1
0.90%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%
Analogue and Darkroom processes						
Gelatin Silver	Polaroid & Polaroid lifts	Liquid emulsion	Mordancage	Chromogram or (Chromatography)	Experimental darkroom chemistry painting	
63	40	39	8	1	1	
54.3%	34.50%	33.60%	6.90%	0.90%	0.90%	
Historic Direct Positive processes						
Tintype	Wet collodion	Albumen prints	Ambrotype	Daguerreotype	Dry plate	
29	25	21	20	8	1	
25%	21.60%	18.10%	17.20%	6.90%	0.90%	
Cameraless processes						
Lumen	Chemigram	Cameraless				
30	2	1				
25.90%	1.70%	0.90%				

Table 25 - Overview of question 11 with percentages

Combining the responses from the “Other” category (Table 25) did not shift the overall numbers in the data. Cyanotype, Gelatin Silver and Gum bichromate process were the most commonly used by the practitioners represented in the survey population.

SECTION 2

3.1.5 WHY ARE THEY WORKING WITH THESE PROCESSES?

As discussed in Chapter 2, Research Design, section 2 of the online survey was designed to explore some initial questions regarding why contemporary photographers are engaging with alternative processes in contemporary times. The ideas which formed these questions included topics such as:

- Engagement with alternative photographic processes is a result of disenchantment with digital photography;
- Alternative processes allowed more creativity in practice;
- Alternative processes are technically more challenging and so more interesting;
- The engagement is a result of contemporary photographers who are nostalgic for historical (traditional) photographic processes.

This section contains 30 closed-ended statements, each with a five-point Likert scale for the survey population to record their responses. It was through an analysis of these responses that some of the initial ideas were challenged while others were included in further research focuses. Once identified as critical concepts they became the basis for interview questions in Phase 2 of the study.

QUESTION 12

Question 12 was formulated on a discourse of digital photography which suggests there is a differentiation between “pure photography” and “digital imaging”. As seen in the results from this question, 64 (56.10%) of the survey population strongly agree with this statement and a further 29 (25.4%) agree. Amalgamating these two datasets brings the number of survey respondents who agree with the statement to 93 (81.5%). The figures support the discourse statement and so provide some insight into why there is a contemporary engagement with

alternative photographic processes and practitioners are searching for a link to the traditional craft of photography. There were only eight participants (7%) overall who did not agree or strongly disagreed with the statement and only two who did not respond (Table 26).

Question 12: Alternative photographic processes provide me with a link to the traditional craft of photography. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
64	29	13	4	4
56.10%	25.40%	11.40%	3.50%	3.50%
93		13	8	
81.50%		11.40%	7.00%	

Table 26 Question 12 data with percentages

Further analysis of the same dataset reinforced the initial findings. The spread of responses resulted in the median and the mode both being 1 (Strongly Agree) and a relatively low standard deviation of 1.0398, which suggests a limited spread of results over the dataset. Only two of the survey population abstained from responding to this question. (Table 27)

n/=	Median	Mode	Standard Deviation	Abstention
114	1	1	1.039829	2

Table 27 Question 12 Descriptive Statistics

The outcome of this question suggests that the concept of traditional (real) photography was worth further investigation during the interview stage of this research. At this time, discussion with members of the alternative process community regarding ideas of a perceived difference between alternative (traditional or historical) photographic processes, and digital technologies will be possible.

QUESTION 13

In question 13, when the statement suggested practitioners work with alternative processes because of a “dislike for technology”, there was an overwhelming number of respondents, 68 (59.60 %) who strongly disagreed with the statement and a further 15 (13.20%) who disagreed. When these numbers are combined, a total of 83 (72.8%) of the survey population did not agree with the statement. A further 21 (18.45%) neither agreed nor disagreed and only 10 (8.7%) agreed with the statement (Table 28)

These numbers suggest that choosing to work with alternative photographic processes is not based on a dislike for technology. However, as suggested in question 12, the reason for returning to and engaging with historical photographic processes is the enjoyment of working with them and maintaining a link to the traditional craft of photography.

Question 13: I prefer to work with alternative processes because I dislike technology. (n/= 114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
3	7	21	15	68
2.60%	6.10%	18.45%	13.20%	59.60%
10		21	83	
8.7%		18.45%	72.8%	

Table 28 - Question 13 data with percentages

After further analysis of Question 13, the results suggest that a majority of the survey population strongly disagreed with the statement provided. This outcome is supported by a median and mode of 5, and a small standard deviation of 1.107, which indicates a small spread of data. There was a total abstention of two from a population of 116. (Table 29)

n/=	Median	Mode	Standard Deviation	Abstention
114	5	5	1.107882	2

Table 29 - Question 13 statistical data

QUESTION 14

Question 14 explores the idea that alternative photographic processes require a higher level of photographic knowledge and skills to be successful as opposed to digital technologies. This question examines whether boredom with, or a stance towards the ease of working with, digital technologies is prevalent within the alternative process community.

The responses here revealed a majority of responses in the “strongly agree” or “agree” options, covering a total of 71 (61.8%) of the survey population. A total of 28 (24.3%) participants took a neutral stance to this question. A small number, 16 (13.9%), either disagreed or strongly disagreed to the statement. These results suggest a perception, at least among the alternative processes community, that alternative and historical photographic processes (non-digital) require a higher level of technical knowledge and skills than do digital. These numbers suggest that a reason for engagement with the non-digital processes is the challenge and pride of acquiring this level of skill with traditional photographic processes, as opposed to any perceived simplicity of working with digital capture (Table 30)

Question 14: Alternative processes are harder and require a more in-depth knowledge of photographic practice and or skill level. (n/= 115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
30	41	28	9	7
26.10%	35.70%	24.30%	7.80%	6.10%
71		28	16	
61.6%		24.9%	13.90%	

Table 30 Question 14 data with percentages

Further analysis of this question resulted in both a median and mode of 2, with abstention of only one from the survey population. However, the standard deviation of 1.131 suggests a wider spread of responses. When referring to Table 31 this is obvious as there is a fairly high frequency of results in 1 (Strongly Agree) and 3 (Neither Agree nor Disagree). These responses are not at a high enough level to impact on the overall result. The statistical analysis supports the original analysis for question 14.

n/=	Median	Mode	Standard Deviation	Abstention
115	2	2	1.131338	1
<i>Table 31 Question 14 statistical data</i>				

QUESTIONS 15 TO 16

Questions 15 and 16 continue to explore the same themes as the previous questions: reasons behind this contemporary engagement with alternative photographic processes. However, the focus is expanded beyond just the process to include sourcing and working with the chemistry, vintage equipment and the hands-on aspects of building and or customising camera equipment.

QUESTION 15

Question 15 asked the survey population to respond to an idea that sourcing and mixing chemistry is both a challenge and part of the enjoyment of working with alternative photographic processes. With 40 (35.10%) of the survey population selecting the “strongly agree” option and another 29 (25.40%) selecting “agree”, it is evident the majority of participants, 69 (60.5%), agreed with this statement. Another 24 (21.10%) selected the “neither agree nor disagree” option and 21 (18.60%) selected either “disagree” or “strongly disagree” (Table 32).

Question 15: The challenge of sourcing and mixing chemistry is part of the enjoyment of engaging with alternative processes. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
40	29	24	11	10
35.10%	25.40%	21.10%	9.80%	8.80%
69		24	21	
60.50%		21.10%	18.60%	
<i>Table 32 - Question 15 data with percentages</i>				

Further analysis of question 15 data supported the initial findings. With a median of 2 (Agree) and mode of 1 (Strongly Agree), this correlates with the standard deviation value of 1.284

which indicates a spread of data across more than one response. When referring to Figure 34 table above, this is supported in further analysis of data as illustrated below. (Table 33).

(n/=114)	Median	Mode	Standard Deviation	Abstention
115	2	1	1.284818	2

Table 33 - Question 15 statistical data

These results suggest that for the majority of the survey population, the challenge as well as the enjoyment of sourcing, mixing and working with the chemistry associated with traditional photography were the main reasons for working in this manner.

QUESTION 16

Question 16 has a similar focus to the previous question, asking whether the challenge of sourcing and working with vintage and or antique camera equipment was a reason for engaging with alternative processes.

With 31 (27%) of the survey population choosing “strongly agree” and another 40 (34.8%) who chose “agree” when these two options are combined it suggests a majority of responses 71 (63%) agreed with the statement. Of the other options, only 27 (23.5%) chose “neither agree nor disagree” and another nine (7.8%) chose “disagree” and eight (7%) chose “strongly disagree” (Table 34).

Question 16: The challenge of sourcing and working with vintage and antique equipment is part of the enjoyment of engaging with alternative processes. (n/-115)				
1	2	3	4	5
Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
31	40	27	9	8
27%	35.80%	23.50%	7.80%	7%
71		27	17	
63%		23.5%	14.80%	

Table 34 - Question 16 with percentages

Further analysis of question 16 resulted in a mode of 2, the answer most frequently chosen along with a median of 2, the midpoint in the dataset and a standard deviation of 1.1584, which

suggests a spread of results over a broader range of answers. There was a low abstention of one from the 115 who responded to this question (Table 35).

n/=	Median	Mode	Standard Deviation	Abstention
115	2	2	1.158493	1

Table 35 Question 16 Descriptive Statistics

This outcome supports the earlier findings that the majority of the survey population agreed with the statement that the enjoyment of sourcing chemistry and vintage cameras was a reason for working with alternative processes.

QUESTION 17

Question 17 continues to explore ideas around the importance of the process of building cameras and other items used for alternative photographic processes. It investigates the idea that many of the practitioners working with alternative and historical photographic processes do so as they were missing that element of innovation and experimentation, including building or modifying photographic equipment.

Question 17: I especially enjoy the process of building my own camera and other items used in alternative processes. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
24	22	34	16	14
24.60%	19.30%	29.80%	14%	12.30%
64		34	30	
43.90%		29.80%	26.30%	

Table 36 - Question 17 data with percentages

The survey data suggest that 24 (24.60%) strongly agreed and a further 22 (19.30%) agreed which gave a combined total of 64 (43.90%) of the survey population who agreed with the statement to some extent. Furthermore, 34 (29.80%) of the survey population took a neutral stance in response to the question. Finally, 16 (14%) disagreed and 14 (12.30%) strongly

disagreed, suggesting that a combined total of 30 (26.30%) of the 115 who responded to this question disagreed with the statement to some extent (Table 36).

Further analysis of question 17 supported these initial findings. The median and the mode both sat at 3 (Neither Agree nor Disagree) and there was a much higher standard deviation of 1.3125, suggesting a broader spread of variation from the average. Overall the results for question 17 were inconclusive (Table 37).

n/=	Median	Mode	Standard Deviation	Abstention
114	3	3	1.312502	2
<i>Table 37 - Question 17 Descriptive Statistics</i>				

The response to the question indicates there was a shift towards the survey population agreeing with the statement with reasonably similar numbers as in questions 15 and 16.

QUESTIONS 18 AND 19

Questions 18 and 19 ask the survey participants to respond to statements which explore the impact that engagement with alternative processes is having on the creative community, including whether a new community of practitioners and aligned business opportunities has emerged.

QUESTION 18

Question 18 asks participants to respond to a statement regarding whether a new cottage industry is developing around practitioners using alternative processes. This emergence of smaller business opportunities could include the supply of cameras and chemistry, along with the facilitating of workshops and running specialised exhibition spaces.

In question 18 data, the majority of participants, 71 (63%), agreed with the statement. This number was a combination of the “strongly agree” option 28 (25%) and “agree” options 43 (38.4%). Only 30 (26.8%) of the survey population took a neutral stance, another seven (6.30%) “disagreed” and four (3.60%) “strongly disagreed”, so only 11 (9.90%) did not agree with this statement to some extent (Table 38).

Question 18: This re-engagement with alternative photographic practices has allowed a new cottage industry to develop. (n/=112)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
28	43	30	7	4
25%	38.40%	26.80%	6.30%	3.60%
71		30	11	
63%		26.80%	9.90%	

Table 38 - Question 18 data with percentages

Both the median and mode values were 2 (Agree). The standard deviation of 1.019, while not overly high, confirms there was a spread of data for the question which may be observed as slightly higher over the three options, strongly agree (1) agree (2) and neither agree or disagree (3). These results suggest overall that while there was a slightly higher number of the survey population who believed this statement was correct, there was also a similar number who had had either no strong opinion or strongly agreed. (Table 39)

n/=	Median	Mode	Standard Deviation	Abstention
112	2	2	1.019948	4

Table 39 - Question 18 descriptive statistic results of the data

QUESTION 19

Question 19 asked whether respondents believed that the engagement with alternative photographic processes had allowed a new community of practitioners to emerge. This question was an attempt to support or challenge early observations of the development of alternative process communities in contemporary times. Further questions explored the diversity of this community and whether it assisted in the distribution of knowledge through workshops and ongoing support for newer members.

A total of 49 (43%) of the survey population strongly agreed with the statement with another 44 (38/6%) who agreed. Only 14 (12.3%) took a neutral stance, and another four (1.80%)

disagreed and five (4.4%) strongly disagreed. Together, there was a total of seven (6.2%) of the survey population who disagreed with the statement to some extent. These numbers suggest that the engagement with alternative processes is not a solitary endeavour but has instead enabled a community of creative practitioners to develop (Table 40).

Question 19: This re-engagement with alternative photographic practices has allowed a new community of practitioners to emerge. (n/= 114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
49	44	14	2	5
43%	38.6%	12.30%	1.80%	4.40%
93		14	7	
82%		12.30%	6.20%	

Table 40 - Question 18 statistical data

From the survey population of 114, there were only two abstentions. Analysis resulted in a median value of 2 (Agree) as the most frequently selected answer, and a mode of 1 (Strongly Agree) as the middle value in the dataset. The standard deviation of 1.007 suggests some spread of the data across other response variables (Table 43). However, this spread is over the first two response categories and is limited in the others. These results support the initial findings via percentages (Table 41).

n/=	Median	Mode	Standard Deviation	Abstention
114	2	1	1.007714	2

Table 41 - Question 19 Descriptive Statistics

QUESTION 20

Question 20 provides a statement exploring whether engagement with alternative processes is enabling a new generation of photographers to experience working with alternative photographic processes, specifically, traditional photographic and historical processes. This question explores whether this contemporary engagement is with younger photographers, born in a digital era and now however, work with alternative processes or whether it is photographers who continued working, or returned to work with alternative processes after an

absence. Question 20 data supports the statement, with 49 (43.40%), of the survey population who strongly agree and the same number who agreed. When combined, a total of 98 (86.80%) of the survey population agreed with the statement to some extent.

Only a small percentage of respondents chose the “disagree” one (0.90%) or “strongly disagree” two (1.80%) options for a combined total of three (2.7%) who took this stance. Furthermore, 12 (10.8%) did not express an opinion (Table 42).

Question 20: This re-engagement with alternative photographic practices has allowed a new generation of photographers to experience traditional photographic and alternative practices. (n/=113)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
49	49	12	1	2
43.40%	43.40%	10.80%	0.90%	1.80%
98		12	3	
86.80%		10.80%	2.7%	

Table 42 - Question 20 data with percentages

Further analysis of question 20 data resulted in median and mode values of 2 (Agree). This analysis supported the initial results (Table 44). The low standard deviation of 0.824 suggested a narrow spread of results over limited response options (Table 43). These results further confirmed that the survey population supported the statement.

n/=	Median	Mode	Standard Deviation	Abstention
113	2	2	0.824682	3

Table 43 Question 20 Descriptive Statistics

QUESTIONS 21 TO 23

Questions 21, 22 and 23 further investigate why photographers have been engaging with alternative processes. These questions explored the emotive reasons behind this

contemporary engagement as well as the experimental and innovative perceptions which surround alternative photographic processes and practice.

QUESTION 21

Question 21 asked whether it is a sense of experimentation which draws creative photographers to engage with alternative processes. The question was designed to explore the idea that there may be some “disengagement” with digital processes because of a perceived lack of innovation and experimentation associated with them. While these processes do allow some variation with image editing, because it is computer-driven, the outcomes are easily reproducible and may even be described as predictable.

There was support for this statement with 64 (55.74%) who strongly agreed and a further 29 (25.2%) who agreed with the statement. Combining these numbers results in a total of 93 (80.9%) who agree with the statement to some extent. Furthermore, only 12 (10.40%) of the group took a neutral stance, only nine (7.8%) disagreed and one (0.90%) strongly disagreed, a combined total of 10 (8.70%) who disagreed with the statement (Table 44)

Question 21: It is this sense of experimentation which draws me to alternative processes. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
64	29	12	9	1
55.70%	25.20%	10.40%	7.80%	0.90%
93		12	10	
80.90%		10.40%	8.70%	
<i>Table 44 - Question 21 data with percentages</i>				

Both the median and mode values were 1 (Strongly Agree). With a survey population of 115 and an abstention of one, the low standard deviation of 0.996 suggests that the spread of results was quite narrow in this dataset (Table 47). These results mirror the strong number of responses in the “Strongly Agree” and much lower responses over all other response options. (Table 45)

n/=	Median	Mode	Standard Deviation	Abstention
115	1	1 -	0.996033	1

Table 45 - Question 21 statistical data

QUESTION 22

Question 22 asks the survey participants to respond to a statement asking whether it was the innovative aspect of work with alternative processes which drew them to practice in this manner. The majority strongly agreed or agreed. From 114 responses to the question, 61 (53.50%) agreed and 40 (35.10%) strongly agreed, a combined total of 101 (88.60%). Only 10 (8.80%) took a neutral stance with only one (0.9%) who disagreed. Two (1.80%) strongly disagreed (Table 48) These results suggest that the majority of the survey population chose to work in this fashion because of the innovative aspects of the processes (Table 46).

Question 22: I love the innovative aspect of working with alternative processes in the 21 st century, that is the freedom to work with processes in a new manner. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
61	40	10	1	2
53.50%	35.10%	8.80%	0.9%	1.80%
101		10	3	
88.60%		8.80%	2.70%	

Table 46 - Question 22 data with percentages

Both the mode and the median values for this dataset were 1 (Strongly Agree) and a low standard deviation of 0.824 indicates a narrow spread of data. Two abstained (Table 47).

n/=	Median	Mode	Standard Deviation	Abstention
114	1	1 -	0.824303	2

Table 47 - Question 22 statistical data

These results suggest that among the survey population, working with alternative photographic processes has elements of innovation, offering a reason to work in this fashion.

QUESTION 23

Question 23 explores the idea that the involvedness or complexity associated with producing work using alternative photographic processes provides a positive emotional response for the practitioner. The results for this question are similar to the results for questions 21 and 22: 61 (53.50%) strongly agreed and 26 (22.80%) agreed, a combined total of 87 (76.30%) from 114 responses. Only 16 (14%) took a neutral stance, eight (7%) disagreed and three (2.60%) strongly disagreed, a combined total of 11 (10%) who disagreed with the statement (Table 48).

Question 23: It is the involvedness of alternative photographic processes which makes producing work special. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
61	26	16	8	3
53.50%	22.80%	14%	7%	2.60%
87		16	11	
76.30%		14%	10%	

Table 48 - Question 23 data with percentages

The median and mode values were both 1 (Strongly Agree) and the standard deviation of 1.084 suggested a spread of data across other responses (Table 50). The abstention rate was two from a survey population of 116 (Table 49).

n/=	Median	Mode	Standard Deviation	Abstention
114	1	1 -	1.084819	2

Table 49 - Question 23 - Descriptive Statistics

These results suggest that there is a “specialness” associated with producing work using alternative photographic processes, and this could be a reason for this contemporary engagement. This point was explored further during the interview phase.

QUESTION 24

Question 24 explores the idea the practitioner has an emotional connection to the final artefact produced through alternative photographic processes.

From 113 responses, 53 (46.9%) strongly agreed and 34 (30.1%) agreed, so 87 (77%) agreed. Only 13 (11.5%) took a neutral stance, while seven (6.20%) disagreed and six (5.30%) strongly disagreed (Table 50).

Question 24: Alternative processes are appealing because they produce a strong emotive connection to the final photographic object in the resulting image. (n/=113)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
53	34	13	7	6
46.90%	30.10%	11.50%	6.20%	5.30%
87		13	13	
77.00%		11.50%	11.50%	

Table 50 - Question 24 data with percentages

The results for median and mode values were split. The median was 2 (Agree) and the mode was 1 (Strongly Agree). There was a slightly higher abstention rate of three as well as a slightly higher standard deviation of 1.149, which suggested a spread of responses across the dataset. This spread was primarily across the first two response categories (Table 51).

n/=	Median	Mode	Standard Deviation	Abstention
113	2	1 -	1.149079	3

Table 51 - Question 23 Descriptive Statistics

Question 24 explored the idea of whether the object created by the process was perceived differently from that produced through digital processes. This idea was explored further in the interview phase of the study.

QUESTION 25

Question 25 explores the idea of whether nostalgia for historical photographic processes, the equipment and the methods, was a reason for this engagement. From 113 survey participants, 38 (33.6%) took a neutral stance to the statement with a further 44 (50.5%) either disagreeing or strongly disagreeing and only 31 (27.5%) either agreeing or strongly agreeing (Table 52).

Question 25: The emotion experienced working with alternative processes could be described as nostalgia. (n/=113)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
9	22	38	22	22
8%	19.50%	33.60%	19.50%	19.50%
31		38	44	
28%		33.60%	39.00%	

Table 52 - Question 25 data with percentages

The Median and Mode values were both 3 (Neither Agree or Disagree) and the standard deviation was 1.207, suggesting the responses were spread across other options (Table 53).

n/=	Median	Mode	Standard Deviation	Abstention
113	3	3	1.207948	3

Table 53 - Question 25 statistical data

These numbers suggest the reason for engaging with the process is less about nostalgia. The challenging nature of these processes and the emotional attachment to the artefact produced was instead part of the findings in previous questions. To further clarify this point, this became a discussion point for the next stage of the research method, the interviews. There were no "Other" comments section available for this question to provide further insight.

QUESTIONS 26 AND 27

Data extracted from questions 26 and 27 were interdependent as they asked a similar question in two different ways about a perceived difference in the relationship between creativity, alternative and digital processes.

QUESTION 26

Question 26 asked the survey population if they believed working with alternative processes had pushed them to be more creative.

From the 114 responses, 55 (48.2%) agreed and 39 (3.42%) strongly agreed so the majority, 94 (82.4%) agreed. Only 10 (8.80%) indicated a neutral stance and another eight (7%), disagreed and two (1.80%) strongly disagreed, supporting the idea that a majority linked working with alternative photographic processes with a higher level of creativity (Table 54).

Question 26: Working with alternative processes push me as an artist to be more creative. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
55	39	10	8	2
48.20%	34.20%	8.80%	7%	1.80%
94		10	10	
82.40%		8.80%	8.80%	

Table 54 - Question 26 statistical data

These results support the earlier findings that the survey population believed that working with alternative photographic processes pushed them to be more creative. With a lower standard deviation of .0989, the majority of the dataset was spread within the first two options. The analysis resulted in a median value of 2 (Agree) and mode of 1 (Strongly Agree). The abstention rate was low at two (Table 55).

n/=	Median	Mode	Standard Deviation	Abstention
114	2	1	0.989755	2

Table 55 - Question 26 Descriptive Statistics

QUESTION 27

Question 27 presented a similar statement to question 26 but from another perspective. It asked whether the survey population thought of digital processes as less creative than working with alternative photographic processes.

In response, 28 (24.80%) disagreed with the statement and another 47 (41.60%) strongly disagreed. Another 25 (22.10%) took a neutral stance, seven (6.20%) agreed and six (5.30%) strongly agreed. These numbers provided a clear indication the survey population did not agree with the statement regarding the perceived lack of creativity relative to digital processes (Table 56).

27. Do you consider working with digital processes to be less creative? (n/=113)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
6	7	25	28	47
5.30%	6.20%	22.10%	24.80%	41.60%
13		25	75	
11.50%		22.10%	66.40%	

Table 56 - Question 27 data with percentages

A standard deviation of 1.174 indicates a greater spread of the data over more than one of the options. There were three abstentions. The median was 4 (Disagree) and the mode was 5 (Strongly Disagree). The spread of data was predominantly between 3 (Neither Disagree or Agree) to 4 (Strongly Disagree), suggesting that the survey population either did not have a strong opinion or disagreed to differing extents. A minimal number only agreed (Table 57).

n/=	Median	Mode	Standard Deviation	Abstention
113	4	5	1.174455	3

Table 57 Question 27 Descriptive Statistics

The results for Question 26 and 27 are binary and suggest that while the survey population agreed that working with alternative photographic processes led them to be more creative, they did not feel working with digital processes to be less creative. So it has not been a reaction against the perceived lack of creativity in digital processes which enticed them to work with

alternative processes but creativity and creative practices are not linked or limited to a single type of process. This point became a question in the interviews in order to build further understanding of the idea.

When comparing the numbers for questions 26 and 27 (Table 58), it became apparent there was a reversal of polarities in the responses. Question 26 had a high number of participants 94 (82.4%) who agreed with the statement that alternative processes push them to be more creative. In question 27, when asked whether they thought work with digital processes to be less creative, only 13 (11.5%) agreed with this statement and 75 (66.4%) disagreed or strongly disagreed.

Because of the contradictory nature of the results of Questions 26 and 27, this discussion point was included in the next research phase, a series of interviews with alternative process practitioners in order to gain a deeper understanding of this point.

Comparison of Questions 26 and 27 data				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
Question 26: Working with alternative processes push me as an artist to be more creative.				
94			10	
82.40%			8.80%	
Question 27. Do you consider working with digital processes to be less creative?				
13			75	
11.50%		22.10%	66.40%	
<i>Table 58 - Comparison of Questions 26 and 27</i>				

QUESTION 28

Question 28 presents a statement regarding the challenging nature of working with alternative processes. This question explores the idea some photographers are engaging with alternative processes because they enjoy this challenge of working with wet-chemical processes.

From 114 responses, 41 (36%) agreed with the statement and another 27 (23.70%) strongly agreed so a total of 68 (59.70%) agreed with the statement to some extent. Another 29

(25.4%) took a neutral stance, nine (7.90%) disagreed and eight (7%) strongly disagreed so 17 (14.9%) disagreed (Table 59).

Question 28: Working with alternative processes is much more challenging for me as a photographic artist. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
27	41	29	9	8
23.70%	36%	25.40%	7.90%	7%
68		29	17	
59.70%		25.40%	14.90%	

Table 59 - Question 28 data with percentages

The overall result for both median and mode was 2 (Agree). A standard deviation of 1.1442 indicated a spread of data across other response options. This result is evident (Table 61) which illustrates considerable support for 3 (Neither Agree or Disagree). There was an abstention rate of two (Table 60).

n/=	Median	Mode	Standard Deviation	Abstention
114	2	2	1.144229	2

Table 60 - Question 28 Descriptive Statistics

Examination of these numbers supports the idea that creative photographers work with alternative photographic processes because they enjoy the challenges of producing work which comes with these processes. However, as the survey is only able to collect data, or measure opinions within the survey population, the types of challenges the practitioner experiences were explored further in the interview stage where an extended discussion was possible.

QUESTIONS 29 TO 32

Questions 29 to 32 explored ideas around the unpredictable and inherently imperfect nature of alternative processes compared with the assumed predictability of digital processes (including post-production) and their focus on perfection. Development of the questions was

in response to early observations regarding differences between digital and alternative processes and the artefacts produced from each process.

QUESTION 29

Question 29 asks the survey population to respond to a statement regarding the digital image process and production. It suggests that digital capture focuses on producing a perfected image.

Data extracted from question 29 suggests the survey participants do not agree with this statement. Out of the 115 responses, 28 (24.30%) disagreed and another 32 (27.80%) strongly disagreed, a total of 60 (51.2%) who did not agree. Furthermore, 23 (20%) of the survey population took a neutral stance to the statement. A further 20 (17.40%) agreed and 12 (10.40%) strongly agreed. Combined, this gives a total of 32 (27.8%) who either agreed or strongly agreed with the statement (Table 61).

Question 29: Digital capture appears to be all about producing perfection in the final image. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree (neutral)	Disagree	Strongly disagree
12	20	23	28	32
10.40%	17.40%	20%	24.30%	27.80%
32		23	60	
27.8%		20%	52.10%	

Table 61 - Question 29 data with percentages

While the earlier analysis of this dataset suggested that the majority of the survey population either disagreed or strongly disagreed with the statement provided, further analysis of the same dataset provided more insight.

This analysis resulted in the data represented as illustrated below (Table 64). The median or mid-range of responses was 4 (Disagree) and the mode was 5 (Strongly Disagree). The very high standard deviation of 1.342 indicates a spread of data over a much more extensive range which included quite a high response rate for 3 (Neither Agree or Disagree). The abstention was only one from the overall 116 survey participants (Table 62).

n/=	Median	Mode	Standard Deviation	Abstention
115	4	5	1.342925	1

Table 62 - Question 29 statistical data

QUESTION 30

Question 30 asked the survey population whether they considered alternative photographic processes were focused less on perfection in comparison to digital capture and production. The response options for this question changed from the Likert scale options in previous questions. Instead, now the respondents were able to choose whether they thought the processes were more, less or similar in perfection, with an option for neutral or no opinion and other, where they could leave comments. This change in design was made to seek a much better understanding of the responses. It caused some problems with the participants, as seen in the comments provided in the “other” category.

From 113 responses, only seven (6.2%) thought the alternative photographic processes were focused more on perfection, and 29 (25.7%) thought it was focused less on perfection. There were 33 (29.2%) who thought both processes had similar output qualities. Another 26 (23%) had no strong opinion. Within the 18 (16%) who chose the “Other” option, it became evident that some were confused by the question and did not quite understand how perfection was defined or measured (Table 63).

Question 30: When compared with digital capture and output alternative photographic processes are focused less on perfection. (n/=113)				
More	Less	Similar output qualities	Neutral/ no opinion	Other
7	29	33	26	18
6.20%	25.70%	29.20%	23%	16%

Table 63 Question 30 data with percentages

Some thought the outcome was more about the combination of artist and process and the artist’s personal vision. In hindsight, the wording of the question could have confused some of the participants. The aim of question 30 was to explore the experimental qualities of alternative photographic processes, and how creative photographers may use the processes in innovative ways, not necessarily focusing on perfecting the process in a traditional manner.

The Median was 3 (Similar output qualities) and the Mode was 1 (Less). The large standard deviation of 1.252 pointed to a spread of data across over result options. There was a large number of resposes clustered in the 4 (neutral/no opinion) option. For this reason, the result of this question is ambiguous and unsubstantiated. The abstention rate was two (Table 64).

n/=	Median	Mode	Standard Deviation	Abstention
113	3	1	1.252726	2
<i>Table 64 Question 30 Descriptive Statistics</i>				

QUESTION 31

Question 31 follows a similar thought process, exploring concepts of perfection and imperfection. However, it suggests that creative practitioners find alternative processes alluring because of their inherent imperfections as opposed to the perfection of digital capture and output. When compared with the statements about the perceived perfection of digital capture and output, there was nearly a reversal of results.

The responses indicate 36 (31.3%) strongly agreed and another 34 (29.6%) agreed so a total of 70 (60.90%) agreed to some degree, while 25 (21.70%) took a neutral stance, a further 10 (8.70%) disagreed and the same number 10 (8.70%) strongly disagreed (Table 65).

Question 31: I find alternative processes alluring because of their inherent imperfections as opposed to the perfection of digital capture and output. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
36	34	25	10	10
31.30%	29.60%	21.70%	8.70%	8.70%
70		25	20	
60.90%		21.70%	17.40%	
<i>Table 65 - Question 31 data with percentages</i>				

The median was 2 (Agree) and the mode 1 (Strongly Agree). A high standard deviation of 1.252 indicated a much wider spread of data. This data included a large number of responses in the “neither agree nor disagree” option and some representation in the disagree or strongly disagree options. The abstention rate for this question was only one from the 115 (Table 66).

n/=	Median	Mode	Standard Deviation	Abstention
115	2	1	1.252726	1

Table 66 - Question 31 Descriptive Statistics

However, in comparison to question 30, the survey population (when asked whether they felt alternative processes were less focused on perfection than digital) showed a definite shift towards rejecting this statement. However, in question 31, on presentation of a similar statement, the group moved towards a positive outcome, agreeing with the statement.

Question 30: When compared with digital capture and output alternative photographic processes are focused less on perfection. (n/=113)				
More	Less	Similar output qualities	Neutral/ no opinion	Other
7	29	33	26	18
6.20%	25.70%	29.20%	23%	16%
Question 31: I find alternative processes alluring because of their inherent imperfections as opposed to the perfection of digital capture and output. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
36	34	25	10	10
31.30%	29.60%	21.70%	8.70%	8.70%
70			20	
60.90%			17.40%	

Table 67 - Questions 30 and 31 comparisons of data

Data (Table 67) illustrates how results extracted from questions 30 and 31 support this notion. The responses to question 30 indicate the survey population believe that compared with digital capture, alternative processes either have a similar output quality or are less focused on perfection. In question 31, the survey population indicated they believed working with alternative processes is focused less on perfection in comparison to digital capture and output.

QUESTION 32

Question 32, the final in this set, asks for a response to a statement which suggests it is the unpredictable nature of alternative processes, especially in the output, which is part of the reward for working with alternative photographic processes.

Data from this question suggests that the majority of the survey population agreed with this statement to some degree. Out of the 114 responses, 43 (37.7%) strongly agreed and another 38 (33.3%) agreed so 61 (71.00%) agreed to some extent. Furthermore, 23 (20.2%) took a neutral stance to the statement, seven (6.1%) disagreed and three (2.6%) strongly disagreed. These numbers suggest the majority agreed that the unpredictable nature of alternative photographic processes is part of the reward for working with the processes (Table 68).

Question 32: The unpredictable nature of alternative processes and especially the resulting output is part of the reward. (n/-114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
43	38	23	7	3
37.70%	33.30%	20.20%	6.10%	2.60%
81		23	10	
71.00%		20.20%	8.70%	

Table 68 - Question 32 data with percentages

The median was 2 (Agree) and the mode was 1 (Strongly Agree). The standard deviation of 1.252 indicates the data was spread across a wide range of the responses (Table 70). The abstention rate was only two (Table 69).

n/=	Median	Mode	Standard Deviation	Abstention
114	2	1	1.252726	2

Table 69 - Question 32 Descriptive Statistics

QUESTION 33

Question 33 invites responses about whether the current engagement with alternative processes is, in fact, a backlash against digital processes and its non-tactility. This question

is a continuation of the exploration of why creative practitioners are turning to alternative photographic processes in this digital era.

From 115 responses, 24 (20.90%) strongly agreed and another 36 (31.30%) agreed so 60 (52.20%) agreed to some extent while a further 33 (28.70%) took a neutral stance. Finally, 12 (20.40%) disagreed and 10 (8.70%) strongly disagreed. Even when these numbers are combined, they do not impact on the result of the survey responses which indicates that a majority of the survey population agreed that the contemporary engagement with alternative photographic processes is because of a backlash against the non-tactile nature of digital processes (Table 70).

Question 33: The contemporary re-engagement with alternative processes is a backlash against the non-tactility of digital practice. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
24	36	33	12	10
20.90%	31.30%	28.70%	10.40%	8.70%
60		33	22	
52.20%		28.70%	19.10%	

Table 70 - Question 33 data with percentages

Both the median and mode were 2 (Agree). However, the standard deviation of 1.1907 indicated that the results were spread across a comprehensive range of response categories. This spread is evident in the high rate of responses for the 3 (Neither agree or disagree) and 1 (Strongly Agree) (Table 71).

n/=	Median	Mode	Standard Deviation	Abstention
115	2	2	1.190972	1

Table 71 - Question 33 Descriptive Statistics

QUESTION 34

Questions 34 approaches the topic of artistic vision in photographic work. The question asks the participants whether they felt working with alternative processes allowed them to extend

beyond a “perceived absence of artistic vision in digital processes”. The statement poses two interrelating concepts: that there is a perceived absence of artistic vision in digital processes; and that working with alternative processes is a way to extend or work through and past this problem.

An examination of data suggests that this is not the case, with 17 (14.90%) who agreed and 12 (10.50%) who strongly agreed. Even when these numbers are combined, the result is only a minority of participants, 29 (25.4%) who agreed with the statement to some degree. Another 29 (25.4%) of the group took a neutral stance. Furthermore, 25 (21.90%) of the survey population disagreed with the statement and another 33 (27.2%) strongly disagreed (Table 72).

When combining these numbers, the results from question 34 indicate 56 (49.10%) of the survey population either disagreed with the statement to some extent. While this is only a slim majority of the survey population who do not agree with the statement, the figures in the “neutral” option and the absence of numbers in the “agree” categories suggest that practitioners do not choose to work with alternative photographic processes because of a perceived absence of artistic vision in digital processes.

Question 34: I began to work with Alternative processes as a way to extend beyond the perceived absence of artistic vision in digital processes. (n=/114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
17	12	29	25	31
14.90%	10.50%	25.40%	21.90%	27.20%
29		29	56	
25.40%		25.40%	49.10%	

Table 72 - Question 34 data with percentages

The median was 4 (Disagree) and mode was 5 (Strongly Disagree). This supports the initial findings discussed earlier. The high standard deviation of 1.4062 suggests a spread of data over more than one response category. There was a nearly even spread of responses over 3 (Neither Agree or Disagree) as well as 4 and 5 (Disagree or Strongly Disagree) with a lower frequency over the first two options (Agree or Strongly Agree). The abstention rate for this question was two from the 116-survey population (Table 73).

n/=	Median	Mode	Standard Deviation	Abstention
114	4	5	1.406263	2
<i>Table 73 - Question 34 Descriptive Statistics</i>				

QUESTIONS 35 AND 36

Questions 35 and 36 begin to approach topics such as contemporary aesthetics, and whether the mix of contemporary subject matter and alternative photographic processes produce a unique complexity in the final work.

QUESTION 35

In question 35, the statement suggests that alternative processes can bring a freshness to a familiar subject matter because of its material form: work produced using an alternative photographic process. With regards to photographic aesthetics, the expected or known aesthetic was associated with contemporary photography changes because the work is produced instead through the use of alternative photographic processes. The aesthetic is revisited, refreshed and presented as a new or contemporary aesthetic.

From 115 responses, 49 (42.60%) strongly agreed and another 38 (33.0%) agreed so a total of 87 (75.6%) agreed with the statement to some extent. Furthermore, 24 (20.9%) took a neutral stance to the statement, another one (0.9%) disagreed and three (2.60%) strongly disagreed, so four (3.5%) of the group disagreed with the statement to some extent. The results of this question support the statement that working with alternative photographic processes can produce a unique and contemporary aesthetic (Table 74).

Question 35: Alternative processes have the ability to revision and produce a unique contemporary aesthetic. (n/= 115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
49	38	24	1	3
42.60%	33%	20.90%	0.90%	2.60%
87		24	4	
75.60%		20.90%	3.50%	

Table 74 - Question 35 data with percentages

The Median was 2 (Agree) and the mode was 1 (Strongly Agree) (Table 75). This analysis supports the initial findings. There is a much lower standard deviation of .951, suggesting the spread of data was over much narrower than in some of the previous questions (Table 74).

n/=	Median	Mode	Standard Deviation	Abstention
115	2	1	0.951388	1

Table 75 - Question 35 Descriptive Statistics

QUESTION 36

Question 36 examines the relationship between contemporary subjects and the use of alternative photographic processes. The question suggests that the juxtaposition of these may result in a unique complexity in the final image produced.

The development of this question focused on the idea of viewer expectations. When encountering an image produced using alternative photographic processes, the expectation may be that the image is of a historical subject or scene. When the photographer instead mixes contemporary subject matter with alternative or historical processes, there is that initial moment of surprise, when there is not a realisation of this initial expectation. The same uniqueness in the final image may be discerned when working with contemporary themes or concepts and alternative processes.

From 115 responses, 49 (42.80%) strongly agreed and 33 (28.70%) agreed so an overall majority of participants, 82 (71.5%) agreed to some extent. A further 29 (25.2%) took a neutral

stance. Only two (1.70%) disagreed and two (1.70%) strongly disagreed, a total of four (3.4%) who disagreed to some extent. These numbers suggest that the statement regarding the mixture of a contemporary subject and alternative photographic processes produces a unique complexity in the image is valid (Table 76).

Question 36: The use of alternative processes and contemporary subject/s create a unique complexity in the resulting image. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
49	33	29	2	2
42.80%	28.70%	25.20%	1.70%	1.70%
82		29	4	
71.50%		25.20%	3.40%	

Table 76 - Question 36 data with percentages

The Median was 2 (Agree) and the mode was 1 (Strongly Agree). It has a relatively narrow distribution of responses which included 3 (Neither Agree or Disagree), and a minimal number of responses in 4 (Disagree) and 5 (Strongly Disagree). The abstention rate was meagre, with only one from the survey population of 166 who did not respond (Table 77).

n/=	Median	Mode	Standard Deviation	Abstention
115	2	1	0.951429	1

Table 77 - Question 36 Descriptive Statistics

QUESTION 37

Question 37 continues to explore ideas around the subject matter and working with alternative photographic processes. It suggests that any subject matter may be resolved in a much more creative manner through the use of alternative processes.

From 114 responses, only 10 (8.80%) strongly agreed while another 18 (15.80%) agreed so 28 (24.6%) agreed or strongly agreed. A further 36 (31.8%) took a neutral stance but 24 (21.10%) disagreed and 26 (22.80%) strongly disagreed so 50 (43.9%) did not agree with the statement to some extent (Table 78).

Question 37: Any subject matter will be resolved in a much more creative manner through the use of alternative processes. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
10	18	36	24	26
8.80%	15.80%	31.60%	21.10%	22.80%
28		36	50	
24.60%		31.60%	43.90%	

Table 78 - Question 37 data with percentages

While a majority of the survey population did not agree with the statement, it was under half of the survey population, which indicates that this is not a significant concern or not one on which the group showed a strong opinion.

The Median and Mode were both 3 (Neither Agree or Disagree) and the relatively high standard deviation of 1.243 indicated the spread of results was more involved than as suggested. There was a low rate of abstention for this question, only one (Table 81). It was option three (neither agree nor disagree) which accrued the most primary responses. This result suggests that for the survey population, the creative rendering of selected subject matter is not reliant on the use of alternative processes. (Table 79)

n/=	Median	Mode	Standard Deviation	Abstention
115	3	3	1.243631	1

Table 79 - Question 37 Descriptive Statistics

QUESTION 38

Question 38 explored the idea of whether the survey population considered a hand-made image (photographic object) has a higher perceived value when compared to a machine-made image.

On examination of the data, 40 (34.80%) of the survey population strongly agreed with the statement while 46 (40%) agreed so 86 (74.8%) agreed with this statement to some extent. Only six (5.20%) disagreed and four (3.50%) strongly disagreed so 10 (8.7%) disagreed with the statement. A further 19 (16.5%) of the survey population took a neutral stance (Table 80).

Question 38: A hand-made image has a higher “perceived value” than a machine-made image. (n/= 115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
40	46	19	6	4
34.80%	40%	16.50%	5.20%	3.50%
86		19	10	
74.80%		16.50%	8.70%	

Table 80 - Question 38 data with percentages

Both the median and the mode were 2 (Agree) and a reasonably wide spread of data was suggested by the standard deviation of 1.021 which indicates some spread of results over a range of response options. There was a low abstention rate of one (Table 81).

n/=	Median	Mode	Standard Deviation	Abstention
115	2	2	1.021277	1

Table 81 Question 38 Descriptive Statistics

These numbers suggest that the majority agreed with the original statement suggesting a perception of increased value associated with the hand-made image, which is a reason for engaging with the processes. This point is interesting, and for that reason was included in discussion during the interview stage.

QUESTION 39

Question 39 continued to explore reasons for a contemporary engagement with alternative photographic processes. It investigated concepts around the presence of “the hand of the artist” in the creative process and output, and whether it is absent in digital processes. The statement follows the premise that digital processes are mechanical while alternative processes manual, and for this reason, the artist’s presence in work is much more prominent when working with alternative photographic processes.

The data for this question indicated that 11 (9.60%) strongly agreed with the statement and a further 15 (13.0%) agreed. However, 43 (37.40%) of the survey population disagreed and a

further 25 (21.70%) strongly disagreed, with only 21 (18.30%) neutral (Table 82). Question 39 results suggest that a majority of the survey population did not believe that digital capture was devoid of the hand of the artist.

Question 39. Digital capture and production are devoid of the 'hand of the artist'. (n/=115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
11	15	21	43	25
9.60%	13%	18.30%	37.40%	21.70%
16		21	68	
22.60%		18.30%	59.10%	

Table 82 - Question 39 data with percentages

Both the median and mode were 4 (Disagree) and there was a low abstention rate of one. The standard deviation of 1.242 suggests a spread of data beyond this result and supports the initial findings, with a high frequency of responses for 5 (Strongly Disagree) as well as 3 (Neither Agree or Disagree). (Table 83)

n/=	Median	Mode	Standard Deviation	Abstention
115	4	4	1.242646	1

Table 83 - Question 39 Descriptive Statistics

It is these divisions between machine-made and hand-made as well as how much control or creative input the artist has in the non-tactile digital processes, which continue to be a discussion point in contemporary photography. This concept appears as a question in the next research phase, the interviews.

QUESTION 40

Question 40 further investigates the allure of alternative photographic process. It asks whether a "sense of wonder" experience when the final image appears with alternative processes was part of the appeal of engaging with alternative photographic processes. This statement alludes to that moment, such as when working in the darkroom, the latent image contained on the photographic paper appears during development and fixing. A similar moment is part of

alternative printing processes when the image develops with exposure to light. The closest to this experience when working with digital processes would be perhaps when the image slowly emerges from the inkjet printer.

Of the 115 survey participants, 59 (52.30%) of the survey population strongly agreed with the statement and 40 (34.80%) agreed so 99 (86.10%) agreed to some extent. Only 10 (8.70%) took a neutral stance. Furthermore, two (1.70%) disagreed and four (3.50%) strongly disagreed so only six (5.20%) disagreed with the statement to some extent (Table 84).

These figures suggest strong support with the statement that there is a sense of wonder associated with working with alternative photographic processes, and this is part of the appeal. Given the strong response to the statement, it could be a reason for a contemporary engagement.

Question 40: The sense of wonder when the final image appears is part of the appeal of engaging with alternative processes. (n/= 115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
59	40	10	2	4
51.30%	34.80%	8.70%	1.70%	3.50%
99		10	6	
86.10%		8.70%	5.20%	

Table 84 - Question 40 data with percentages

Both the median and mode were 1 (Strongly Agree) and a much lower standard deviation of .964 suggests the responses are limited to a narrower band of the dataset. This analysis supports the initial data analysis where while the majority of responses are in 1 (Strongly Agree), there is a high frequency of responses in 2 (Agree) and very few responses in the other options (Table 85).

n/=	Median	Mode	Standard Deviation	Abstention
115	1	1	0.964037	1

Table 85 - Question 40 Descriptive Statistics

QUESTION 41

Question 41 explores ideas around the complexity of working with alternative photographic processes, and whether these processes required “patience and perseverance”. Having worked with a number of these processes, it was no surprise when an overwhelming majority of survey participants agreed with this statement.

From the 115 responses, 86 (74.80%) strongly agreed and 22 (19.10%) agreed so 108 (93.9%) agreed to some extent. Only four (3.5%) took a neutral stance, two (1.70%) disagreed and a further one (0.90%) strongly disagreed, a total of three (2.6%) who did not agree with the statement (Table 86).

Question 41: Engaging with alternative processes requires patience and perseverance. (n/115)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
86	22	4	2	1
74.80%	19.10%	3.50%	1.70%	0.90%
108		4	3	
93.90%		3.50%	2.60%	

Table 86 - Question 41 data with percentages

The value for both median and mode was 1 (Strongly Agree). The low standard deviation of 0.716 indicates that the spread of responses in the dataset is focused more on a single response, with a low frequency of responses in the other options. There was also a low abstention rate of only one (Table 87).

n/=	Median	Mode	Standard Deviation	Abstention
115	1	1	0.716215	1

Table 87 - Question 41 Descriptive Statistics

QUESTION 42

Question 42 asks whether engaging with alternative processes is emotionally and creatively rewarding and explores the reasons for an engagement with alternative processes in an age where digital processes are available, affordable and within the reach technically of a wide range of practitioners.

Of the 144 responses, 88 (77.20%) strongly agreed with the statement and 16 (14%) agreed. Only nine (7.90%) took a neutral stance. Finally, there was only one (0.90%) who chose the “strongly disagree” option and none chose “disagree”. The results suggest this is an absolute yes, with 104 (91.20%) of the responses selecting the agree or strongly agree options (Table 88).

Question 42: I believe engaging with alternative processes is emotionally and creatively rewarding. (n/=114)				
1	2	3	4	5
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
88	16	9	0	1
77.20%	14%	7.90%	0%	0.90%
104		9	1	
91.20%		7.90%	0.90%	

Table 88 - Question 42 data with percentages

Further analysis of the data revealed both the median and mode were 1 (Strongly Agree) which aligned with the initial analysis. Furthermore, a very low standard deviation of 0.702 indicated a narrow spread of responses (Table 89).

n/=	Median	Mode	Standard Deviation	Abstention
114	1	1	0.702173	2

Table 89 Question 42 statistical data

This result suggests that working with alternative photographic processes produces emotional and creative rewards associated with the mastery of these processes. This point was explored further in the interview phase of the research.

SUMMARY

The survey explored the reasons for engaging with alternative processes with a diverse community of practitioners, from the enthusiast-level through to professionals, artists and educators. It investigated topics including: who uses the processes; how long they have worked with the processes; what processes are in use and where are they located, to understand the demographics of this community. Furthermore, section two of the survey focused on why photographers are returning to work with alternative processes.

Analysis of data from the survey was an essential first step towards fulfilling the research aims. This analysis led to the identification of a number of key concepts which required further exploration. These concepts informed the development of questions for Phase 2, the interview.

The survey responses suggested that the question of why contemporary creative photographers work with alternative processes is complicated, and one which required further exploration.

CHAPTER 4

INTERVIEW RESULTS

4.1 INTRODUCTION

The first research phase, the survey, collected quantitative and qualitative data in order to measure initial responses to a range of notions regarding possible reasons behind this contemporary engagement. It was the survey results which provided a focus for the development of the interview questions. The interviews were an opportunity to explore critical concepts from the survey results, which proved of interest or required further unpacking and discussion.

The interviews were conducted conversationally, with open-ended questions and in a semi-structured manner, which allowed for the presentation of follow-up questions or additional points to extract maximum information during the interview sessions. The questions, based on these critical concepts, were presented as three main discussion topics: the process; the object; and the link to traditional photography.

- The process: slowness and complexity; unpredictability and imperfection; emotionally rewarding; a sense of wonder; experimentation; the uniqueness of a singular hand-made object; emotive connection to the photographic object.
- The object: associated distinctive aesthetics; aesthetic produced when working with a hybrid practice; contemporary subjects and alternative processes.
- The link: Nostalgia and traditional photography; traditional photographic techniques; search for authenticity; pure engagement with light and its ability to record time and place; nostalgia.

Chapter 4 presents and discusses interview responses grouped around these themes to respond to the research question. The analysis and conclusions drawn from the interview data are used to develop a framework for a series of case studies investigating the practice of a group of highly successful alternative photographic practitioners in Phase 3 of the research.

4.2 OVERVIEW OF PARTICIPANTS

Interview participants initially included volunteers from the survey population, and others selected by the researcher due to their expert knowledge or position within the alternative process community. The table below provides details of the background and experience of each participant.

IP 1	Professional photographer and exhibiting artist who uses alternative processes as part of creative and commercial practice.
IP 2	Academic and exhibiting artist.
IP 3	Professional photographer and exhibiting artist who uses alternative processes as part of creative and commercial practice.
IP 4	Experimental filmmaker who uses alt processes as part of the method.
IP 5	Photographer who runs community access darkroom and workshops. Space includes a gallery specialising in silver halide photography exhibitions.
IP 6	Commercial photographer and enthusiast who has not exhibited, however, has won some awards for the work. Runs a boutique business building equipment and chemistry for others interested in wet-plate process.
IP 7	Exhibiting artist: national and international exhibitions, conducts workshops and has written curriculum for inclusion of alternative processes in secondary school.
IP 8	Exhibiting artist and post-grad student who uses alternative photographic processes as part of data collection phase. Mixes science and creativity.
IP 9	Exhibiting artist working with camera obscura.
IP 10	Enthusiast who has another non-creative career. Takes wet-plate collodion process into schools where primary school students can experience the process. Also runs a portrait studio.
IP 11	Exhibiting artist who facilitates an alternative processes group, website, education and exhibition space.
IP 12	Emerging exhibiting artist/ Honours student working with alternative processes.

Table 90 - Detail of interview participants

4.3.0 THE PROCESS

On examination of the interview participants' responses, the majority commented in some manner on how it is the processes themselves which are pivotal to why they choose to work in this manner. It is the processes which challenge them with their complex and sometimes unpredictable natures. Furthermore, they believe working with the processes is emotionally and creatively rewarding and provides a link to authentic or traditional photography. Finally, the processes produce a unique hand-made photographic object and related distinctive aesthetic. There was also a consensus that even though the alternative processes are much harder to master and can even have health and safety considerations, the result is worthwhile.

4.3.1 SLOWNESS AND COMPLEXITY

When you are really working in the darkroom, you have times when you ask, why am I really putting myself through this it is so much harder and slower? But I think it is a more rewarding result, and it is just different. As much as you can replicate film digitally, you are working with pixels, and you are not working with grain. (IP 1, 21.15)

In interview one, even though the practitioner did question why they would work with a process which is a "much harder and slower" medium (than digital), the suggestion was that the reward for this effort is desirable. The reason for this perceived reward vs effort is that the resulting photographic object is "different" (IP1, 21.15).

The notion of slowness and complexity was also described as a deliberate and meditative way of working. Furthermore, working with alternative photographic processes was described as an emotionally rewarding experience. Always, though, the group linked the process with the outcome, the production of a photographic object.

Further interview participants supported this sentiment. Additionally, in interview 11, it was the slow and meditative nature of alternative processes, along with the tactility, which was a reason for working in this manner. "Yes, for me the slowness of the process is attractive as it can be quite meditative. It forces me to slow down and become focused on tactile work." (IP 11, question 5).

Mindfulness is an excellent way to describe the act of working with alternative processes. Concepts such as slowness and how working with the processes necessitated a level of focus were a recurring theme during the interviews. The complexity was further described as a range of variables during interview 12. These variables included mixing and working with wet-chemical-based processes, which included weather, humidity, and the papers (the binders used in the papers which are in some way out of the control of the photographer) (IP12, 9.49).

The effort required to master these processes because of perceived complexity was a conversation topic in some of the interviews. Interview participant 12 stated that "... It took my whole degree to get the salt print process pretty solid" (IP 12, 11.46). Interview participant 7 related the journey of learning the processes along with the assistance of others more experienced was an essential part of him mastering the daguerreotype process, even though now at an experienced level, still, because of the unpredictable nature of alternative processes, there and be mistakes. Whether to embrace this error or to work towards a solution is always the decision to be made.

I guess not everything in life that is important happens fast. Sometimes a slow way can show you more there is time to see the light change and there is time to see something happen in a different way than if you are working with a digital camera. To me, it just reveals the world in a different way. (IP 2, 20.29)

The question regarding the slowness and complexity of alternative processes was approached from a more philosophical point of view by the second interview participant. In this instance, in response to the question, the suggestion was that working with alternative processes provided an opportunity for contemplative or mindful engagement with photography. This point was especially true in their practice, which is working with a room-size camera obscura. The description of the process and the physical engagement with light and space includes this individual photographic practice. However, there is a contemporary ideology that with digital, light is created through digital manipulation, not found and captured through observation and engagement. This comment suggests that alternative processes provide a link to that notion of traditional photography, which is working with light and light-sensitive mediums.

Understanding the slowness and fastidiousness of the process and being prepared to put in the time and effort to master it are important points presented within the interview results. Working with alternative processes involves being in the moment, focusing on each step and then measuring success, or lack of, by the final product. This focus is enhanced

working in the darkroom environment, which requires low-light situations, and the room being lit only with the glow of a red safelight. Shut out from the world, the room is often quiet, and the practitioner is working in isolation. This isolation may add to that single-minded way of working. The act of developing and printing work or coating polished plates become well-practised, even choreographed, with the photographer visualising each step as the process progresses. It is slow and practised. The slowness attributed to the process refers to both the amount of time spent in preparation, and the long exposure times required for each image.

I do agree to a certain point with any of the large format photography that it is a slower process. It is a completely different medium in the sense that there are certain things that you cannot do, but then there are also challenges to work outside of that box too. (IP 3, 14.47)

For some of the group, though, this slowness can also be frustrating, especially when working with a new subject matter and in ever-changing natural light. The long exposure times working with processes such as wet-plate collodion and daguerreotypes are slow, and require bright light, natural or artificial, to facilitate faster exposure times. With alternative processes, there is also much more complexity in the planning and preparation before an image may be captured.

... it is about 20 minutes until you are ready to take the first image. It is time-consuming, by the time you have done one or two shots the light might have changed because the sun is moving. There is not that immediacy of the image. Yes, you have to think it through. The slow down does have a disadvantage ... sometimes you have to either miss what you saw in the first place. The fact that you are slowing down everything is far more considered. (IP 4, 32.40)

Interview four continues to discuss the frustrations encountered when working with alternative processes and unpredictable available light. The comments in this interview refer to working with wet-plate processes, where, in a similar fashion to daguerreotypes, there are many steps to be taken in the preparation of the plate before image capture. As each of these processes (daguerreotype and wet-plate) is a direct positive capture process, there is no negative. The plate is the final image object and there is some pressure to undertake the preparation correctly. In wet-plate collodion (tintype and ambrotype) the preparation includes the mixing of chemistry, coating the plate first with collodion and then sensitising with silver nitrate. Each step carefully choreographed is only the first part of the method. This preparation and finality

of the object produced means that in the final step, the light becomes just one more uncontrollable variable within the workflow.

Wet-plate processes also have prolonged exposure times due to the extremely low sensitivity of the medium of around 0.75 ISO. In comparison, a digital camera provides the lowest ISO of 50 to 100 ISO, which results in faster shutter speeds and less prolonged exposures. There seems to be an added level of difficulty when working with long exposure times and natural light, which can, of course, change quite quickly sometimes. This difficulty has encouraged some to work with artificial lighting in a studio setting instead of natural light.

In interview 12, the participant related the experience of wanting to find a manner to control light quality and produce repeatable outcomes for salt printing. This artist wanted a workflow which provided consistency in the outcome and assurance that each print was "...something I could reproduce again" (IP 12, 8.42). To overcome this inability to control outcomes when printing with natural light, the decision to work with a UV lightbox provided the much-needed control of light and the consistency in output.

While the majority of interview participants agreed with this concept of slowness of the process, for one of the interviewees, this was not quite so. Using alternative processes as a way to collect scientific samples for research, the workflow required to set up and then collect these samples is quite vigorous, working out in the field to collect samples and working with light-sensitive mediums which require particular amounts or exposure necessitates attention to both the lighting and weather conditions on location.

Well it is not slow at all, so I walk around, and I choose botanical specimens that are representative of the area at the time, and I get my photographic paper box ready, and I get underneath the picnic blanket, and I work as fast as I can. I do not have time to place things artistically. I just have to kind of whack them down and pin the glass, and then I walk away. I put them out in the sun, and then I walk away for a couple of hours. So, the complexity is not there just in what I end up with it is far more than what I ever imagined that I could have got. (IP 8, 16.27).

The research examines and then measures the success of revegetation after mine closures. It employs the Lumen process which is a cameraless process involving black and white photographic paper, with quite often botanical subject matter to create a photogram. For this

participant, it is used to collect trace: in this case, the collection of pollen and seeds and botanical samples from areas undergoing a revegetation process. The final step in the Lumen process is to fix the exposed paper. However, the resulting image changes dramatically. Scanning this paper before fixing retains a record of the original colour and textures for later analysis.

During interview 8, the participant explained that scanning the image before fixing provided two advantages: because the colour of the Lumen print changes when fixed; and scanning is a way to keep those original soft tones. Also, it is a way to retain any loose pollen or other debris which is on the paper which provides the viewer with a microscopic view of this botanical world. This microscopic detail is not visible to the naked eye. The other advantage of scanning the print, once digitised, is it may be printed digitally as larger sized prints or on a range of mediums for an exhibition. This particular practice is an excellent mix of science and art for research purposes. Working with Lumen process in this manner, with the addition of the scanning stage, produces a hybrid process.

This suggestion of a likely fascination with a scientific process aligns with concepts suggested by many other interviewees. This included descriptions such as how engaging with alternative processes are disciplined, controlled and require careful management of each the steps in the process.

In interview 9, the correlation between a connected learning methodology, such as a “science methodology”, (IP 9, 14.35) was suggested to be an essential part of, or a desirable part of, students’ learning. Engaging with alternative processes was likened to a scientific process and suggested that those interested in working with alternative processes do so have a “... sense of longing to understand through a scientific model ... Through testing and experimenting” (IP 9, 14:35). This interview participant continued to describe an idea of how working with alternative processes may become cross-disciplinary, that is a crossover between arts and sciences. Interview participant 9 suggests the notion of the exploratory nature of the process “... deeply connects to a way of learning ...” (IP 9, 14.:35) which is itself more attractive than even that magic in the process, described in all the interviews.

This idea of following a set of pre-determined instructions or methods is a perfect description of the discipline required to undertake alternative photographic processes. Some of the group described engagement with alternative processes as a performance or performative. While on the one hand it is described as a choreographed performance, on the other is the description of scientific, disciplined practice while others again suggest it is uncontrollable and leads to unpredictable outcomes and at times imperfections with the outcome of the process.

I call Cyanotype and Van Dyke practice, performance photographic practice. The whole process of taking the work outside and standing with it and watching the sun change the nature of the chemical is as important as the final image I think. (IP 9, 16:53)

The idea of working with alternative processes as a step-by-step choreographed method of working is one discussed frequently during the interviews: The need to adhere to a set of instructions as any deviation increases the risk of error. Even if all instructions are followed, at times, control is still out of reach for the practitioner. It is this performative notion of the processes, making with their own hands and body, which appears to underpin the reasons for working with alternative processes. Participant 12 described it as "... remaining physically connected with and as close as possible to the medium itself, and ... it is always slightly out of reach, I think, just because of the nature of it. I see it as quite ephemeral or something" (IP 12, 13.59).

4.3.2 UNPREDICTABILITY AND IMPERFECTIONS

The majority of the group indicated a desire to develop a level of expertise in working with these processes. This skill enabled them to have a level of predictability and perfection in the production of a final photographic object. It was the cost as well as the time required to work with these processes which drove them towards mastering the process as described in interview 7: "... otherwise, it costs you time and money, and probably that search for perfection as well. You are always trying to do better than your last plate" (IP 7, 12.00). In interview 12, the process was described as unpredictable because of its complex nature: "... you do not really know how something will turn out when it has its own kind of, I do not know, idiosyncrasies and characteristics" (IP 12, 10.11). This point, however, was not a negative comment regarding the process. Instead, it was what made working with the processes interesting for this participant.

Acknowledgment of the limitations and capacities of alternative photographic processes, both creatively and technically, emerged during these interviews: The idea of accepting that "you are sort of the mercy of the medium and I find that something of significance for me" (IP 12, 17.06).

Alternative and traditional photographic processes are involved in their nature. Because of the light-sensitivity of the emulsions and mediums, working in near darkness for mixing chemistry

and coating substrates is not easy to master. Pride in achieving a high level of mastery with these processes is justifiable and linked to the successful production of a final image. For some of the interview participants, working with alternative processes did not always equate with the production of imperfect or flawed photographic objects. This point was also made clear in the survey, as well.

... but what really does it for me is just the personal satisfaction of controlling the process which is pretty uncontrollable. Working through steps with scientific or medical precision, because of cleanliness and reproducibility of your actions. Every time you do something slightly different, it can have an effect (IP 4, 18.29).

Furthermore, the idea of fully understanding the process provided the practitioner with the necessary skills to begin to customise or experiment with alterations in the process. This point describes a different level of control. This experimental way of working with alternative processes, therefore, is finding a way to develop a personal style through these errors or image artefacts but always in a controlled fashion, not suggesting that the mistake is part of the aesthetic. It is about having the ability to reproduce that artefact, not having the process taking control of their practice and outcome.

I come from the, I suppose, the conservative school in that I think to perfect your technique and then use that to make art or make work that you think has some resonance. So, once you have perfected the process, you can then make amendments or undertake experimentation at that point. (IP 2, 8:49)

Not all agreed with the idea of control and the aim for perfection in the final photographic object. One part of the group thought that control and a deep understanding of the process enabled them to produce image artefacts “at will”, while others thought that the beauty of working with these processes was its uncontrollable nature, the *serendipity*. In interview 12, the idea of not knowing what would happen, even though the aim was to control the process, was sometimes considered a “lucky mistake” and “at times it is like a game of tug of war or something”, where you have to give and take (IP 12, 15.42).

I am always of the opinion that you can create perfect plates and eliminate artefacts and then you can create artefacts at will, rather than relying on serendipity or chance and then claiming those as your own. (IP 2, 8.14)

In contrast, many of the practitioners in the interview group who considered the allure of working with alternative processes was the ability to experiment and test and work more intuitively. They were happy to accept the imperfections as a result of this experimentation. For some, especially participant 12, the idea of a “perfect print is not always perfect” (IP 12, 22.17). It is that lack of perfection for which he strives, suggesting that digital photography is “preened and polished ... and so those kinds of abnormalities and variances, even within the same edition, may be significant to my work” (IP 12, 22.47).

Some alternative processes, such as camera obscura, are out of most levels of control. This process is entirely dependent on nature to provide the light, and serendipitous could be an apt description. There is no expectation of success. However, that surprising moment when it does work makes the effort all worthwhile: “I do not know what I am getting ... I guess when it works, it surprises me, but when it does not work, it makes more sense” (IP 2, 3.54).

A sense of connection between the practitioner, the process and space were evident in the practice of interview 2. This practitioner works with room-sized camera obscura, building them and then exposing sheets of photographic paper within the space, capturing images of the light and shapes formed. She describes the tactile nature of the process and the connectedness:

Because I am making it out of my human body, not a techno- machine ... I do not want to disconnect from the space ... getting hot and sweaty, putting the paper in with my own hands, mixing the chemicals myself and hoping for the best (IP 2, 4.17).

In this case, the thought of controlling the process or the desire for a known outcome is not necessary. This particular practice is perhaps anti-control; it is that embracing the unknown, that surprising result which is more desirable. That is that unexpected moment when, through experimentation, there was a surprising final product.

I do not want to know what is ahead. I do not want it to be all the same even though you could say pinhole is the same, and there is always lots of surprises light leak and such ... (IP 2, 4.28).

Acknowledgment of the vital link between photography, photographic processes and light is imperative. Light is perhaps the common denominator between alternative, traditional and digital processes. Working with the oldest and most basic of all processes, camera obscura, which is just light and light physics, is described beautifully in interview 2. What this person is alluding to is how some parts of working with alternative processes will never be able to be controlled, as nature, including light, is out of anyone's control.

... what I am looking for as I am photographing is light and light is going to find its own way (IP 2, 3.54).

This idea of imperfection was expressed differently in interview nine. Discussed during this interview was the inability to control a process entirely, which led to the production of some image artefacts. However, this practitioner considered these artefacts at times to be part of the surprising outcome of working with alternative processes. It was this ideology of embracing the serendipity as well as engaging with the process in a more organic and less controlled manner. A number of the interview group also described this concept of serendipity or a serendipitous outcome.

... because of that idea and that process of chance, and mistake, and that idea that through the process you cannot control all of it and you have to make those aesthetic determinants that often, that very often change the project from how it started and where it finishes ... (IP 9, 24.04).

Interview 5 presented the notion of perfection and predictability in digital imaging. This participant, however, described perfection as an illusion. Digital imaging does carry with it the stigma of altered images and a notion of hyper-reality. Discussions were present in other interviews regarding this notion, that working with alternative processes was serendipitous.

It was this idea regarding a lack of control over the process and the resulting image which was described not only as attractive but also satisfying. Concepts regarding magic, serendipity and sense of wonder became common themes in the discussions as were concepts regarding

perfection and imperfection, though these were linked to reality and truthfulness, perhaps authenticity in the representation of the subject in the final image as well.

I think digital is so much about perfection and the illusion of perfection and you lose touch of reality. Whereas when you work with alternative processes, they are never 100% perfect ... there is always that level of serendipity. (IP 5, 8.29)

Two interview participants were professional commercial photographers as well as photographic artists. Interestingly, they use alternative processes as part of their commercial as well as personal practice. This duality of purpose provided an opportunity to explore the topic from both the practitioner and client perspective. For them, they were able to comment not only on their own experience but also on the observed or shared experience of their clients.

In an age where images are available in an instant to be viewed on the capture device whether it be a phone camera or digital camera, the experience of waiting for a result and the associated anticipation and excitement of seeing the image revealed on the photographic plate which initially would appear blank, is what these photographers include in the portrait session.

... it is you know when you have people over for the first time and they are not familiar with the process. I tell them hey this is going to take about 20 minutes before you sit down on the chair, we have to go through the entire process before you actually see what your image looks like. To be honest, I do not think there's anything really hard about it. I think anybody could do this. But it is, just do they want to take the time you know, that 20 minutes just to get one picture as a result, that I think it is the differentiator between people who are into instant gratification versus this which is a handcrafted type of representation. (IP10, 9.27)

Alternative photographic processes are at times quite toxic, and so there is much more attention required for the safe handling of the required chemicals. For some practitioners, however, this appears to be part of the overall excitement of working with alternative processes.

Interview 2 indicated the pride of mastering the traditional form of the daguerreotype, that working with mercury vapour is worth the extra efforts. It is that effort which permits that element of exploration and experimentation and ultimately the production of a unique photographic object with its associated aesthetic. For some, it appears that the challenge of working in this manner is one of the reasons why they choose to work with alternative processes, especially the wet-chemical processes.

Using standard fixers like sodium thiosulfate or ammonium thiosulfate are great, but I think that I am the only person using potassium cyanide in Australia because I know I have to jump through several hoops to renew my licence every two years, and that is even better again (21.46) because it happens instantaneously. (IP 2, 21.46)

Further to this point, that ability to faithfully reproduce or replicate photographic techniques from the 19th century in contemporary times, and in a traditional manner, was also crucial to many in the interview group. This notion of authenticity and rendering of traditional processes and practices was a strong point within the surveys as well. The capacity to be able to source chemistry and replicate these processes still now is an essential point that differentiates traditional from digital technologies with their inbuilt redundancy. These processes have apparent longevity, not only with the practitioners being able to reproduce them in contemporary times. The photographic object also has proven longevity. Wet-plate images and daguerreotypes from the late 1800s are now still in perfect condition some centuries later.

For me, it is like I make the chemicals from scratch, so I buy the supplies individually, so I make them by using the old recipes from the 1800s. So, you can buy some of this stuff pre-made but, I figure if you are going to do this process then start at the start, it makes more sense. You get more involved in the process, and you find it quite relaxing and soul-satisfying to sit here and make my chemicals from scratch, and that is it. (IP 7, 10.51)

Furthermore, there is that perception that a digital image is edited, changed in some way, and they are not faithful renderings of what is before the camera, or representative of the intent of the subject matter. It is this acceptance, or even expectation, that the hyper-real images are better than reality, which is a problem for many of the group. Digital images are described as "... amazingly perfect" in interview 9.

On the contrary, when working with alternative or historical photographic processes, acceptance of imperfections and this association with an accurate rendering and underlying imperfections of the subject, is part of the allure for a number of the interview group. It was not that they did not care about how carefully they worked with their choice of alternative processes; it was as though this acceptance was that the world is not perfect, we are not perfect and so why would there be an expectation that photographs captured should then be perfect.

This discussion about truthfulness, or raw reality in photography and photographic processes, included the production of a unique photographic object with a distinctively unique aesthetic. “I think digital is so much about perfection and the illusion of perfection and you lose touch of reality. Whereas when you work with alternative processes, they are never 100% perfect, there is always that level of serendipity” (IP 5, 8.29).

4.3.3 EMOTIONALLY REWARDING

Some of the group spoke about having an emotional connection with alternative processes. They considered the mastery and tactile nature of the complex processes, along with the connectedness between process, the subject in the final product, to be emotionally rewarding. For some, this was positive emotion; however, for others, as discussed, there is a challenging element of this engagement.

... with wet plate, for example, there may be 12 steps you have to go through, and every one of those can end in utter disaster right up to that very last varnishing step. So, if you get all the way through it and you get an image at the end, and it looks beautiful, it is like the feeling of elation is just incredible (IP 4, 18.46).

This description describes engaging with the wet-plate process. It summarises both the challenges as well as this positive feeling. The practitioner is acutely aware that the complexity of the process may yield either success or failure. Even if one follows the process, step, by step, until the successful completion of that last step, the result can be elation or despair.

Working with an alternative photographic process is not always straightforward and this may lead to frustration. The unpredictable nature of these historical processes and that most practitioners work in isolation, means they have to be more resourceful in troubleshooting.

The other option is to communicate with another practitioner somewhere else in Australia or overseas if a problem arises. While there is a wealth of online resources, it may be down to trial and error and repeated attempts for a successful outcome which requires a level of personal determination.

... I just spent four days trying to isolate one thing that was going wrong with my mercurial daguerreotypes, and it came down to one chemical. I was fuming the plates correctly, but I was getting these black spots all over it. It had happened before, but it was intermittent and I found it was the strength of that one chemical. It took me four days and 58 plates to work it out. At the end of three years, I can finally say, yes, I know that one (IP 3, 17:47).

However, the joy and connectedness one experiences on the successful rendering of the work results in an emotionally rewarding outcome. The connection between the idea, the process and the resulting object provides a level of personal satisfaction.

... I love being in the darkroom and that tactile nature of creating a unique item with my hands from what is in front of me. So, when I went into weddings and portraits and the digital work, it was years before I went back to that. Also, I missed that tactile nature. I got so. I felt so disconnected from my work sitting in front of the computer, editing, you know 1500 shots for a wedding. I was not connected to the images, the work anymore, so I went back to the alternative processes to reconnect to my creativity and the processes of work and leaving my artist's mark on the images, I wanted them to feel like my work again (IP 5, 7.02.)

Interview participant four discussed the idea of the emotion of connectedness further. The suggestion that working with digital technologies elicited a feeling of disconnection with the (photographic) work, whereas alternative processes allowed a reconnection with the tactility and creativity in this work. It is each step; the mixing of chemistry, selection of paper, calculating exposure, development, fixing and washing, as it is handled by, and under the control of the creative photographer. It is the tactile nature of the process which differentiates it from digital methods which are, for the most part, automated with the aid of a computer and software.

Furthermore, it is that moment when that final image eventuates, and the feeling of personal pride, which creates an emotional connection. It is that tactile and connected sentiment of building an image from scratch, which is prominent in the interview data. The emotional connection is also described as a sense of wonder or serendipity by others in the interview group.

4.3.4 SENSE OF WONDER

There are numerous videos on YouTube and Vimeo ... and the thing that people like to see the most is it (the image) being revealed in the fixer, the actual image coming to life. So that is another addictive part of the process. In workshops, they absolutely love that. Everything else, you know, breathing stops while people look at their images come to life in the fixer (IP 2, 21.01).

This notion of “sense of wonder” was a common discussion point among the interview group. It mainly refers to that moment when an image appears on the photographic paper or a sensitised plate as part of an alternative photographic process. These processes, especially darkroom photographic techniques, allow for the revelation of a latent image, invisible until it enters the developer, ephemeral until it is through the final fixing stage.

I have always had this passion for photography in terms of the material process both from being in the darkroom and just watching that extraordinary sort of image appears out of nowhere (IP 9, 5.45).

This “sense of wonder” is at times, also described as mystery or magic by the interview group. That “... extraordinary sort of image appears out of nowhere ...” (IP 9, 6.13) That moment of awe and amazement when an image appears on the plate or paper in a developing tray is present in a majority of the interviews. There is a positive emotive response associated with this moment, a pride in the successful mastery of the process and the production of a photographic object.

I am very much a tinkerer. I like to, I like to figure new things out and to be honest you know. The very first time I was able to take an image and see it form before my eyes I was hooked. (4.56) At that point, it was, you know, it what it's like being able to perform a magic trick, and you never know quite what is going to happen every time you do that trick. (IP 10, 5.04)

If the photographer working with these processes finds this phenomenon amazing, imagine how those with no experience describe their disbelief at the revelation of an image. For some photographers, choosing to share the experience with their client embeds an emotional and experiential value to the finished photograph with that client. They are reinforcing the notion of the value of an image produced in this manner. The client, having experienced the session, now understands the complexity of a hand-made photographic artefact as well.

... they actually get to come into the darkroom and watch some of the process unfolding, so it is really, it is really an experience instead of just sitting for a portrait. It is fascinating, and it is really a nice way to engage people as well. So, you are teaching them something, and they walk out of there and well, "oh wow, that was so good" (IP 7, 17.40).

Working with alternative processes, however, is not just limited to still photography or single images. One of the interview participants was an experimental filmmaker. Initially, there was a consideration that this genre might have been unsuitable for the study. However, some discussion and exciting insights resulted from this encounter. The creative practitioner works with themes of memory, focusing on her childhood. It was the complex process of converting analogue film stills to digital negatives, which were printed as cyanotypes and re-recorded to an analogue film: "That way of making interesting work through the processes ... It is just a lot more fun, but I find I get a lot more out of it than (digital)" (IP 6, 10.16). This way of working with moving images though is unusual and time-consuming, however, from an aesthetic and emotional point of view, for this practitioner, entirely necessary.

While many of the comments referred to the darkroom or wet-plate work in particular, interview 9 described the same sentiment of watching an image form in a printing process, not capture as "... standing with it and watching the sun change the nature of the chemical ..." (IP 9, 16.53).

Working with analogue processes also has a sense of mystery associated with the equipment itself. With digital, of course, one can view an image as a shot on the rear screen of the camera. However, when working with analogue processes, there are none of these luxuries. There is a time of anticipation, waiting until the development of a strip of film, or a sensitised plate, before acknowledgment of success or failure is possible.

It is mysterious. They don't get to see anything on the back of the camera immediately, it is all locked away on this film and they have to wait until it is processed and scanned for them to actually see their images (5.04) they get to use a camera they bought from an op shop for \$2 that looks like it is from the ark. It is the mystery of what used to be before us (IP 4, 5.24).

For those new to working with non-digital processes, this wait time, the lack of immediate feedback, is something they have to begin to understand. It is a different way of working and producing photographs. The outcome of the capture is a mystery until revealed at the time of processing and printing.

However, this notion of “sense of wonder” is entirely different when engaging with a camera obscura. This device is the earliest and most basic form of alternative processes. There is no camera or light-sensitive medium. Engaging with, notably, a room-size camera obscura is experiential instead. At times, the practitioner may opt to capture this ephemeral image either by using a digital camera or at other times, making the image in the dark body of the camera obscura by placing the light-sensitive medium, photographic paper, in that space for exposure.

Standing in the space is akin to being inside the interior of a camera. Here, within this camera obscura, the world is turned upside down and flipped vertically, everything is reversed. This phenomenon of light physics renders a view of the world projected from outside. This experience is beyond imagination.

Remaining inside a room-size camera obscura is quite meditative. Depending on what is outside for the light to reflect from, quite often the imagery is moving not still. There may be no sound or muffled sound from outside, which seems disconnected from the images. Standing in this dark body of the camera obscura is a surreal encounter.

...yes, that's what I'm saying when people go in there, they forget that the visual world's upside down we live in a visually upside-down world. How crazy is that we forget totally that bar issue that the light's entering our eyes carried the world upside down, and the brain is flicking it up the right way (22.39). And that's when you can't see digital that you consider a process and that's a reality, but we don't see it because it's unknowable and unseeable unless you set up a process to show that's a magical thing (22.55). You see the world how it is every day it's right in front of your face. So, it is nice to have a bit of an escape. So just remembering that world is upside down, it is crazy, it is physically a visual world upside down, and that makes me wonder how and I am not a religious person, but I wonder why that's the way the world was made and then it's a brain that fixes it the right way up (IP 2, 23.24).

Building a room-size camera obscura, such as described above, provided the practitioner with not only the physical experience of building the space but also of engaging with the changing light and imagery. A reward the manual labour required in the building process is that wonder of engaging with the image, and the experience of “being in the camera”. In the type of practice reflected on below, the room or space becomes the camera where a light-sensitive medium, usually large sheets or sensitised paper, is used to make an exposure. Making an exposure in this space allows for the production of the permanent representation of that frozen moment in time, which is photography.

4.3.5 EXPERIMENTATION

... and using standard fixers like sodium thiosulfate or ammonium thiosulfate are great, but I think that I am the only person using potassium cyanide in Australia because I know I have to jump through several hoops to renew my licence every two years, and that is even better again because it (the appearance of the image) happens instantaneously (IP 2, 21.46).

Working with alternative processes requires the use of toxic chemicals. This usage is part of the appeal for some. Developing competency in working with the chemistry and engaging with the process brings confidence and allows for controlled experimentation as described above. Experimentation may lead to a different way of working with alternative processes, beyond the originally intended purpose.

The description of this experimentation as being a more adventurous way of working was consistent in both the survey and interview findings. A slight change in dilution or temperature or even substitution of chemistry may produce exciting results. There are nearly limitless possibilities. In interview 3, the participant describes how the use of potassium cyanide in the daguerreotype process produces an unusual aesthetic to the plate as well as efficiency in the process.

Potassium cyanide gives you those really lovely coffee cream tones to the plate; it is quite unique. You can warm the plate up as well or use different dilutions of the other fixers for a different look, but nothing is quite the same as potassium cyanide, and it washes out very quickly'(IP 3, 22.07).

The experimental nature of the process may also be evident in the capture stage when facing challenges of combining specific subjects and limitations presented by the technical components of the process itself. The ability to problem-solve, to work with a trial and error method, is essential at times for a successful outcome.

... there was a boy, Elliott, that I was trying to photograph, and I had three sessions, and I could not get him to stay still for even one second that I needed to make that image on an ambrotype. And I was racking my brain, and at that time no one was using high-output strobe to create images, but I thought you know I have to look at this, and I tested this, and I thought, yes, I can do so. So, I asked Elliott back to the studio, had no idea how he was going to react, and it worked. So, the thing for me personally, I enjoy those challenges. I enjoy how difficult sometimes the process can be because it gives you the opportunity to beat it, to find a way around to secure a solution (IP 3, 17:00).

While there is a level of experimentation possible in digital processes, it is a little more controlled, repeatable and mistakes are usually easy to repair. This way of working with digital processes, the infinite reproducibility of the work, is described at times as a conveyor belt or rubber-stamp way of making, which limits that feeling of being experimental. It is this experimentality when working with alternative photographic processes, and the unknown outcome, which some of the interview participants have cited as a reason for their engagement.

So, they are all methods. I would be happy to take something from another process and mix it up. I am not a purist. On those edges is where you have interesting things happen. It is on those edges between science and art, between drawing and photography any of those edges. It is the same that you know that that the edges are the most productive like in a river and the land would be the mangroves. So, if you go and inhabit that area with whatever you are working with, it is the edges or intersects that produce that most beautiful work. This is the difference between technicians and artists. (IP 8, 23.19)

Although there was an overwhelming consensus regarding the positive aspects of working with alternative processes, working with digital processes was not always rejected by the group. A number of the alternative process community indicated they work with a hybrid process. That is, they employed digital technology as well as alternative processes to gain the advantages from both ways of working. The most common use for hybrid processes is with a range of alternative printing processes as described in Chapter 3. These printing processes are historically linked to a technique of using objects placed directly on to the sensitised light-sensitive medium which then blocks the light from the chemistry, a technique described as producing a photogram or photogenic drawing.

With a hybrid process, the original image may be captured using a digital camera, processed in Adobe Photoshop, and printed as an oversize negative using a large format inkjet printer and inkjet transparency film. From here, the experimental, hands-on techniques begin. The digital negative is used to print an image using papers sensitised with chemical-based formulas.

Some of the interview group indicated they used digital photography for their commercial (professional) work but choose to employ alternative processes for their personal creative and exhibition output.

Sourcing and mixing chemistry, matching the paper stock to the formula, and extending processes, are all part of the excitement of working with these techniques and continuing to work with such processes as gum bichromate over the original light-sensitive medium to produce a coloured image instead of monochrome. Recoating the papers or substrate, in order to make more than one exposure, changes the overall look of the final image — for example, coating paper with Van Dyke solution after already coating with cyanotype before making a second exposure. Furthermore, toning the print using a range of natural products such as tea, coffee, wine is all quite usual. There is quite a bit of experimentation around wet cyanotype processes currently: the addition of citric acid, washing detergents and salt alters the colour, contrast and look of the image produced.

I think that alternative photography processes will be seen as just another method for contemporary artists to express themselves (e.g. painting, drawing, printmaking, sculpture) and will become less confined to the world of photography. Many artists seem to be moving towards an interdisciplinary practice. (IP 11, question 6)

Ultimately, working experimentally with alternative processes allows the practitioner to customise their way of working and produce work based entirely on their intent or vision. This vision is made possible through the use of either pure historical, experimental or hybrid processes or a mixture of all. What appears essential, though, is the consideration first for the aesthetic, and the process is then selected based on this desire.

4.3.6 PROCESS AND AESTHETIC

When I was first starting I was working on a series “As Faulty as We Are”, which is a revelation that I had in hospital ... I worked with people who were drug addicts or intellectually or physically disabled. Rather than focusing their condition, I could marry that (condition) through this photographic medium to focus on their character. Well here I have this sense of irony, a juxtaposition between faulty people and a faulty process, but here we have this beautiful three-dimensional image of the character of the person (IP 3, 15.40).

Matching the process with aesthetic and vision for the final image is how many of the group described their practice. In the case of the body of work described above, the “faulty” process referred is the wet-plate process, with its inherent risks and at times resulting embedded artefacts and imperfections. Even the most perfect wet-plate image, because of the distinctive aesthetic, looks different to what is considered a photograph in modern times. It is not an image which anyone unfamiliar with the process would expect. The artist has selected this process as a way to describe imperfections in each of the subjects metaphorically.

If I have a particular series I am thinking about creating, then I think about which processes would be best and then set about creating accordingly. Which process will be best for this series, which is the processes that I fell will fit it best (IP 5, 18.20).

This practice of matching an expected aesthetic outcome with the process is explained further in this excerpt from interview 5, where the interview participant described considering the look of the final object at the beginning of the creative process. The interview participants are describing the practice of matching the project, the subject and the process for a desired aesthetic or outcome, and the overall impact that aesthetic will project. One must first understand the processes in order to successfully work in this manner.

A critical point is that planning is completed pre-capture when working with alternative photographic processes, whereas, when working with digital, the creativity or the final aesthetic is a result quite often of a post-production (post-capture) technique. This method is a different way of working.

... I guess that with chemistry all that stuff really changes the way that finished photo looks at the end of the day. So, when you pick a film stock, that is already thinking about the print when you take the photo, of course, has a big impact. The way that you develop can have an impact on the way the photo looks and then in the darkroom you have so many different options again of how you can get the most out of a photograph. (IP 1, 22.22)

In interview 12, this point is repeated where the participant describes the process in full. The decision to document his mother led to a process which included the use of resin-coated paper, grainy black-and-white film and a long lens. The work was displayed in the gallery using

pushpins on the wall. The outcome was described as a “romantic notion of a police investigation or some type of surveillance” (IP 12, 18.53). This difference, an outcome of working with alternative processes, is another discussion point and the interviews brought with them some interesting perspectives.

Within the interview group, there were already commonalities around the idea of that “difference” factor. For some, alternative processes provided a uniqueness in the aesthetic, and there was also discussion about how digital technologies attempt to emulate alternative processes, with limited success. That is, these pre-prepared scripts as part of processing software, or in apps such as Instagram attempt the emulation of this (alternative) aesthetic through the use of technologies.

... it is like the sort of filters in Instagram gives you to make those changes; it is not an authentic change (21.34). It is a sort of suggested idea of how to read. But no, in essence, it is the total materiality, it is the surface and the 3-D dimensionality of the materials (IP 9, 21.44).

In interview 11, the participant described alternative processes as having a look which is “more textured and less plastic, and that this could appeal to artists working with contemporary subject matter” (IP 11, question 5). The statement was quite decisive regarding that difference between the analogue or alternative product and one produced by digital technology. The participant suggested that “it would be possible to replicate the aesthetic of alternative photography processes, but it would be very difficult” (IP 11, question 3).

I was just thinking of the Australian photographer who was doing his residency here at the beginning of last year ... he had intended to do work in wet plate. But because in the residency he did not have the facility he actually did these portraits with the large format camera, and then he made the changes to replicate wet plate in Adobe Photoshop. So, they were outputted as inkjet prints, and they were entirely different. They were not wet-plate collodion prints because they attempted to look like it. (IP 9, 21.26)

While analogue and alternative processes may be emulated in some fashion using digital technologies through the editing of colour, tone and even the addition of faux film grain, and borders created referencing the look of an analogue negative, it is quite visually distinct from

an object produced using optical and chemical-based processes. The base substrate itself which supports the light-sensitive medium when working with alternative processes, and the way the final image “looks”, that is how the image may seem to float within the plate, is not able to be replicated in any form when working outside alternative processes, especially wet-plate collodion and daguerreotypes.

The failure to be able to replicate alternative photographic processes through digital output is described further in interview 9. While the attempt may appear successful for those who are not familiar with how the outcome of the process should appear, for those who are, the difference is easily discernible.

4.4.0 THE OBJECT

A focus on the end product, the production of a photographic object, was present in all levels of the engagement with alternative processes. A discussion regarding the importance of this object ensued during the interviews. The group agreed the object was an essential aspect of why they engage with alternative processes. Furthermore, the group considered this object was not the focus of, or was missing for the most part in, digital imaging technologies.

Additionally, the group identified a link between process, aesthetic and the final object, all of which are interdependent and intertwined. The object produced using this chemical-based and optical processes is unable to be reproduced digitally or through digital technologies. The object produced, especially the direct positive images produced by a wet plate or daguerreotype processes, is one of a kind. It carries with it that infallible link between time, place and production of the object and includes an illusion of authenticity and truthfulness.

Working with alternative photographic processes is linked to an expectation of working with traditional subjects from some parts of the community. Even though dressing in costumes replicating a past time is sometimes offered, it is rarely the focus of the serious practitioner. While some practitioners work with alternative processes to recreate a historical or traditional look to their images through the use of costumes and props, they are in the minority. Instead, it appears the contrast of everyday clothing and the historical process is more attractive for the photographer and is perhaps a more authentic replication of how photographs were taken last century.

... a lot of people that I've had over in the studio ... they ask do you have, like, costumes and stuff that I can put on and no I don't even. Those pictures that were taken you know 150 years ago those people weren't wearing costumes they were wearing the day today or you know maybe they got dressed up for it but a lot of times it was representation of who they were or something to do with their occupation so tell them you know they don't unless that's what you really looking for just wear what you would wear on a day-to-day basis that is how people are going to remember you by. (IP 10, 15.32)

The mixture of alternative process and contemporary subject results in uniqueness in the final object. It is this mixture of contemporary subjects, themes and concepts when realised using alternative photographic processes which results in that distinctive (contemporary) aesthetic.

I look at ways of combining traditional and historical processes with contemporary subjects today, so they are both relevant I think, and it makes people look at things in a different way. I am trying to engage the viewer at that different level (IP 5, 20.30).

Alternatively, working with the processes to produce conceptual art beyond the simple representation of a subject results in a contemporary quality to these historical processes. It is that juxtaposition of contemporary subject matter and historical photographic processes which provides that surprising moment for the viewer as there may be an expectation they are looking at an antique photograph. However, it is current work. This is a sophisticated way of working with alternative processes, through presenting an object that, while obviously photographic, is not readily familiar in either subject matter or presentation.

4.4.1 UNIQUENESS AND VALUE OF THE SINGULAR HAND-MADE OBJECT

The interview process included a conversation regarding the value and uniqueness of the hand-made photographic object, a result of engagement with alternative processes. The majority of the group had an opinion regarding this topic. For most, it was a consideration that the object produced through alternative photographic processes was considered firstly unique, and secondly more valuable because of its one-off and particular nature.

Creating something digitally is different to making something as an actual object. It is real, and it is there in front of you. And I think that changes where people place the extent of emotional value, monetary value, social value. Digital images don't have, I don't think they have real value any more. We see hundreds and hundreds and thousands of them every single day, but they are not, people look at them without they don't pause for that look at that one, what-ever. When you have that actual physical object at hand there is something, they go wow and they really look at it. (IP 5, 10.47)

The group suggested the ubiquitous nature of digital images as well as the democratisation of photography itself were two reasons for the devaluation of digital images, and perhaps photography in general. That is, digital technologies, and their perceived ease of use, have created a situation where less technical skills are required to create an image.

Not everyone could do photography when it was in the darkroom, before digital it was the specialist art form, a bit mysterious and wow, look at that and I think the alt processes bring that back to the artist. They give that specialty that level of mystery, and some people appreciate that is something that they can't do themselves (IP5, 29.00).

As discussed in Chapter 1, photography, the act of capturing a photographic image in contemporary times, does not even require a camera. The capture device most often used now is a camera built into a smartphone. This point reinforces the stance that the primary role for digital imaging is transmission or sharing of an image, not so much the production of a photographic object or artefact. Capture, edit and share capabilities are built into smart

devices globally. It is due to this changing face of digital capture technology that photography and the production of the photographic object have become devalued and may even be considered unnecessary.

... and technology has changed, there is no appreciation for it anymore ... most people can use apps, edit, use the digital technology, and they've got their phones and this that whatever, they don't have that same appreciation for the art as being able to make something by hand anymore, and I felt as well that I was not appreciating my art and my craft as much because of that, and I wasn't as connected and my creativity was lacking, so being hands-on again with these other processes gave me all of that back (IP 5, 7.49).

The group identified that the ease of reproducibility of digital prints was problematic and aligned to a perceived lack of value associated with working in this manner. The knowledge a photograph may be reproduced an infinite number of times impacts negatively on its inherent value. While work produced through digital capture and output is sold for amazing prices and are part of a museum, gallery or private collections, the careful management of the number of reproductions is greatly different from everyday photography.

Instead, limitations set on the number of prints made aligns to this idea of the value of the hand-made object; a value has continued into the 21st century. This point was described well in interview 11.

I think digital counterparts can be sold for similar prices to analogue prints, but personally I think digital prints are more likely to be reproduced and are therefore less valuable. I would find it hard to buy a digital print for more than \$100 (IP 11, question 4).

As more practitioners engage with alternative photographic processes and this work is exhibited, the awareness of what these processes are, and so the interest in the work, is increasing as described in interview 5 below. This increased visibility only adds to the ability for the viewer to compare the product, digital and other, as the product of alternative processes. Initially, the wow factor or how different these works appear, may draw attention to them.

As more artists are doing more work in it, more people will see, they will see and appreciate that. I don't feel there is the value in the digital image anymore and so as more of these works are created, then more people will understand the value of photography in this form, to be taken back to that (IP 5, 28.32).

The presence felt from viewing the mirrored surface of a daguerreotype, or the lacquered surface of a tintype or ambrotype, stands them apart from works on paper, that is a print. It is this viewer response, the emotional reaction to viewing these objects produced with alternative photographic processes, which supports that notion of value. Paper-based photography or images on a screen are quite normalised. However, images on a mirrored surface already have a distinct difference.

It is that inability to reproduce the object correctly when working with alternative photographic processes which for some makes the objects more unique and so more valuable. With a daguerreotype or wet-plate collodion object, there will always be small differences in the plates: a smudge, a spot of dust or even a thumbprint or just a slight change in where the light has changed and impacted on the exposure time.

Furthermore, even photographing the same scene or subject again, using the same process, is quite likely to render an image differently. It is the unpredictable nature of alternative processes and reliance on natural light when working outdoors, which makes this possible. While experienced technicians will have a level of control which provides the ability for consistency in output, there is always the risk of elements outside of all control.

I think an object/photograph produced using alternative processes is unique because it cannot be exactly reproduced, there will always be some difference in the print – whether a scratch or a change in tone (IP 11, question 3).

The notion of the hand of the artist, the hand-made object, was a further discussion point in the interviews. Leaving the mark of the artist, mark-making, and leaving traces of the presence of the artist, including fingerprints, were all topics of discussion. This romantic notion of working with chemistry from scratch, handling the paper or sensitised plates, and the opportunity to leave a trace or presence of the artist in that space and time, are essential for some of the interview group.

...in there that you are working with you leave your artist's mark, you may accidentally leave a thumbprint and you have that unique connection to your work and that other people can see that. You know you put your blood, sweat and tears into creating this work, and here is a tangible physical, one of object that shows that (IP 5 8.53).

This description refers to that hands-on nature of the process. However, the hand of the artist is always present in the construction of the image: the creation of an image from ideation to output. So, in some ways, digital is not devoid of the hand of the artist but it is through a more abstract understanding of this terminology.

In interview 12, this participant was not so sure how to respond to the question, suggesting that it “may take his entire artistic career to come closer to an answer to that question” (IP 12, 1.49). However, when asked to provide a personal opinion, the answer was yes, with still the same indecision suggesting that value “was in the eye of the beholder” (IP 12, 2.03). The reason for this is that value is subjective, and everyone has their way of defining value. This was evident during both the survey and interview phases of the research. This question of value was also challenging for the survey participants for the same reason. However, there was no hesitation when affiliating the emotional value of the hand-made object and inherent value.

4.4.2 EMOTIVE CONNECTION TO THE PHOTOGRAPHIC OBJECT

In a discussion regarding the emotional connection to the photographic object produced through engagement with an alternative photographic process, there was not just one reason for this phenomenon. It is instead the culmination of topics already discussed in this chapter. These include slowness and complexity; time and cost; the tactile nature of the process; and the production of a photographic artefact. It is an amalgam of all these concepts which generates an emotional connection for alternative process practitioners.

The presence of the tactile object, one which is not only seen but also held and touched, is a big part of the reasoning behind this emotive connection to alternative processes. Furthermore, as described in interview 4, there is the notion that this object will be a lasting representation of a person or place, especially where there is already that personal connection added to this emotional connection.

My mantra now is if you can't see it and you can't hold it then it does not exist. If it is locked away in anything digital it is irrelevant because if it gets lost, stolen or broken or if we die, who is going to go to the effort to actually look, at what was on there, no matter how important, they will just see a disc drive, it is just like out in the dumpster with that. A generation of our history is just going to be lost in a moment (IP 4, 8.34).

The existence of historical photographic items supports the perceived longevity of the object, produced through an alternative process. The existence of these photographs from the beginning of photographic history itself suggests that these contemporary objects will also have that longevity and supports that idea of an image which will exist for perhaps centuries. There is an assurance the photographic object will be available for view and the memory of this moment revisited and enjoyed.

This is unlike digital, where the storage of the image is on hard drives or another data storage means, the image itself remains hidden, unless the associated technology to view the image is available. Therefore, with the redundancy built into digital technology, and the massive changes in how images or data are stored and then viewed, some of these images may remain hidden. The advantage of working with non-digital processes is that the image, even if it is on a negative, only requires light to be viewed. The image is always accessible to the viewer. When working with alternative processes, the image is visible immediately at the completion of the process.

... even today I shoot wet plate for one of these two reasons, I love the medium for the art but I constantly find any reason to shoot my family (9.07) and it might be just a test shot when they have to stand there just to record something but, every time I do that it is absolutely locked away and I have this image of them which will never be lost, it will be special, it will be treasured, it will go into a box and in a 100 years' time they can open that box and they will see it now just when I made it (IP4, 10.01).

As described above, there is the knowledge that the image once captured is a permanent representation of that moment in time. The viewer, when holding the object in their hand, has

an opportunity to connect that moment. It is proof that that moment in time existed and that image becomes a historical document.

I do feel that photographers and then people wanting to have access to these processes, artists of wider mediums and such, will come more to it for that reason, give them that connection, that tangibility, that creation of something in their hands, it is that difference (IP 5, 27.48).

It is perhaps the production of that actual document, this hand-made object that carries with it the emotional intent of the artist, the photographer, as well as the notion of being a historical document, verification of light, time and place, an object to be held and admired, that are all important reasons for this contemporary engagement with alternative photographic processes.

I guess it's the magic really that caught me up. I am a person who is just amazed by what a device like a camera or emulsions can actually do to create something that is this permanent record of light and place (IP 3 - 9.18).

Photography, whether it is through the use of traditional light-sensitive materials or modern digital processes, has that ability to capture a moment in time, to produce a record of light, time and place. It records the event, the subject within the moment of time of the exposure. It is magic as it records that moment as it passes, the moment which will never return.

4.5.0 NOSTALGIA AND THE LINK TO TRADITIONAL PHOTOGRAPHY

An original notion at the beginning of this research was the idea photographers are engaging with alternative photographic processes because of nostalgia for the processes; that is, the desire to work with vintage cameras as well as the associated wet-chemical processes. The survey explicitly asked the participants if it was nostalgia which led them to work with these processes. While a vast majority of the survey participants did not agree with this stance, some ambiguity remained on this topic as further questions confirmed their interest in working

with the equipment and light-sensitive mediums. The inclusion of a discussion on this topic in the interviews provided an opportunity to explore the concept further.

Although the terminology “nostalgia” was rejected in the survey, other emotions associated with this terminology were supported by the interview participants.

During the interviews, many of the group spoke about longing to work with traditional photographic processes, and the associated outcomes. They were searching for engagement with traditional forms of photography, described by some as authentic photography. It was that challenge of working with these antiquated processes and equipment which was part of the reason for deciding to work in this manner.

I am sort of more excited about the things people used to use and that we can actually bring them back to life and use them today, every bit as good as 100 years ago. It absolutely revitalises you. (IP 4, 5.42).

However, others in the group voiced a perceived lack in digital processes as one of their reasons for working with alternative processes. Digital processes were thought to be less real, to lack authenticity and truthfulness, as well as uniqueness and tactility in the object produced which were qualities deemed present in alternative processes.

I appreciate quite a lot of what digital offers you, there is still something for me greatly missing in the imagining and creating of an image which analogue photography just has in spades (IP 9, 7.48).

It is that link to traditional photographic processes, with all the challenges they bring, which draws some practitioners to work in this manner. In interview 10, this was quite evident. IP 10 was a non-artist, but instead an engineer who loves exploring hobbies. This interview participant found wet-plate collodion some years ago and describes himself as a “tinkerer”, who became “hooked” with the process for a variety of reasons. These reasons are echoed in other interviews and include that magic in the process. During interview 10, the participant continued to expound this point by stating “... I think it was more the process, more so than the look of the photograph. I think a lot of folks, especially new people, come into it they really drawn to the vintage look there are lots of artefacts and things on the picture ...” (Interview 10, 10.52).

There is a further idea that this contemporary engagement may be part of a more significant push back against built-in redundancy and a move towards sustainability. This idea of redundancy in digital technologies is evident in some of the interview discussions.

I personally think it will stick around and gain more traction because I think it has a lot to do with that tangibility of it, that realness (27.06). I think that a lot of people get a bit tired of the digital world and we are so hooked on digital technology. That people go, oh, going to have a break from social media, need to get off my phone, it is something that causes stress and anxiety in their lives. So, people are looking to other options that feed us in a positive way (Interview 5, 27.25).

As this technological age pushes us to become more “plugged in”, some are pushing back, looking to engage again, looking to reconnect with processes perceived as real photography. There is support for this stance in interview 5, where the participant suggests that as part of the reason for looking for a positive engagement, and engagement, which is stress-free.

Some of the stresses associated with digital photography are the storage of the files. The storage devices become redundant along with photographic technology. The software and hardware required to access these files have been superseded. This idea of acknowledging built-in redundancy continues in interview 4. It is that fear that images may be lost forever, locked away in some digital format, which, when made redundant, renders these images impossible to access.

... the digital revolution means you don't shoot film, so you don't have that negative file any more, that thing where you could just open up a file and check through and see what you have got. Everything is locked away on a CD. I looked the other day and when we started using digital in our lab we have gone through 8 or is it 11 it was a ridiculous amount of different media, and that is in the space of a 20 years maybe (7.21). And most of those, like anything we have stored on those we can't pull them back these days because we don't have data tapes, or a zip drive or a jazz drive or all this media which might have files locked away on them we can't get to them anyway. It is that redundancy you know (Interview 4, 7.21).

In interview 4, the participant continued to voice some sadness that digital technology displaced what was considered high-quality equipment associated with analogue processes.

This participant was able to reflect on this point because of his long engagement with photography at a professional level, being part of a three-generation professional photography business. The move from analogue to digital not only changed the entire way their business worked; there was also that recognition of the quality of the camera and other equipment associated with analogue processes and the lack of quality in the early digital equipment, the built-in redundancy recognised in the equipment which now becomes part of their working life.

This point alone encouraged him to begin working with wet-plate collodion processes for his personal and creative work, including capturing images of his family regularly.

So as things got more technology focused we had less of those things that we just cursed all the time because it was always just disgusting. But when digital finally came of age and wiped out darkrooms as I saw all of my friends closing their darkrooms and selling off all their film gear. I just could not believe it because I had seen the quality of the equipment not just the lab equipment that we used to love and maintain, but the internals of camera gear, how they were made because they were mechanical and precision. With digital now everything is plastic and polycarbonate and disposable (Interview 4, 3.30).

While the survey population did not accept the term nostalgia, a longing to work with historical photographic processes and equipment does seem to play some part in this contemporary engagement with alternative processes. During the interviews they expressed this idea in several ways. The research does suggest that this is only a superficial symptom and the reason lies with a much more profound and more philosophical conviction within their creative practice and by these practitioners.

4.5.1 AUTHENTICITY AND TRUTHFULNESS

I think that the important part for me why I work with alternative processes is the truthfulness (Interview 3, 10.25).

Ideas of authenticity and truthfulness in photography may be at times quite loaded subjects, especially the notion of truthfulness. In interview 3, the participant suggests he works with alternative processes, namely wet-plate collodion, because of the truthfulness. Discussion of this point during the interview revealed the meaning is multi-faceted. It is the relationship between the image produced through this particular process, and the subject photographed

along with the rawness of the resulting image, the direct representation of the subject which the interviewee describes as “truthful”.

That link between time, place light and subject, especially when working with processes which produce a direct positive image, provides the photographer with this notion or feeling of authenticity and truthfulness in the images. It is in contrast to that perception regarding digital technology. It is the perception that digital is in some way untruthful or carries the stigma of lack of truthfulness because digital images can be edited. This point is also present in interview 7, with a description of their digital work ethic of looking always to perfect an image.

... when you take a digital image because I do a lot of creative work as well all in Photoshop and I am always perfecting little things like making the eyes have a bit more clarity, removing a pimple or a mark that someone has asked me to get rid of, so the digital process is absolutely perfect (Interview 7, 14.19) when I give it, when I hand it over to the client and it does not always show the true sense of what a person really looks like. But with the tintype or ambrotype, like the wet-plate process, what you see is what you get (14.44) but there is something aesthetically beautiful about it that really, you really engage with the person who is sitting there (Interview 7 14.49).

However, the perception is, in alternative processes, that there is truthfulness in the rendering of the subject itself, described in interview 9 as the mark-making. This terminology more usually used to describe the practice of drawing, than photography, and links the hand of the artist with the final image beautifully. With alternative photographic processes, the mark-making is that moment of intersection between light and a light-sensitive medium to produce an image.

But there is something about believing these alternative processes because they are so much about a kind of authenticity in mark-making (Interview 9 – 18.52)

Some interview participants suggested it was the ubiquitous nature of digital photography which has led them to work creatively with alternative processes. The group suggested that perhaps there is an air of fatigue around digital photography itself. The consensus among the interview group was that images produced via alternative photographic processes bring back not only a level of excitement to their engagement with photography but a level of authenticity to the work they produce.

Digital photography is all pervasive now we see it everywhere, and not only is it so hyper-real, that things look much, I think, better than in real life. People now understand digital photography to be something to be constrained by or heightened by the post-production techniques, so you cannot believe a digital photograph (Interview 9, 18.0).

Perhaps this contemporary engagement is about a search for authenticity, or even a reality not offered by digital technology, a reaffirmation of photography and photographic processes themselves.

4.5.2 LINK BETWEEN OBJECT LIGHT, TIME AND SPACE

The interview participants identified that light was an essential part of their process. Light, of course, is an essential part of any photographic processes. However, for just a small number of practitioners working with alternative photographic processes, light was considered more philosophically. For them, it was this link between light, time and place which provided a level of authenticity to the final object.

In interview 4, the light was used not only to make the photograph but also as the link between the subject and its time and place. For this practitioner, this idea of the link between light, time and place was most important when photographing people, especially when documenting his family members.

But with Tintypes or Daguerreotypes those photons of light, you know they are a physical property, those photons of light have actually hit your subject and reflect off and bounce into your camera through your lens and hit that plate, that photon has actually touched the subject, so there is that absolute connection to the subject. So, if I pick up a wet plate or a daguerreotype of Abraham Lincoln in it, and I put my finger on the top of the image I am actually touching something that touched him. That is sort of, it is very, very, close connection to the subject (IP 4, 22.41).

It was the light reflecting from the subject to intersect with the light-sensitive medium that verified the event within that time and place. Working with a direct positive process, when the

photons of light intersect with the subject and then the light-sensitive material, provided an element of authenticity to the photographic process as well. Direct positive processes do not produce a negative: the image is rendered directly on to the photographic plate and it is actuated through the action of light and light-sensitive wet chemistry. Interview 9 described the idea of light and the production of a permanent record of light and place as a phenomenon which amazed them.

I am a person who is just amazed by what a device like a camera or emulsions can actually do to create something that is this permanent record of light and place (Interview 9, 9.20).

In interview 12 this phenomenon was described as not only amazing but also as the photographs themselves having “some sort of aura”. This aura also may be described as an emotional response experienced on viewing a photograph and recognising this link between the photograph, the subject and space and time. Furthermore, the subject matter in Cauchi’s work deals with the supernatural which may resonate with what is perceived as an aura. However, the unique aesthetic of the wet-plate and ambrotypes with their metallic mirrored surfaces is a possible consideration for the response.

I did find the ambrotypes that Ben Cauchi made to be particularly amazing, 3.37 and have a sort of aura about them, because I knew what it was. And I knew that the object that I was looking at in the gallery was also there when he took that image. You know that light the thing was reflecting on that surface it is all connected (4.02) and to me that was really wowing. (Interview 12, 4.15).

For those who are conversant with the philosophy of photography, this describes that authenticity, the documentation of an event and is the crucial documentary role of all photographic processes, traditional and digital. Photography can capture an image in the present which stands as a testament for the event, the time and place.

SUMMARY

At the beginning of the interview phase of this research, a range of concepts had been extracted from the survey results which required further investigation. The interviews were conducted in a semi-formal manner and were based on a list of discussion points which allowed the participant to add information or to expand on specific points if necessary. The interview results provided an opportunity to further understand why creative photographers have chosen to work with alternative photographic processes.

There was a noticeable level of excitement from the interview group around alternative and historical photography, which drives their ongoing engagement with these processes. The interviews provided a fascinating insight into the reasons for working in this manner from a diverse range of alt process practitioners. This confirmed the link between process, object and outcome. That is the process itself, which is described as meditative, complex and hard to control and a photographic artefact with its intrinsic aesthetic. There was a reinforcement regarding the emotive connection between both the process itself as well in the results. Furthermore, that link between time, place and the subject provided a level of authenticity, which some described as truthfulness, to the overall process.

The primary objective of the interviews was to further refine these critical concepts distilled from the survey findings. The remaining concepts from the first two research stages would assist in the production of a framework for the case studies in Phase 3.

Chapter 6 contains further information and discussion regarding the outcomes of this research phase.

CHAPTER 5

CASE STUDIES: RESULTS

INTRODUCTION

This series of case studies constitutes the final phase of the research investigation, as described in the Research Design chapter. The purpose of the case studies is to continue the exploration from an application perspective into why there is a contemporary engagement with alternative processes, that is historical photographic processes, some over a century old. The research design provided an opportunity to engage with a diverse range of practitioners, from enthusiasts through to highly successful national and international art photographers. In the first two phases, survey and interview, the participants consisted of volunteers from a broad range of practitioners, who identified mostly as enthusiasts and academics along with a sampling of professional photographers and emerging artists. In this final phase, the participants were chosen by the researcher using a framework as described below. The case studies enabled an examination of work from a range of highly successful contemporary artists, the demographic missing from the other research phases.

As described in Chapter 2, data extracted from each step of the research phases resulted in the identification of a range of concepts. Because of the sequential nature of the research, each subsequent group of research participants tested these concepts before proceeding to the next phase. In this final step, the remaining concepts were used to form a framework for the case studies. Through the examination of the creative work and practices of five internationally recognised contemporary art practitioners, it was possible to examine whether any of the critical concepts which had survived the first two stages of research analysis were evident at this level of practice. As a result of this examination, it was possible to confirm or reject any remaining concepts with regards to the research problem and directly address the research question.

SELECTION OF CASE STUDY ARTISTS

The following framework was used to select photographic artists for the case studies:

- The artists worked with alternative and or historical processes;
- The artists had commenced working with the processes within the past 10-15 years (10 years preferably);
- Their work had received critical acclaim and was critiqued at an academic or professional level;

- They are exhibited and collected by contemporary art galleries or museums;
- They had won international awards for contemporary photography;
- There was diversity across their practices and the processes used.

Each of the four photographic artists selected work with alternative processes in a specific way including: historical process in a traditional manner; historical processes used experimentally; alternative printing processes and the production of cameraless work; and a hybrid digital and alternative process model.

For each of the artists in the case studies, evidence their work is considered ultimate in contemporary practice is the fact it is exhibited and collected internationally and has received prestige in contemporary photographic awards such as the Paul Huf photography prize (for photographers under the age of 35 years).

KEY CONCEPTS ADDRESSED IN THE CASE STUDIES

The range of concepts which survived the first two levels of research analysis and was deemed critical for inclusion in the examination of the artists and their work included the following:

- The process;
- The object;
- The aesthetic;
- The philosophical and conceptual concerns.

The case studies examined the creative practice of a selection of photographic artists. This examination included a description of their processes, the photographic object produced, and a discussion regarding the aesthetic. The case studies were also an opportunity to contemplate whether there was a conceptual and philosophical motivation behind this engagement and whether working with alternative processes provided an enhanced experience for both artist and viewer. Furthermore, the case studies were an opportunity to examine the diversity of practice at this level and how long the artists have worked with these processes, confirming the hypothesis that there is a contemporary engagement with alternative processes. Finally, the case studies searched for a commonality of vision and a reason for this contemporary engagement.

Each case study was conducted as a stand-alone exercise, working with the framework as outlined earlier. However, the aim of this chapter is first to present the case studies and then compare and contrast each artist's practice through discussion using the same framework developed to conduct the case studies. Through this process, the case studies continued to explore the reason contemporary artists are engaging with alternative photographic practices, with all their associated risks, in the 21st century. Furthermore, the case studies unpack the reasons for contemporary engagement with alternative processes, and endeavour to answer the research questions.

TRADITIONAL PROCESSES AS A CONTEMPORARY CONCEPT: BEN CAUCHI A CASE STUDY IN WET-PLATE PROCESSES

Growing up, I thought photography was pressing a shutter and up pops a photo. However, working in the library at Wellington Polytech and came across the photography section and there were all these books on Fox Talbot, the gear, the early experimenters with the medium. Just seeing the images, they were making, using a whole wide range of different processes I'd never even heard of, it was that kind of moment where you realise something is far bigger than what you actually expected it to be or understood it to be. And you can work in many other ways than you thought. That's what got me interested. So, it was that side of it that had that initial appeal. The more alchemical side of it. And that led on to an interest in the spiritualist movement and smoke and mirrors and studio tricks and that kind of thing. (Ben Cauchi, 2012, listener.co.nz interview)

Ben Cauchi's website provides an abundance of information regarding his creative practice and how long he has worked in this fashion, along with an extensive web gallery of his work. Cauchi, an emerging, contemporary art practitioner, has developed a successful creative practice working with alternative processes. He specialises in wet-plate collodion photographic methods, namely tintypes and ambrotypes. His biography describes a photography student who discovered the work of Henry Fox Talbot by accident during his time studying. In doing so, he encountered a world of photographic processes and practices which were previously unknown to him. These processes were at the same time intriguing and ultimately right for his artistic vision.

Cauchi is the recipient of multiple awards including a range of artist residencies, the most recent being the Creative New Zealand, Berlin Visual Artists Residency at Künstlerhaus Bethanien, Berlin in 2012, which is continuing (Ben Cauchi CV). Cauchi's exhibition career started in 2001, so he is relatively new to this area. However, in a short time he has made an impact on the perception of what is considered art photography. His work, including both his tintypes and ambrotypes, are now part of collections in most New Zealand galleries as well as in Australia, including the National Gallery of Australia and the Art Gallery of New South Wales.

Nevertheless, the question at hand here is why Ben Cauchi, an emerging photographic artist, would choose to work with messy, slow and hard to control wet-plate processes such as tintypes and ambrotypes instead of remaining with the relative safety and certitude of digital capture and output. Through an examination of interviews, exhibition essays and academic papers, this study explores the reasons for his engagement, and discovers why he chooses to work with historical photographic processes in a digital age.

Cauchi does not often speak about his work personally but a rare interview with Ross Liew (“The Gravy”, 2011, YouTube) provided a first-hand insight into the artist and his practice. Cauchi identified several reasons for working with his preferred methods including: the slowness; the unique aesthetic; as well as the singularity of the object created by the process. He also mentions that it appears magical and he enjoys the alchemic process of turning the sensitised plate into a work of art (Cauchi, B., 2011, The Gravy). In a subsequent interview with Guy Somerset from *The Listener* in 2012, Cauchi discusses his love of history as well as photography. He found that in working with wet-plate processes, these could be both combined.

Cauchi’s work has been the subject of ongoing academic interest and discussion for some years now, primarily through essays on his work by Geoffrey Batchen, Professor at the School of Art History, Classics and Religious Studies at Victoria University, Wellington, as well as Glenn Barkley, an independent curator and writer based in Sydney.

This case study unpacks and examines Cauchi’s work through the following lenses: the aesthetic and subject matter; the process and alchemy; the slowness and imperfection; and creation of a unique object.

THE AESTHETIC AND THE SUBJECT MATTER

My photography is about photography; it is about how we see. It is about light it is about dark, it is about perception, psychology. It is a combination of a whole heap of things; it is autobiographical, it’s situational. Its process, absence, the indecisive moment. Which is me really (Cauchi, B., 2011, The Gravy Interview, 1:07)

When looking at Cauchi’s work, initially it appears to be primarily an engagement with light, space and objects. The question then was whether his images could be successfully captured with a digital camera, as all photography is about engaging with the same elements.

Furthermore, with advances in knowledge around post-production techniques, and the emergence of film emulators, including those for tintypes and daguerreotypes, perhaps it was possible to create this unique look digitally.

While there may be some argument towards this stance, there appears to be a unique physical quality present in his work which is not possible in digital capture and post-production. The aesthetic is quite distinctly different to the type of photographic imagery produced by digital and modern camera equipment or even film or analogue capture and equipment. The following factors can be causes for this difference: pure optical engagement with the light; the subject matter; a very low ISO of the light-sensitive medium which leads to long exposures. The optical artefacts created by the large format lenses appear as imperfections in the images. For Cauchi, this is a part of the overall aesthetic. As a result of their design and relationship with large format camera bodies, these lenses produce artefacts such as softening (blur) around the edges of the image with an emphasis on sharpness towards the centre, in comparison to modern lenses.

The light-sensitive medium used for wet-plate process reproduces the light in a controlled manner, with much lower contrast. That is, the tintypes and ambrotype processes record light uniquely with a heightened sensitivity to ultraviolet and blue but no sensitivity to the red light. This unique technical quality results in a beautiful render of blacks in the image, with quite subdued highlights and whites. If shot digitally, it is a regular practice in image processing to reimage or remap the image data. This workflow sets the white and black points of the image data to register the maximum range of tonal values. This workflow creates a perfected technical representation of the scene not always possible with historical processes, most notably those which are direct positive processes such as wet-plate collodion. Interestingly, tone mapping for extending this tonal range in a printed image was possible when working with analogue photographic processes (film) and graded paper. It is this system which formed the basis for digital post-production processes.

Cauchi's work is not so concerned with that level of perfection but instead aims for a realisation of his artistic vision. He has through the process been able to transform this space and the objects to spectacular and unique imagery. This way of working gives the image a claim to authenticity, that authentic reproduction of the photographer's vision. This medium, in some way, provides this feeling of otherworldliness and assists with the quiet presentation of Cauchi's subject matter.

The wet-plate processes produce a singular and unique direct positive object and in doing so could lay claim to an authentic indexicality of the photographic process. This was a term first

proposed by Charles Sanders Peirce in his writings on semiotics and later by Roland Bathes (Camera Lucida 1982) to describe the relationship between the object photographed and the resultant image. Wet-plate processes deliver a permanent record of that moment in time, that time and space as the image are created “in-camera”, a result of the encounter of light bouncing from the subject, entering the camera and engaging with the light-sensitive medium to produce that image. The object generated is unreproducible except via re-photographic process. That is, it requires documenting by another method, analogue or digital to produce copies.

Cauchi references both the history of photography as well as influential photographers in his subject matter, process and his style. The work considers critical concepts including travelling between life and death, presence and absence, what is meant to be seen and what is hidden.

Although the subject matter captured in Cauchi's work is itself unremarkable, there is a distinct sensitivity to his images. He is not reliant on grandiose schemas or exotic locations, nevertheless appears to be working at an emotional level with themes of time, place and space. It is reminiscent of the “banal” nature of Stephen Shore’s photographs, especially his “Uncommon Places” series which featured mundane interiors of motel rooms during his 1973 expedition across America. The stillness and the way Shore’s photographs capture well-placed elements of the image, leaving the interpretation to the viewer, is familiar with Cauchi’s work as well.



Figure 3 - Berndt & Hilla Becher, 1983-92, detail Gas Tanks



Figure 4 - Stephen Shore, 1973, Uncommon Places, Room 110, Holiday Inn, Brainerd, MN



Figure 5 - Fox Talbot, 1841, The Open Door, salt print from Calotype negative, 18.8x23.1cm

There appears to be an affinity between Cauchi’s work and Berndt and Hilla Becher’s photographs of structures: Urban, utilitarian architectural form which is reliant on the artist’s vision to bring them to life. This interest in mundane or banal subjects is not a contemporary compulsion, however. Fox Talbot showed interest in the “... artistic treatment of the mundane” (Guimaraes Lima, M., 2008, Henry Fox Talbot) which is also present in Cauchi’s work.

With all these photographers, including Cauchi, the subject matter is banal. Photographs are of nothingness, of the everyday and exercises in image design with elements of stillness with the importance of light as the fundamental concepts.

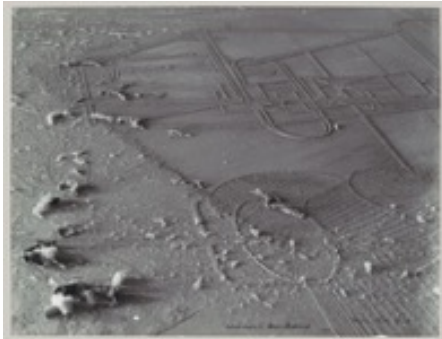


Figure 6- Man Ray, 1920, *Dust Breeding*



Figure 3- Ben Cauchi, 2008, *Ashes*



Figure 8 - Ben Cauchi, 2008, *Crystals*

Cauchi's 2008 works, *Ashes* and *Failed Experiment*, document traces of an event and challenges the viewer with more questions than answers. This work has been likened to Man Rays' *Dust Breeding* from 1920. The images point towards that which was, or that which happened before. A photograph always may be linked to a moment in time, an event or incident. The images present the last paragraph of the story, and it is up to the viewer to imagine what is.

I am interested in the idea before and after the event rather than the actual action. Simply to leave an idea of what might have happened. It is what people want to believe. If it is all spelt out for them, there is no room for the viewer to bring anything to a work. I always like to leave things reasonably open for that reason. (Cauchi, B., 2011, The Gravy Interview, 5:45)

Wet-plate process manages this link in quite an authentic manner because it is a direct positive image. It is the image created in that space and time, with light bouncing from the object to the camera and indelibly registered as an image on to the plate.

However, Cauchi's work investigates concepts of a more profound nature than just the mundane or banal. There are constant challenges to how we interpret what we see in his work. Geoffrey Batchen in his 2012 essay, suggests that "... Cauchi's photography consistently plays in this gap between presence and appearance, belief and truth ..." (Batchen, G., 2012, *The Way of All Things*).

... I used to be interested in exposing the documentary evidence of the lie. I am quite interested in spiritualist photography of the 19th century and the belief that the camera can somehow through the long exposure and the power of optics, present the other world onto a photographic plate. That was the obviously quite a fraud. (Interview The Gravy, 2011)

Photographers, since the very beginning of photography's history, have challenged these truths. In 1847, Hippolyte Bayard contested the pretence of authority and truth in a photographic image with his *Portrait of a Drowned Man*.

This was a self-portrait taken and displayed as an act of protest against what he saw as unfair treatment by the French government. Until this time, photographers were more focused on finessing the technical aspects of the photographic process rather than how a photograph may be a tool of visual communication or even protest. Bayard, while not recognised as a pioneer of photography such as Daguerre, should be acknowledged as a pioneer in that he saw the potential power of photography to communicate an idea in this manner.



Figure 9 - Hippolyte Bayard, 1847, Self Portrait of the artist as a Drowned Man,

In an interview, Cauchi speaks about his interest in spirituality.

This interest is reflected in the subject matter and titles of his works, *The False Stage*, *The Portal*, *The Thin Veil*, which are all suggestive of the ability for a photograph to be



Figure 10 - Ben Cauchi, 2013, The False Stage, Collodion on Glass, 14 x 10cm



Figure 11 - Ben Cauchi, 2013, The Portal, Ambrotype, 43 x 36cm



Figure 12 - Ben Cauchi, 2013, The Thin Veil, Collodion on Glass, 43 x 36cm

transcendent. Cauchi's work transcends space and time but is at the same time contemporary and classical.

However, it is also transformative and transforms space and light into a work of art which he asks the viewer to interpret. When examining Cauchi's work as an entire body, there is a robust conceptual bias towards themes around the spiritual nature of being.

Works such as *Pseudo Levitation*, 2003 and *Untitled* 2004, continue this conversation referencing the spirit photography of the 19th century where the camera is seemingly able to capture photographs beyond the scope of "normal" or "natural". His studio scenarios are not looking to hide the supports such as string or wires, but instead includes them in the image to "... highlight the lie that photography has always been" (Cauchi 2011). There is a beautiful dichotomy in Cauchi's work, conceptually playing on that belief, that perpetual lie, photographs created pre-digital photography are a truthful representation of what is before the camera lens. At the same time, he provides the viewer via the elements captured in the image, all the props and fakery he uses, with proof that these photographs are not at all what they seem.



Figure 13- Ben Cauchi, 2003, *Pseudo Levitation*



Figure 14 - Ben Cauchi, 2004, *Untitled*

The process is really alchemy. You take a plate of glass, pour collodion on it, add the sensitiser, put it in the camera, it goes straight into the back of the camera. You expose it to light, take it back to the darkroom, develop it, the developer only stays on for a few seconds so and then the image is all done. (Cauchi, B., 2011, The Gravy Interview, 2:06)

Watching an inkjet print moving through the printer is satisfying but with digital processing workflow and soft proofing, there is no risk. It is a methodical process from camera to computer and then photographic print. For those who have worked with silver gelatin medium, including processing and printing images in the darkroom in pre-digital times, the experience of that magic moment when an image appears from a blank piece of paper is one to remember. Light through the negative in the enlarger and on to that light-sensitive medium provides a glimpse of the final print. However, when the exposure is finished, the enlarger turns off, the paper appears still blank. During the developing bath, the image once again emerges from an empty paper base, as if by magic. Each of these steps carries that promise of a successful analogue printing session. There is space for error as so much of the process is invisible. The only verification for success or not is at that final step when the image appears.

In light of this, how much more precarious is the process of wet-plate collodion, where there is no negative to hold that promise, just a plate coated with a light-sensitive medium. There is no negative or digital data waiting for printing, and there are no options for multiple attempts to create that unique photographic object. It is this wet-plate collodion process, even though messy, smelly and entirely unpredictable, which Cauchi chooses to create his images. Cauchi himself embraces the instability and the inability to have absolute control of the process, likening it to that "... random, serendipitous element ..." (Cauchi, B., 2011, The Gravy Interview, 2:58)

Cauchi has responded to some of the restrictions associated with the ancient process, including the limitation of image size and fragility of traditional substrates especially when creating ambrotypes. The process requires the use of antique camera equipment which has the largest size of 11x14-inches. To overcome this problem, Cauchi built a camera to accommodate a 20x24-inch photographic plate. He then replaced the metal plate or in the case of ambrotypes, the glass, with the more contemporary substrates including plexiglass.

In doing so, he has alleviated problems with weight as well as the fragile nature of the ambrotype plates traditionally made of glass which are difficult to transport.

However, with Cauchi, it is not just the novel process which is the allure. It is the outcome of that process, the final object with its possible quirks, error and even failures. Cauchi relies on the wet-plate collodion process to create the desired aesthetic in his photographic images, including these imperfections. It is all part of the complexity of his work, the connections between the subject matter, underlying constructs, the process and the final object. Each is reliant on the other.

There was this one plate, it was a self-portrait, and I was doing plate after plate after plate trying to get the right expression on the face. There was one plate at the end that there happened to be a little speck right there (indicated palm of right hand), and it formed this little comet by pure chance. The perfect imperfection I thought, and it is that which can really work and bring a plate to life. Other times it can really kill it.
(Cauchi, B., 2011, The Gravy Interview, 3:25)

Cauchi talks quite a bit about alchemy in his work, the magical process of transforming elements to create something new, that magical process of transmutation. He is describing two concepts. Firstly, through the application of light, particles of silver are changed and form the image on the plate. Secondly, photography itself is seen as magic, where the image appears from nowhere on the plate. Alchemy or magic is an underlying concept in his work and refers to the process used to produce this work.

Wet-plate collodion is an incredibly slow process, both in the preparation of the plate as well as the exposure and development. For that reason, it is so unlike digital imaging where one may capture a multitude of images in any given period. So perhaps, in Cauchi's practice, the time spent to set up the subject and then consider the final photograph adds an extra element of contemplation. This process limits the number of plates exposed, and in turn, makes each of those plates more valuable.

While is it the photographic object, the concept and the creativity, which are of utmost importance to Cauchi, quite often the "novel" process becomes the discussion point for most people interested in his work. Cauchi sees wet-plate processes as a chosen medium and nothing more.

... It is performance. In fact, I often think of the whole process as a performance. (Cauchi, B., 2011, The Gravy Interview, 2.06)

Cauchi describes the process of creating a wet plate image as “performative”, that is each step is carefully measured and acted on to a prearranged script. He also relates the process to performance, not only at the capture stage but also at the development stages. Cauchi links the act of making, that is producing the plate, and the performative nature of the subject matter in the images. Cauchi stares to the lens, unblinkingly stern in a performative stance.



Figure 15 - Ben Cauchi, 2005, self- portrait with ghosted object, Collodion on glass 24 x



Figure 16 - Ben Cauchi, 2006, Accidental Self-Portrait, Collodion on glass 24 x 20cm



Figure 17- Ben Cauchi, 2005, self-portrait-as-prophet, Collodion on glass 24 x 20cm

Cauchi's self-portraits have a timeless quality to them. There is a stillness in his photographs. His stance and the way he dresses link his images to a time and place in the past. It is as if Cauchi has time-travelled back to the late 1800s. His work appears to span time as he peers out of the photograph. There is this fantastic complexity of the historical process and contemporary subject matter, in this case, his self-portraits. His work is about performing for the camera and staging events to be photographed.

It is quite easy to link his portraiture to the genre of spirit photography through this concept of a staged photograph, the appearance of his work with its error and imperfection, as well as Cauchi's interest in the spiritualist movement. For him, the error in the process, with “ghosted” artefacts such as smudges, specs of dirt or other detritus in the collodion, are happy accidents which work well with his artistic vision.

Evidence of ghosting and spiritual themes are evident in Cauchi's work. Spiritualist photography provides another link between Cauchi and his interest in the history of photography. This genre of spirit photography was quite prevalent in the early 19th century with perhaps the most famous of photographers being William H. Mumler.



Figure 18- William H. Mumler, 1872, Mary Todd Lincoln, Lincolns

Using the slow exposure times to their advantage, and experimenting with double exposures, unscrupulous photographers preyed on the most vulnerable with this type of photographic portraiture.

UNIQUENESS OF THE OBJECT

I also really like the object quality. The fact that the finished image is an object as much as it is an image. (Cauchi, B., 2011, The Gravy Interview, 2:43)

Cauchi himself acknowledges that the quality of the image created through the wet-plate collodion process is unique. The ambrotype is an image produced on a glass substrate, which appears as a negative before the black backing is added to reveal the actual (positive) photograph. The tintype, a single image developed on a metal backing, is a direct positive of the subject matter. Each is distinctly different. Even though the processes are similar, each aesthetic is unlike the other. The final plate produced through these processes in each instance is itself a beautiful object.

Though the action of light and light-sensitive medium, the subject is forever frozen in time. The direct positive processes do not employ the use of a negative but instead the image is created directly on to the support substrate. The wet-plate process delivers not only an exquisite photographic image but also a photographic artefact which has proven to be long- lasting.

Cauchi pursues the space between these two tenets — object and image — and the space in which he is working embodies an adaptation of William Carlos Williams' modernist maxim "no ideas but in things": no images but in things (Barkley, G., 2012).

Moreover, Cauchi in his interview with Barkley describes the wet-plate positive process as the “... 19th-century version of the Polaroid process ... it's a really quick direct positive which is at the same time incredibly slow and cumbersome” (Barkley, G., 2012). This quote provides an insight into Cauchi's creative practice, and also his insight into the process itself. Wet-plate collodion is a slow and meticulous process but provides an immediate reward in the form of a unique photographic object.

My photography is about photography; it is about how we see. It is about light it is about dark, it is about perception, psychology. It is a collection of a whole heap of things; it is autobiographical, process, absence, the indecisive moment. But that is me really. (Cauchi, 2011, The Gravy Interview, 1:29)

CONCLUSION

This case study has allowed further insight into the practice of Ben Cauchi and the development of an understanding of why this contemporary photographic artist has chosen to engage with historical photographic processes to produce his work.

Cauchi encapsulated in his practice his love of history, historical photographic processes and concepts including spiritualist photography. While at first glance, it appears that Cauchi works with this medium, wet-plate collodion, this is not entirely so. He does undertake some experimentation including building a customised 20x24-inch camera and replacing the glass with plexiglass to create larger images. He embraces the imperfections in the wet-plate collodion processes, as these defects provide authenticity to his work as well as uniqueness away from the “straight” creation of work using a traditional 19th-century process.

The use of wet-plate processes, where the object produced is a positive image, created at that moment of exposure also provides a level of authenticity. The object produced is a direct reflection, a copy of what was before the lens, a copy of that all-important referent.

Cauchi uses his selected method to create his photographs, as the process and the object produced matches his artistic vision. While the output from this process may contain imperfections, this also aligns to how he sees the world. Cauchi embraces the serendipity, the element of chance, within the process and in his work.

Furthermore, the critical concepts regarding the link between process, aesthetic, object as well as the link between light time and space are all evident in his creative practice and resulting work.

HOLDING MEMORY IN ONE'S HAND: THE DAGUERREOTYPES OF TAKASHI ARAI

*The daguerreotype is an object carrying the memory for generations
the object for memory ... prove the existence ...* (Arai, T., Street Level
Photoworks interview, 2015)

Takashi Arai is a young Japanese photographic artist who began working with the daguerreotype process in 2010. His work focuses on objects and sites affected and altered by nuclear disasters. These include the Japanese fishing boat *Daigo Fukuryū Maru (Lucky Dragon 5)*, exposed to radiation after the American H-bomb test on Bikini Atoll in 1945, the World War II atomic bomb sites of Hiroshima and Nagasaki, and the people and area around Fukushima Daiichi nuclear power plant devastated following the earthquake and tidal wave in 2011. Arai became a member of the Atomic Photographers Guild in 2016, a collective of international artists who work to reveal the impact of our nuclear age. In 2017 he joined the National Museum of Ethnology as a researcher in an interdisciplinary study on radiation effect. Arai continues to work in research and fine arts to bring to the world an awareness of nuclear issues through his daguerreotype images.

Arai has accumulated several awards including the 41st Kimura Ihei Award and the Source-Cord Prize in the United Kingdom in 2014. His work is held by private collectors as well as galleries and museums both in Japan and overseas including Tokyo Metropolitan Museum of Photography, San Francisco Museum of Modern Art, the Museum of Fine Arts, Boston and Musée P Guimet. He has exhibited his daguerreotype work extensively in the United States, Europe and Japan. Arai, however, did not set out to be a photographer, and in fact, began his study in the discipline of biology. He had an interest in photography but only as a tool to aid his memory to produce poetry and film in his late teens and early 20s. Arai encountered his first daguerreotype, a portrait, while visiting Paris in the early 2000s and was drawn to the "... ghostlike presence of a human face ..." (Arai, T., 2016 interview with Amandine Davre). This description is an apt explanation of a daguerreotype, as it is impossible to view the plate without also seeing one's own reflection. The mirror image of the plate also creates a phenomenon where the image is only visible from certain angles, switching between negative to positive, and then to a blank mirrored surface.

It was Arai's curiosity about the history of cinema, focusing on the Lumière brothers, that allowed him to come across instructions for the daguerreotype process quite by accident.

Interested in looking at historical photographic processes from the very beginning of photographic history, he set out to teach himself how to work with daguerreotypes. He had not planned to continue using the medium but had intended to investigate other historical processes as well. However, the beauty of the object and the unique aesthetic created, along with the process itself, convinced him that it would be his medium. Impressed by his work, Yokohama Art Museum invited him to continue to work with them.

While there are very few academic publications on the work of this young photographer, a few interviews along with his writing associated with each exhibition provide an insight into why he works with this quite toxic process. The original mercurial daguerreotype processes employ the use of metal plates sensitised with iodine and developed in the traditional manner using mercury vapour.



Figure 19 - Takashi Arai, 2014, *The Atomic Bomb Dome, Hiroshima, Daguerreotype, 25.2x19.3cm*

CONCEPT AND AESTHETICS

It was an invitation to participate in a project themed around art against nuclear power which led Arai to photograph the *Lucky Dragon 5* fishing boat. The boat, now housed in the Daigo Fukuryu Maru Exhibition Hall in Tokyo, had become irradiated by fallout during the American H-bomb tests at Bikini Atoll in 1945.

Ash collected from the boat was made available for him to work with as well. However, it was only after the 2011 explosion of the Dai-ichi nuclear power plant in Fukushima that he became interested in nuclear issues. It had become personal, not historical.



Figure 20 - Takashi Arai, 2012, *Multiple Monument of Daigo Fukuryu Maru (Lucky Dragon 5), Study #1*

In an interview, PhD candidate Amandine Davre suggested that Arai is attempting to "... weave a temporal connection between the introduction of the daguerreotype and the modernisation of Japan, which includes nuclear power" (Davre, A., 2017). This connection though is not a primary concern for Arai. His engagement is based less on the history of Japanese photography and more on atomic issues affecting his country. He chooses to work with daguerreotypes because of the synchronicity between the extreme longevity of the effect and presence of radioactivity at nuclear disaster sites, and the long life of a daguerreotype. Arai does not engage with the daguerreotype because of the historical method but instead because of its "durability and emotional and intimate connection; it forms between the viewer and the subject, interactions not possible with modern photography" (Arai, T., 2017, Lens Culture interview).

A daguerreotype is a photographic object with a distinctive appearance. The differences include an ability to capture extreme elements of fine detail and seemingly extra dimensionality beyond the flat surface of a photographic print. The photograph appears as an image permanently etched on to the plate, not floating on or above the substrate of the photographic support. Part of the daguerreotype's unique aesthetic is the monochrome colour palette, except in the case of overexposure where, depending on the amount of light, the plate may display a brilliant blue. While this is considered an error, for Arai it has become part of his distinctive aesthetic.

Arai described the daguerreotype portraits he encountered in Paris as "haunting". This idea would be an apt description of any daguerreotype plate, despite the different subject matter. The plate is a complex dichotomy of fleeting and permanence. The image itself may only be viewed from a central perspective and disappears at other points. However, when viewed correctly, it presents as being contained within the plate, the image floating within the highly polished base plate.

Arai describes nuclear physics as a "new mythology" of our age, the Atomic Age. The daguerreotype, he believes, is the correct tool for discussing this mythology. Arai describes the daguerreotype as a "micro-monument" and believes that it, like the traditional monuments set to remind us of disaster, assists in refreshing memory. A photograph represents "what was, and points to what has been but is always a signifier for the subject photographed" (Barthes, R., 1978). Arai believes it can replace or become the required monument. The daguerreotype is a direct positive of the object/subject and can function as a container, "which relays the monumentality of an original monument" (Arai, T., 2017, interview with Amandine Davre).

For instance, this image, a photograph towards Peace Park, Hiroshima, should be considered a monument and can convey meaning beyond a representation of a cityscape. With knowledge of the atomic bombing of Hiroshima, the hidden metaphor is uncovered, and the image can convey this message. Arai had captured the sun at the apparent altitude as when the bomb, “Little Boy”, itself was set to detonate on that fateful day. The sun, the brightest area of the image, is etched on the plate during exposure. This positioning of the sun, along with the vignetting created by insufficient coverage of the antique-lens, creates a vignetting or “dome” effect. This effect attempts to visualise or represent the moments just before the bomb blast.



Figure 21 -Takashi Arai, March 23, 2014, The sun at the apparent altitude of 570m in WNW, Hijiyama Park, Hiroshima. Daguerreotype, 19.3x25.2cm.

While visiting Fukushima, Arai met a farmer who described the situation or the feeling of the area as “... thousands of ghosts marching over the sky” (Arai, T., 2012, *Exposed in a Hundred Suns*). This conversation led Arai to begin to use daguerreotypes to record portraits of refugees, animals and plants as well as the empty landscape, looking to capture “invisible ghosts on the surface of silver plates” (Arai, T., 2012).



Figure 22 - Takashi Arai, January 11, Kashima, Minamisoma, Fukushima, Daguerreotype, 25.2 x19.3cm



Figure 23- Takashi Arai, 2013, Koyu Abe and radioactive waste on his private property, Daguerreotype 25.2 x 19.3cm

It is that unique aesthetic, the production of a long-lasting metallic photographic object, which encouraged Arai to engage with the daguerreotype process. Most importantly, though, it is this unique object which he has adopted to represent his notions of how to keep alive memory which underpins his conceptual stance. In several interviews, Arai describes the

daguerreotype as a micro-monument to memory, a “container” for storing memories. For Arai, the desired object can only be produced using this daguerreotype process.

THE OBJECT AS A CONTAINER

With Arai, one should not underestimate the essential linkage between the concept, aesthetic and photographic object. For him, the object created becomes a container for memory. It is a way of reminding the viewer of the impact nuclear experimentation, and the use it has had and continues to have on our world.



Figure 24 - Takashi Arai, May 25, 2012, Persimmon Trees with Those Skins Stripped Away for Trail Decontamination, Tsukidate, Fukushima.



Figure 25 - Takashi Arai, January 19, 2012. Toru Anzai at his Temporary Housing, Date, Fukushima. Daguerreotype, 25.2 x 19.3cm

As discussed earlier, the mirrored surface of the daguerreotype produces an image which is quite mysterious to view and produces an illusion of spatial change. The image is not visible from all angles, only when viewed from directly in front. The image moves between negative and positive as well, depending on the angle of view. Perhaps it is the elusiveness of the image which links the object, a daguerreotype, to the idea of memory which also fades and returns. That is a small glimpse of memory which returns at unexpected moments.

These unique qualities are accentuated, when linked to the use of 19th-century cameras and lenses which produce an error in exposure, chromatic aberrations and heavy vignetting around the edge of the image. These perceived defects add to the unique aesthetic of the image. For Arai, daguerreotypes create a very distinctive look and fulfil his artistic intent in his work.

It is the assertion by Arai though of the differentiation between a photograph and daguerreotype that brings new knowledge to this topic. Arai believes that the “flat surface of a photograph” loses its vigour and becomes just part of the white noise, the flood of imagery

and “mass information” (Arai, T., 2016). He maintains that a daguerreotype is not a medium or a process but a container. Differentiating between an image object and a “container” is quite simple to Arai, and it is a concept repeated in the interview stages of this research.

These photographs are just not a medium for negotiating meaning: “... they have a touchable material form and a surface that bears the physical marks of their pain” (Arai, T, *Exposed in a Hundred Suns*, artist’s talk). Arai describes the process of caring for monuments in Japanese culture, the careful rebuilding and repairing even before a catastrophic event makes this necessary. It is this care for the “container” of memory which he feels is now missing in modern digital photography. The object, the daguerreotype, is traditionally cared for by storing it in a case along with other keepsakes such as hair, handwriting or other forget-me-not mementos.

The modern digital photograph is ephemeral, beyond ubiquitous, easy to create and so perhaps are seen as disposable, lacking value. A daguerreotype has a laborious preparation process, is hand-made and singularly unique, and so holds value both emotionally as well as an object.

Daguerreotype is not a medium but a container. A container is an object which is exposed to the direct radiation of the light at the exact location where the certain event happened (Arai, T., 2012).

This point has become a critically important part of Arai’s underpinning motive for working with daguerreotypes. He believes we as a society require this container, the remembrance of the impact of a nuclear disaster, whether it is through war or natural disaster. Monuments are to aid our memory, to stand for the centuries after the fact.

Photography is recognised as able to represent “what was ... what has gone before” the presence and evidence of existence, primarily when used as a documentation medium. (Barthes, R., *Camera Lucida*). A photograph though, cannot replace the object which it represents.

However, a photograph can “function as a container which relays the monumentality of an original monument” (Arai, T., *New Theory of Daguerreotype as a Monumental Container*). When Arai refers to the “monumentalisation” of images, it is in quite a different manner to the

Provoke era photographers, especially Takuma Nakahira, who referred to the “monumentalisation” of photographs in a negative manner.

He rallied against the ubiquitous nature of photography and which with the repeated transmission may become a singular interpretation of an event. The photograph becomes a symbol, a monument.

Arai’s multi-part images are a way to portray the memory of nuclear disaster visually. While memories are individual and personal, with disasters which effect a large number of people, memory is a much more complex concept. With sites of disaster, memories may be both singular and collective history recorded through the combined remembrances of many and may be more truthful and complete. These intricate multi-place images encompass the fragmented reality of the scene of the event. Each plate represents a single memory and moment but together they represent the way collective memory is at times warped and inconsistent.



Figure 26 - Takashi Arai, 2012, A Maquette for a Multiple Monument for the Wristwatch Dug Up from Ueno-machi, Nagasaki Atomic Bomb



Figure 30 - Takashi Arai, A multiple monument for Lucky Dragon 5, Daguerreotype, 106 x 198cm Private collection

This work is reminiscent of the Cubist era artists where they approached movement as separate instances in time. It also resonates with David Hockney's Polaroid collage works where the subject is broken down to minute detail, with each detail about the whole. Arai and Hockney, in the tradition of the Cubists, appear to be visually assessing each minute detail, examining them and then contemplating each detail as a moment in time, a memory.

For myself daguerreotype is the way to break down the huge scale of the monuments from historical to personal scale. It is to take more time to observe the monument and to break down the historical context into my own view, my own emotion (Arai, T., In the Wake, artist talk).

The monumental scale of these images, their complexity and mirror-like metallic surfaces, continually reference that idea of a public monument, words etched into a plaque for generations to read and consider. Arai's daguerreotypes are that monument and; the images transcend the meaning of words.

The photograph of the Atomic Dome in Hiroshima is thought-provoking. Arai has created a new monument from the existing monument, the Atomic Dome itself. The image itself appears fragmented, referencing the partial destruction evident in the building's structure. The Atomic Dome, untouched except some work to ensure it may stand safely for generations to come, is a reminder of the bombing event, situated in Peace Park Hiroshima and part of the more significant effort to remind society of the atrocity of the bombing of Hiroshima. Arai, through his work, has brought this event to the attention of a new generation of the population.



Figure 31 - Takashi Arai, 2014, A Maquette for Multiple Monument for the Hiroshima Peace Memorial (Gerbaku Dome). Daguerreotype, 66 x 152 cm Private collection

THE PROCESS AND ERROR

I can still vividly remember my first shooting test. I was lucky because my first 4x5-inch plate came out successfully, even though the image was subtle, and I was stunned with its extraordinary details and the depth of the image. For a week or so, I couldn't stop observing the plate, and I was almost shocked by pretty much everything about the daguerreotype: the simplicity of the materials and the process, the exceptional details, and the three-dimensional quality of the image. But I learned afterwards that the first plate was just a lucky coincidence. It took me another year to get a similar result, and seven or eight years to make mercurial daguerreotypes of so-so quality. (Davre, A., 2016, Seeing Nuclear Issues in Daguerreotypes, An Interview with Takashi Arai, Trans---Asia Photography Review).

Working with daguerreotypes is a slow and complicated process which takes much patience and diligence to master. A predecessor to wet-plate collodion processes, daguerreotypes require the use of some quite toxic chemicals such as bromide as well as mercury vapour. The steps which involve these chemicals are undertaken usually in a custom-built darkroom with a fume hood installed. Arai, when developing the plate, also works with a personal protection ventilation mask. However, Arai now has a mobile darkroom which he uses when on location.

The laborious plate preparation requires cutting a sheet of silver-plated copper to size before being hand-polished to a mirror finish. Then the plate is coated using iodine crystal and bromine water. In a darkroom, the plate is exposed sequentially to iodine and bromide in repeated steps. Once set in a plate holder it is now ready for use. It is returned to the darkroom once exposed, where mercury is placed in a small container and heated with an open flame to produce vapour for development. The final steps include placing the plate in fixing solution, washing in filtered water and then applying a gilding solution where both the solution and plate are heated to 50° Celsius. At this point, the image becomes clear, the image seemingly captured and retained within the mirror-like surface.

Arai describes the slowness of the process in quite a bit of detail in his interviews and takes pride in his craftsmanship from the preparation stages right through to the final image. He takes an entire day to make one plate from start to finish, performing each step himself by hand. The involved process and associated risk of toxic chemicals make this method one which only the dedicated would undertake. Arai aligns the risks of working with

daguerreotypes with the danger of working at contaminated radioactive sites.

One of the characteristics of the daguerreotype is that it requires mercury vapour to process the image. It is a highly toxic process that has cost the lives of a number of photographers in the early history of photography. Arai thus depicts the dangers of nuclear radiation with the very method of representation chosen for this project. In this context, the daguerreotypes emphasise the term “exposure” as a double-entendre: photographic exposure as well as a state of having no protection from something harmful (Bohr, M., 2017, Here and There, by Takashi Arai, Visual Culture Blog, Essay initially published in Source Photographic Review, Issue 80, Autumn, 2014).

This involvedness, the expense associated with materials, and the need for specialised working spaces, along with the slowness of both the exposure and developing stages, encourage Arai to be more selective regarding the subject matter. It is also these factors which make the process right for his artistic intent.

The slowness of the daguerreotype process continues past the plate preparation. Transporting the antique camera equipment which is both bulky and heavy complicates the process further. Furthermore, with slow exposure times, waiting for the capture to be completed promotes working in a meditative stance. Arai describes how he engages the senses of sight and sound to become more aware of the surroundings and the subject (Arai, T., 2017, *Exposed in a Hundred Suns*). He records sound from the locations while the exposure is happening, at times using them as part of the exhibition installation. The sound provides an unusual juxtaposition to the deserted landscapes of Fukushima. It confirms that while the space appears devoid of life, there is still an active ecosystem, even if it is contaminated.

Arai tells the stories of the people and the place through his work. Stopping to choose his subjects carefully, waiting to complete the slow exposure and in that time, taking the opportunity to engage with the surrounds are all critical to Arai. It was quite a while before he realised he was also exposing himself to the radioactive environment in the process.

When questioned about the spots, squiggles and swirls on the surface of his daguerreotypes from this highly irradiated area, Arai is asked whether it is in fact evidence of the presence of this invisible but deadly fallout. While Arai does not believe this is so, he instead states it is part of the imperfect daguerreotype process and working in a mobile darkroom on location

which makes the plates susceptible to contact with dust and debris. However, the barren landscape with what appears to be black specs of fallout visually link the concept to the subject matter.



Figure 32 - Takashi Arai, January 27, 2016. Seiko 5000, Rokkasho village, Aomori. Daguerreotype, 25.2 x 19 cm



Figure 33 - Takashi Arai, 2012, Nitta River, Minamisoma, Fukushima. Daguerreotype, 25.2 x 19.3cm

Visually, it denotes the idea of invisible radiation, an ongoing concern among the people of the area. Arai, however, embraces imperfections in his images, seeing them not as mistakes but as essential elements in the overall narrative.

Like the landscape that is forever scarred and affected by the fallout from the nuclear disaster, Arai's images are full of imperfections, scratches and dust specks. Marks appearing on the surface of the daguerreotypes are akin to dark cancerous growths appearing on an x-ray image. In this work, it quickly becomes clear that Arai is not just dealing with a destroyed landscape, but he is representing deep anxieties embodied by those he photographed (Bohr, M., 2017, Here and There by Takashi Arai, Visual Culture Blog, Essay initially published in Source Photographic Review, Issue 80, Autumn, 2014).

Arai's work speaks of the constant fears people in and around the current nuclear disaster site of Fukushima have of radioactive contamination and their future. For the people of Fukushima prefecture around the disaster zone, having to continue with life in a normalised way is also an ongoing struggle. Contamination of food and food sources through the spread of radioactive materials is of national and international concern. While Arai can capture seemingly serene images, they are in fact areas which are still heavily contaminated. There is this beautiful divergence between reality and narrative in his work. However, it is those

chemical imperfections found in Arai's images which are a visual reference to the ongoing nuclear contamination of the sites he photographs.

CONCLUSION

There is a critical factor associated with a direct positive image, whether it be a wet-plate collodion or daguerreotype. It is that awareness the photons hitting the surface of the subject or object will reflect and then intersect with the light-sensitive medium to create a singular, unique image object. This phenomenon affords a level of authenticity in the photographic method and the notion of veracity in the final image. This notion is central to the importance of why contemporary photographers are returning to these historical processes. For Arai, working with objects, places and people affected by radiation, this idea is expanded. His images produced on the surface of the daguerreotype are created through exposure to not only the light but to the same radiation in the exact location where the particular event happened. The slowness of the process provides him with an opportunity to slow down, examine the scene and engage with the people and place, sounds and smell, in a meditative manner.

While Arai works with the daguerreotype process primarily because of the uniqueness of the object created through the process and the aesthetic, unlike other daguerreotypists and artists working with wet-plate processes, for Arai, the object is so much more than a photograph. The appearance of the daguerreotype image is akin to the scars borne by the surfaces and places where nuclear disaster has struck. It is an object which one can hold, the metallic and hardened surface and references of the melted detritus left behind after an atomic event.

As the daguerreotype can last for centuries, it can be available for generations as an aid to remember the atomic disasters created through both human and natural causes. It is the medium for Arai to convey his ideas about nuclear issues, issues which are deeply personal for him. The daguerreotype for Arai is the means of creating a "monument to memory".

It is these daguerreotypes which become the container for the ever-fragile human memory, standing as a monument for remembering the event. For Arai, it is this concept of "monumentary" photography which he advocates as an alternative and new theory of photography in our century, both before and after a crisis.

JUSTINE VARGA: IMAGE AND TRACE IN CAMERALESS PHOTOGRAPHY

I have always been interested in what is peripheral, in what is left out of frame or focus. Photography has traditionally hinged on the singular image and the critical point in time, there has been so much emphasis on what is “worthy” to be captured. But what about what occurs on the periphery of the action, surely these occurrences are also of significance? (Varga, J., 2016)

Justine Varga graduated from the National Art School with Honours in 2007. Since then, especially within the last few years, she has developed a distinctive style and visual language around photography. During the past 10 years since graduation, Varga has come to the notice of several galleries and curators, with work included in a group exhibition of Cameraless photography, *Emanations*, curated by Geoffrey Batchen in 2016 at the Govett-Brewster Art Gallery, New Zealand. Varga has exhibited work at galleries in Australia, New Zealand and the United Kingdom and is housed in private collections.

Her work, *Maternal Line*, which won the Olive Cotton Portrait Award in 2017, brought her to the attention of the art and photography worlds. This work proved controversial predominantly because of the lack of a discernible subject in a portrait prize.

Both analogue and digital capture techniques were a part of Varga’s earlier practice. Her work at this time focused on trace and memory, while she aimed for a minimalist aesthetic as seen in her *Empty Studio* exhibition images(below). More recently, from 2011, Varga has moved more towards a cameraless process. Early in that crossover of process, she stated that she sees no differences in-cameraless or in-camera processes. Her more contemporary work, though, does focus on that difference as discussed further in this study.



Figure 34 - Justine Varga, 2009, Empty Studio 11, Type C print, 22.4 x 28.6 cm



Figure 35 - Justine Varga, 2009, Empty Studio 10, Type C print 22.4 x 28.6 cm



Figure 36 - Justine Varga - 2009, Empty Studio 7, Type C print 22.4 x 28.6cm

Outwardly, Varga's work, her cameraless process and the finished objects, challenge the traditional idea of what is considered photography. It posits the question of whether an image made without a camera can be considered photographic. However, this research does not differentiate between processes but instead investigates why Varga engages with this alternative, historical photographic process as her chosen technique in a digital era.

THE PROCESS

I work directly on to the film(ic) surface and I relinquish the camera to do this. I do this because I wanted to play with the tactile nature of the filmic surface. (Varga, J., Artist Interview: Emanations 1.42)

The process utilised by Varga is quite different from that of Cauchi and Arai, in that she bypasses the use of a camera in the initial capture stage. She instead generates the image directly on to the film itself, before taking that negative into the darkroom to produce a print.

The first steps of her technique are not unlike the photogenic drawing practices from the beginning of photography itself. This process is, in fact, the very first type of photographic "capture" with Wedgwood's photogenic drawing taking its place firmly in photographic history. Varga states she is not interested in referencing history but is working as a contemporary visual artist who uses film in her photographic practice.

Her process appears simple. However, it is not the process which is complicated but the conceptual underpinning of that process. Instead of making an image within a space, Varga instead places a piece of 5x4-inch film in position within that space, where it will have contact with daily life. It is the build-up of this contact, the dust and objects placed on the film which forms patterns on the film surface and so the basis for the final image. The last stage of Varga's creative process is a large-format image printed on traditional photographic paper in the darkroom. Employing the use of film provides the possibility for reproduction, enlargement and alteration in the darkroom. As the final exhibition print is an enlargement of a medium-format negative, Varga with her analogue photography and darkroom knowledge, would have some level of control over how the final image appears at this point.

As she is not working with a camera, Varga is not part of the decision-making process regarding what moments in time are worthy of capturing and keeping. For the most part her images are not mediated. Instead, it is just chance contact with the film surface which creates the final image, building up a narrative around life instead of through that contact.

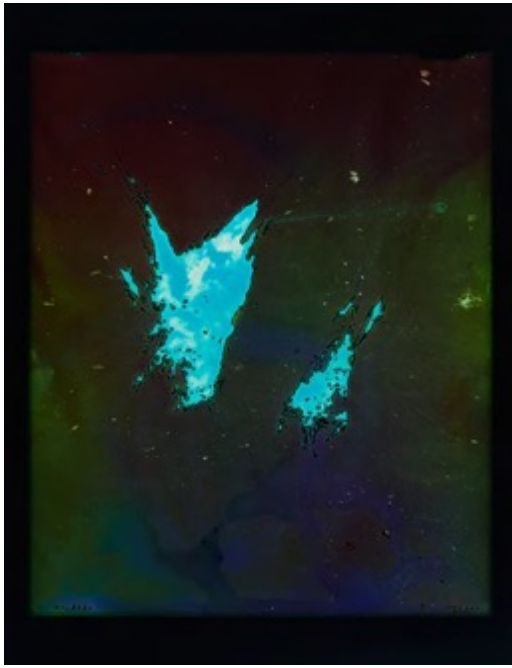


Figure 37 - Justine Varga, *Guache*,
Chromogenic photograph, 164.1 x 122cm



Figure 38 - Justine Varga, *Fracture*,
Chromogenic photograph, 164.1 x 122cm

For Varga, time is the subject as well as part of the process. She allows the film to be exposed to light and accidental contact with objects over some weeks or months, building up multiple frames on one sheet of film. These are the light in the space, the objects placed on or degrading the film surface itself, the scratches and abrasions of everyday life forever rendered to the light-sensitive surface. Through this process it is possible to depict traces of daily life. Contact with this piece of film by people and objects at times overlay each other. These scratches and marks obscure others over that period of time. Varga has relinquished control over the image production at this point except to make decisions regarding positioning of the film and time allowed for the exposure.

Increasingly her practice engaged the idea of the palimpsest: the document altered by erasure and re-inscription, but which still bears fragments of its original form (Johnson, A., 2016).

Recently, Varga has developed her process to the next stage, by deliberately marking or scratching the surface of the film, and adding collaborators, as she did with her work *Maternal Line* (Figure 40), where she allowed her grandmother and daughter to make marks on the film's surface. It appears Varga is now taking back some directorial control over the process.

When considering traditional notions of authenticity in the photographic process, the reflection of light from the subject to produce the imprint of the referent onto the light-sensitive medium

is an important concept to contemplate. Varga's work does not entirely correspond to that singular moment in time and the production of a unique object such as in the wet plate and daguerreotype direct positive processes. However, the process chosen by Varga means to challenge that notion of what is photography and what could be considered photographic.

While Varga's work does not comply with that traditional ideal of a photographic image produced in-camera or with a camera, it is through that symbiotic relationship between the two, light-sensitive medium (film) and final print (output), that Varga's final work, her object, is created.

THE OBJECT AS A SCULPTURAL FORM

The art school I attended was heavily based in drawing practice and so I have always thought about photography in these terms. I would be photographing with a camera; through the lens I would often be thinking about the marks being made on to the photographic surface. So, as I was thinking and as I was working, I kind of decided to relinquish the camera and work directly on to that surface. That is how that evolved in my practice (Varga, J., 2.42, Emanations interview, 2017).

The object created by Varga and her unique process is perhaps more akin to the mark-making practices found in a drawing. This style choice is not surprising given Varga's education background in an art school where there was a strong focus on drawing practices. Varga studied photography as an artist and not as a photographic practitioner.

The use of film in shaping the final artefact is essential, and Varga describes film as "... a sculptural medium made more so when it is liberated from mechanical enclosure" (Varga, J., 2016, Artist Interview Emanations: The Art of the Cameraless Photography). Varga seems to be suggesting that the process employed which allows for the collection of trace over a period transforms the object from a piece of film to a sculptural form. Amanda Johnson suggests that "... when it (the film) is exposed over time to many, many moments and many, many light conditions, it becomes a rare vessel: a compressed duration of memory collapsed into one frame" (Johnson, A., 2016).

It is through that reciprocal relationship between the time, light, film and final print that Varga's final work, her object, is created.

Varga's work, *Marking Time*, (Figure 39) won the Ulrick and Win Schubert Photography prize in 2016. The exhibition was judged by Professor Susan Best, who described the work as "... exquisite photogram ... conceptually and visually abstract and at the same time richly suggestive of materiality, touch and texture" (Best, S., 2016, Art Guide Australia).

Working with the photographic medium in this fashion provides the artist with the opportunity to produce objects which transcend photography itself and challenges the need for a photograph to be a documentation of identifiable subject matter.

This way of working is perhaps most identifiable in Varga's Olive Cotton Portrait 2017 Award entry. Dr Shaune Larkin, the Senior Curator of Photography at the National Gallery of Australia, describes Varga's work, *Maternal Line* (Figure 40) as "... very contemporary" while suggesting "... she is also very interested in the history of photography..." (Larkin, S., 2017, Hugo Michell Gallery press release). Larkin applauded Varga on her work and how she was able to approach portraiture in this contemporary manner. "It's (*Maternal Line*) a very complex photographic portrait: it made me think a lot about the act of the making a portrait – about what it means today to make a photograph of someone else, even if in the end it doesn't reveal what they look like" (Larkin, S., 2017).

Varga uses 5x4 film stock as the first part of her "capture" or collection process. It is the decision to take this film to the darkroom for the print out stage which provides her with an opportunity to interpret the subject matter further. It is at this point she can decide, among other factors, most distinctly the scale of work along with possible colour and tonal changes. With *Maternal Line*, Larkin described it as being printed to "monumental scale" (Liszewski, A., 2017, Gizmodo).



Figure 39 - Justine Varga, *Marking Time*, 2016, chromogenic hand printed photograph 122 x 98.5cm



Figure 40 - Justine Varga, 2017, *Maternal Line*, chromogenic photograph 157 x 122cm Hugo Michell Gallery

THE CONCEPTUAL STANCE

Handing over the creative process to chance is perhaps the most unusual aspect of Varga's practice. Photographs, images captured by a camera, are a culmination of the photographer's choices technically and artistically. The subject is selected, framed and documented. However, Varga's work is much different as it is not so much of a subject but about a subject, time. Varga states that "... the binary nature of photography (negative and positive), these positions are interchangeable" (Varga, J., 2016).

In my own practice, I have an awareness of photographic history, but I am not directly referencing it within the work. I also look to early photographers who are not necessarily working with Cameraless methods, but it is more an enquiry into photographic processes and a certain amount of experimentation which I guess artists like Julia Margaret Cameron from the 19th century definitely emulates in her work. Also, Hiroshi Sugimoto who was in the exhibition as well. I have always admired the way he approaches photography (Varga, J., 2017, 3.3.5, Artist Interview: Emanations).

It is this conceptual stance of "non-choice" as well as the lack of discernible subject matter, which takes Varga's work one step away from photography as considered in mainstream practices. Varga is instead leaving the light-sensitive medium to the ravages of time and encounters with objects, atmosphere, dust and other subsequent elements. It is perhaps why, when she was awarded the Olive Cotton prize for portraiture in 2017, it was associated with so much controversy and outcry from the photographic community. For a portrait prize, there is no recognisable subject in this work, only tone, colour and texture. The traces of a life lived. Varga states that her work is not "... of a place, but within it" (Varga 2016). This concept is the critical demarcation laid down by cameraless photography. Varga aimed to capture the ravages of time on her film, not a subject ravaged by time.

Varga's layered, ambiguous work exploits the capacity of film to make temporal experience mutable (Johnson, A., 2016).

Varga describes her work as "anti-monumental, they serve as a fresh respite from decades of heavily staged, costumed and gaudy photographic blockbusters" (Johnson, A., 2016). If one considers the history of photography, especially after the invention of the camera, appeared

to inherit the need for pictorial realism. That are photographs should have identifiable subject matter, a referent to link to our understanding of the world. Varga has taken this idea and turned it in on itself. Instead, she is asking that we explore subjects through time and trace. Photography has always been about that which has passed; it has always been about the evidence of existence. So, in fact, Varga is just presenting us with a different view of the world with fewer boundaries and more room for interpretation.

CONCLUSION

Varga's emergence as a photographic artist in recent years appears to be part of a growing trend among some experimental visual artists who choose to work with alternative photographic processes which include analogue or film-based processes in an investigational manner. For Varga, working with analogue light-sensitive substrates is her way of creating aesthetically unique photographic objects. It is the tactile nature of her work or the object produced through her practice which is essential. The direct positive created from her process, that method of collecting traces of everyday light and life, is only possible through this method.

In an age of massively controlled and mediated photography, Varga has removed this (mediation) from the first step of her process. There cannot be, of course, no interference, as the artist has chosen the space to place her film to begin the overall process. Varga has considered her place in photographic history and has a deliberately modern take on a historical process.

When examining Varga's work through the same set of criteria as developed through the survey and interview process, it initially did not appear to meet all the concepts such as authenticity, importance of the object, or the slowness of the process in a traditional sense. However, after careful consideration, the first steps in her process do meet those guidelines of "authenticity" or that authentic photographic experience. She is using a light-sensitive medium, film, and light to produce the negative. It is a slow process which requires the film to be left *in situ* for days or even weeks. It is only through the use of the light-sensitive medium, in this case, a sheet of large format film used for gathering those traces of time and place, as well as the analogue darkroom and printing knowledge, that Varga can deliver this uniquely beautiful end product.

Finally, it is the object, firstly the negative and then the final print, which is the creative artefact

produced by Varga. It is this sculptural object which is always the aim of her artistic practice. The conceptual element of Varga's work, as well as the object created through her process, are forever intertwined and interdependent. Varga's work moves beyond mechanical reproduction of a subject or scene to become a piece of expressive contemporary art.

DAISUKE YOKOTA – PROVOKING A NEW ERA IN JAPANESE PHOTOGRAPHY

Daisuke Yokota, a contemporary Japanese photographic artist, uses a unique hybrid model employing digital, analogue and experimental processes in his practice. His method of working is incredibly exciting and recently he has added elements of performance. Peggy Sue Amison describes his work as “a revolution” (Amison, P., 2012 Interview with Daisuke Yokota). His work is informed and shaped by electronic punk music and moves beyond a simple analogue process to sit most comfortably in an “experimental” framework.

Yokota studied photography at Nippon Photography Institute in Tokyo, graduating in 2003. He has received many awards including the Excellence Award at Canon New Cosmos of Photography (2008); the 1_WALL Exhibition Grand Prize (2010); the prestigious Foam Paul Huf Award (2016) and the inaugural John Kobal residency award for emerging artists at Photo London (2017). As a result of him winning the first Outset I Unseen Exhibition Fund at the Unseen Photo Fair in 2013, Yokota was able to present a solo exhibition of his work at Foam Photography Museum, Amsterdam in 2014. In that same year his photobook, *Vertigo*, was nominated for the Aperture Foundation PhotoBook Awards. Significant galleries and museums in Japan and Europe have his work in their collections.

Daisuke Yokota, in a short time, has made his presence known in the world of contemporary art photography. Simon Baker, Tate London's photography director, described Yokota as “one of the most innovative and experimental young photographers working in the world today” (Seymour, T., quoting Simon Baker, *British Journal of Photography*, 2016).

This case study explores Yokota's work through an examination of his processes, the distinctive aesthetic and the range of artefacts produced.

THE PROCESS

*Much of the process remains undivulged, for the secrets of an alchemist must be protected. To relinquish control is to be free from constraints, yet to harness mistakes, appreciate the accidents and embrace the failures takes a great concentration, confidence and, paradoxically, a large degree of control (Grieve, M., 2017, "Destroy And Renew." *The British Journal of Photography*, vol. 164)*



Figure 41 - Daisuke Yokota, 2015, 'Untitled' (BODY)



Figure 42 - Daisuke Yokota, 2012, Untitled #3



Figure 43 - Daisuke Yokota, 2012, Untitled from Site/Cloud Series

Yokota's initial process employed a rigorous approach. It began with digital capture from a low-quality digital camera which resulted in a small jpeg file. These photographs are taken usually at night, which also impacts on the overall image quality. This jpeg image once printed is then re-photographed on 5x4-inch photographic film. This method, of print and copy, is repeated multiple times and each time the image quality is degraded further at each step of the process.

The negatives may also be exposed to open flame, boiling water or acid, which produces further damage. Heating film developer in this manner produces high contrast negatives as well as an artefact known as reticulation as seen in the coarse grain (Figure 41). At times Yokota may expose the negatives to light, both before and during the development stage. This exposure produces fogging of the negative or a reversal of tones in the negative itself similar to the solarisation effect, which renders the lighter areas darker and the darker areas lighter.

The final step of Yokota's process involves the object, the print, the outcome of his convoluted process. At this time Yokota may apply acetic acid to the final images, sprinkling and wiping the acid across the surface of the print to create that trademark look, the pockmarked and smeared surface. Yokota has developed this stage into a performance where he invites audiences to observe and document his work.



Figure 44 - Daisuke Yokota, 2013, untitled, Unseen Festival, Amsterdam. Performance staged at the Unseen Festival where Daisuke Yokota applies acetic acid to brass-printed photographs to generate a chemical reaction.

Yokota employs his “destructive” process to “eliminate information and narrative” (Amison, P., 2012, 1000 Words) from his photographs by removing detail from his images, allowing space for viewer response and interpretation. It is the process which creates his unique aesthetic. His work attempts to encapsulate the idea of how time affects the memory of place and events and how memory may fade over time.

Yokota does not only employ traditional photographic methods to produce his work. He moves seamlessly between analogue and digital capture, traditional photographic darkroom and digital post-production. Yokota employs traditional visual arts printing methods as well, along with digital inkjet and Xerox or laser printing. His work from Alchemists exhibition in 2016 (Figure 129) was a silkscreen print on a metallic substrate coated with powder compounds and treated with acetic acid.

While Yokota does use some digital post-production techniques in his process, he states he prefers the grain created through the use of film to copy his work, and when experimenting with uneven development. Yokota suggests that film grain appears more natural to pixels, stating “I purposely add natural phenomenon to digital data” (Yokota, D., 2013).



Figure 45 - Daisuke Yokota, 2013, 'Untitled', Brass powder in medium, overprinted with Silkscreen black and

His practice is complicated and always changing. As Yokota progresses, gaining more confidence, it appears he is adding more diversity of elements to his method, which will be discussed progressively through this document. Yokota more recently has added experimental elements to his process, including coating images with wax and other substances to develop a distinct aesthetic and produce more of a sculptural form in his photographic artefact. These methods, along with his use of acid and wax print finishing options, result in a complex and fluid process which surpasses that traditional aesthetic of the Provoke era. Yokota seems to reveal a willingness to reconsider the notion of what constitutes as a photographic process and resulting object, an ideology evident in the Provoke era photographers, who also challenged that notion of the modernist fine-art aesthetic.

THE AESTHETIC

There are no stories in my work. There is only what the viewers find within it for themselves. I am more interested in exploring time and multiple possibilities that exist in reality (Yokota, D., 2012, 1000 Words).

Yokota, to produce his particular aesthetic, employs digital and analogue photography processes as well as darkroom techniques in a contemporary manner as discussed. It is these techniques which assist him in the controlled degradation of his image.

The aesthetic in Yokota's work is dark, grainy, blurred and mysterious, with the final image or object presenting as damaged, sometimes burned. White figures at times appear in an unidentifiable environment. There are small glimpses of what appears to be indistinct human form. Amison describes them as being "illuminated by a silvery light that blasts everything like an atomic explosion to the point of removing all detail and origin" (Amison, P., 2012).

His work is about experience and emotion, not about a place or person. Citing Aphex Twin, the Irish electronic musician, as his main inspiration, Yokota suggests that his work references this style of music which is full of "echo, delay and reverb" with "sinister undertones" (Abbe, D., 2012, interview). Yokota uses music and photography to break free of the formality of both photography and Japanese society.

However, his work is not without historical references. Amison continues to describe how Yokota's work is a continuance of the "visual conversation" which began in the 1960s with

Provoke Era photographers such as Daido Moriyama, Ishiuchi Miyako, Shomei Tomatsu and others.

Their style was known as “are-bure, boke” (grainy, blurry, and out of focus) (Baker, S., 2017, *Provoke: Foreword by Simon Baker for ‘The Provoke Generation: Rebels in a Turbulent Time’*). *Provocative Materials for Thought, Provoke*, published by Takuma Nakahira and Koji Taki in 1968, brought this style to the general public, taking the work out of the galleries and distributing it through this zine-style publication. This style is an attempt to move away from western conventions of representation and develop a more Japanese language and style. Their work shifted away from the excellence of technical and print quality to the hurried emotional representation of their environment and their rapidly changing society after the end of World War II. Provoke era photographers were looking to protest about the changes to Japanese society.



Figure 46 - Daido Moriyama, 1970 from Farewell to Photography, Black and White photographic print



Figure 47 - Takuma Nakahira, 1970, For a Language to Come, Black and White photographic print

Yokota's practice, especially his early work, at first appears to sit firmly in the tradition of, and conform to, the Provoke manifesto “to grasp fragments of reality far beyond the reach of pre-existing language, presenting materials that actively oppose words and ideas ... materials to provoke thought” (Amison, P., 2012).

While the aesthetic and subject matter in Yokota's work is heavily representative of this group of Japanese photographers from the 60s and 70s, Yokota, especially in his newer work, brings a modern twist to that aesthetic with his endeavours. Access to digital technologies and colour film has provided new tools for his practice. Also, the fine-art photography community of galleries, museums, residencies and awards provides a much larger platform for Yokota to bring his work to the world. The focus on the Provoke Era photographers was to take the work from the gallery exhibition realm and bring it to the people. Yokota has moved beyond this

Provoke Era ethic to produce highly experimental and contemporary art using photographic processes as the catalyst.

THE OBJECT

The range of experimental processes, as described, are integral to the production of Yokota's desired aesthetic and final artefact. However, for Yokota, it is not the process which is forefront in his work, but the outcome, the photographic artefact. This artefact is as diverse as his processes. It is the uniqueness of the hand-made object, the final result of the process, which is essential (O'Hagan, 2015). Each piece of work produced is unique in both form and aesthetic. The fact that he may have used any number of components such as analogue or digital photography, traditional visual arts, digital and or wet chemistry-based experimental processes, to arrive at the final object is essential but does not outweigh the prestige of the final work.

Yokota stands out, too, because his results tend to transcend the sum of the parts. Or, to put it more brutally, his creative process does not (as with so many emerging young artists) appear more interesting than the results (O'Hagan, S., 2015, 'Aphex Twin is my inspiration': Daisuke Yokota, the acid the acid-loving photographer of tomorrow. The Guardian, Arts & Design).



Figure 48 - Daisuke Yokota, 2015, 'Matter Waxed'. Unique piece signed, Akio Nagasawa Gallery

Yokota's process quite often culminates in the production of artist books instead of exhibition prints. His books, such as *Matter* (2014-2016), are hand-made, one-off oversized photo-books which sell for thousands of dollars (Akio Nagasawa Gallery). However, copies are very hard

to find as many of these hand-made books are now not available.

Yokota has an enormous archive of printed images which he uses to produce work instead of capturing new imagery. From this archive, and for the production of *Matter Waxed* (2015), Yokota made random selection images from his archive then re-printed them before coating them with hot wax and ink. This process merged the photos into one single object. The original photograph is no longer recognisable, covered with these layers of wax and ink. The photobook transcends its original purpose and becomes a sculptural form.

Yokota does not discriminate between these hand-made objects and his soft-cover digital versions along with the magazine-style artist books also produced from his work. His *Matter Burn Out* (2017), and reproductions of other original works, are available in softcover versions for less than \$100. Here, the perceived value of a hand-made object, as opposed to machine-produced, is apparent with a price range from just hundreds of dollars for a zine-style reproduction of the work through to tens of thousands of dollars for the hand-made limited-edition photo-books.

In his more recent work, produced during his residencies, Yokota has added cameraless production to his process which changes the appearance of his final object. Yokota is looking to “focus on the emulsion, on the different textures, more than a subject being photographed” (Yokota, D., 2016, interview). His series, *Colour Photographs*, is part of this experimentation with this cameraless processes. In this case, Yokota has layered large format colour film, then applied his experimental methods, finally scanning the final result. Once again, Yokota mixes digital and analogue to his advantage resulting in a unique aesthetic and undeniably unique creative artefact.



Figure 49 - Daisuke Yokota, 2015, 'Untitled' from his *Colour Photographs* Series

During the Kominek Gallery residency in Berlin in 2016, Yokota moved back to in-camera digital capture, including infrared and his trademark analogue darkroom processes, as well as employing some cameraless methods. The residency program was in association with Hiroshi Takizawa and Yoshi Kametani. During this residency, each artist was to produce their own, as well as a collaborative, photo book. Their work was all created while in Berlin for the month. Yokota decided to work in this manner to respond to the city and the environment he found himself. This approach was in contrast to the first residency photographer, Antony Cairns, who had a body of work prepared before he arrived. Yokota's decision to capture and produce his work while in Berlin aligns with the style of work he produces: chaotic and controlled at the same time.

Yokota, who has the habit of working at night, visited “nightclubs, strip clubs, a fairground and even a boxing match” (Kominek, 2016). He fell into the below-freezing water at the Liepnitzsee Lake during this time while out shooting (Kominek, M., 2016). The month-long residency passed quickly. As a result of his “unorthodox” approach to photography including choice of camera, boiling negatives and re-shooting prints, Yokota delivered a body of work which Kominek described as “idiosyncratic and complex” (Grieve, M., 2017, quoting Kominek, “Destroy and Renew.”, *The British Journal of Photography*, vol. 164).



Figure 50 to 54 - Daisuke Yokota, 2017, excerpts from his photobook 'Berlin'

Grieve continues to describe the book as "... an array of scattered moments. Yokota adds ingredients to images by pulling and pushing and burning and heating, the photograph is much less important than the prominence of the photograph itself as the object/subject" (Grieve, M., 2017).

Yokota's practice of using and re-using images is evident in his series of exhibitions and resulting photobook, *Matter/Burn Out*. This work is a progression from his earlier work *Matter* 2013, which has exhibited at international exhibitions including the Jimei x Arles International Photography Festival in Xiamen, China.



Figure 55 to 60 - Daisuke Yokota, 2016, Excerpts from his book *Matter/Burn Out*

The process for *Matter/Burn Out* began with an installation consisting of more than 100,000 images selected from Yokota's diverse archives. The photographic prints were then each individually coated in wax and exhibited at the Aichi Triennial in August 2016. Burning the prints at the close of the exhibition which once documented them, and the resulting images processed and manipulated, brought the work back to life as *Matter/Burn Out*, a new work with that distinctive Yokota photobook aesthetic.

As the Foam Paul Huf winner and resulting exhibition in 2017, Yokota pushed the boundaries of his practice and production of photographic artefacts even further. His three-dimensional installation *Matter at Foam* focuses on the "volume and material of photography" (Foam press release 2016). The immense scale of the work fills three rooms and provides the viewer with an immersive experience of photography.

One room of the exhibition contains an enlarged print of a roll of film exposed without the use of a camera. The elongated print was waxed on-site and draped throughout the room. While in another of the rooms, the projection of darkroom experiments on to the gallery walls moves even further away from traditional photographic exhibition aesthetic. In the final room, thousands of photographs, repurposed for the exhibition and individually coated in wax, are pushed up against the walls in large piles seemingly discarded. It would be hard not to relate this final installation to the considered lack of value afforded to the multitudes of photographs created every day.

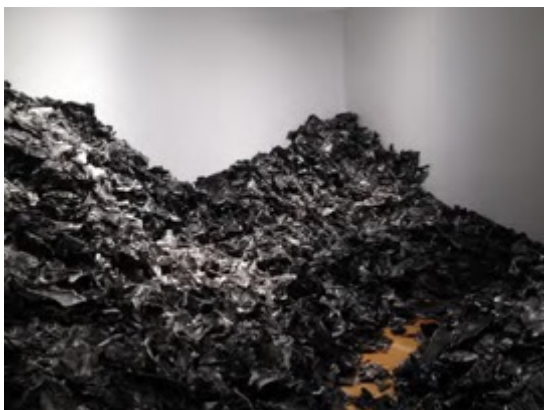
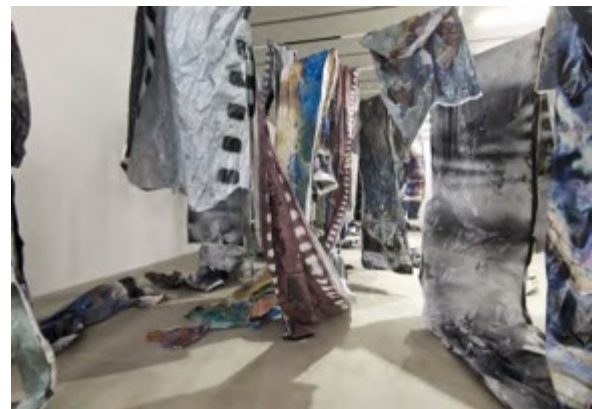


Figure 60 to 64 - Daisuke Yokota 2017 installation view Matter at Foam

PHILOSOPHICAL AND CONCEPTUAL CONCERNS

In any discussion regarding Yokota's creative artefacts, one should not disregard his underlying conceptual stance. Yokota had developed this style of working, his process of creation and output, to comment on the fragility of memory. He aims to portray this concept through visual form, photography. His work suggests that memories fade, are damaged, are

at other times vivid and confronting. In fulfilling his aim, his creative process and output may appear chaotic. However, there is an underlying discipline and structure to this chaos.

*His response is to destroy, in order to breathe fresh life into our understanding of the limits of photography. He reveals that the photograph is not static, but rather an unstable medium, uncertain and fragile in terms of its texture and meaning. Traditional notions of composition are no longer relevant (Grieve, M., 2017, "Destroy And Renew." *The British Journal of Photography*, vol. 164).*

Yokota, through his experimental processes and output, with distinctive textural and at times dimensional qualities, stands up and challenges the notion of "what is photography". A photograph can be so many things but in the digital era it is more than ever considered an ephemeral collection of pixels viewed on a screen of some type than a printed hard copy artefact. His work seems to aim to destroy all historical notions of what is photography and what should be considered a photographic output to set a new precedent.

As discussed earlier, his work challenges modernist notions of image quality at both the capture and output phases. However, is post-modernism the accurate description of his work? It could be better described as post-photographic in another sense, rather than the usual technology-driven work generally associated with this term. Perhaps, Yokota and his creative practice are without a definition, and because of the ever-changing experimental nature of his practice, it is not able to be defined either. Experimental seems to be the best way to label this work, if necessary.

It is this uniqueness of both the process and resulting artefact which has brought Yokota's work to the attention of judges and critics in just the past few years. His work stands out in that sea of digital images which surrounds us daily. His unique and even revolutionary style, like his taste in music, stands out from the ubiquitous nature of contemporary art photography.

CONCLUSION

Yokota's practice sits well with the research topic examining why contemporary fine-art photographers are working with alternative processes. His work is experimental and crosses the boundaries of analogue and digital in both process and output.

While Yokota's process and the resulting artefacts may appear chaotic and challenge the notion of what is a beautiful archival fine-art photographic print, Yokota is one of the most exciting emerging photographers of our time. It is this experimental nature which challenges what photography is in the 21st century. His process and final product are interdependent and cutting edge. He breaks down the barriers of photographic classifications while defiantly standing by his work as contemporary photography.

The artefacts or objects Yokota produces are wide-ranging in style and output. They include a traditional photographic or inkjet print, the prints produced from a scan of a hand-made object, or the hand-made object itself. Yokota also creates large-format hand-made photobooks as well as mass-produced zines. He states that the zines are a way to bring his work to a broader audience. Yokota also produces oversized cameraless prints on analogue paper, coated in wax, ink and acid for exhibition. His installations include prints, books and projected images. Yokota is experimental and democratic in his approach to photographic process and production.

He is a contemporary photographer who has examined photographic history and its associated practices and considered his selection of techniques and output. Yokota has, at any given time, chosen to work with a selection of these processes which suit his artistic vision or his creative aesthetic.

The pictorialist movement in the late 18th and early 19th centuries also attempted to remove the evidence of the camera from the final photographic output. They were in fact at that point trying to have photography considered an art form, and the idea that the hand of the artist with the post-capture processes is considered art. However, to suggest that Yokota's work is just a reference to this time in photographic history or even the Provoke era in Japanese photography would do a great injustice to his work. The way Yokota approaches his practice is very relevant in the 21st century, where academic discourse includes topics such as what is photographic and photography, and whether photography, especially non-digital processes, is dead.

It is through this complex creative practice, Yokota perhaps is also aiming to redefine the understanding of what is photography, what is considered a photographic object in our contemporary times.

CASE STUDIES – SUMMARY

Each practitioner featured in these case studies was examined using the framework described in the introduction to this chapter. This framework, formulated from information derived from previous datasets, enabled an examination of the artists and their work in a considered manner and comparison of critical points of interest in line with the research questions. This systematic approach allowed for the identification of similarities and differences in their creative practice, philosophies and reasons for engagement.

The information gained from examining this group of artists in the case studies has supported the understanding that artists engage with alternative processes mostly within two categories: practitioners work with the processes in either a traditional or experimental manner. In the case studies, this engagement ranged from the very traditional application of wet-plate collodion and daguerreotype with contemporary subject matter and a fine-art aesthetic in the work of Takashi Arai and Ben Cauchi, through to the more experimental work of Justine Varga, and Daisuke Yokota. Cauchi and Arai rely on the contrast between the historical appearance of their artefact and the contemporary subject matter. However, with Varga and Yokota, the traditional photographic characteristics of their creative work are not so important or visible, even though their innovative processes are integral to their conceptual stance. For all these practitioners, the original objects achieved through the use and misuse of these traditional photographic methods was foremost in the reason for working with their chosen alternative processes.

The case studies were an opportunity to investigate whether there was any correlation between why practitioners engage with alternative processes at this esteemed level of practice and the reasons identified from the data collected during the first two phases of the research.



CHAPTER 6

DISCUSSION

Over the past two decades, the boundary between photography and other media like painting, sculpture or performance has become increasingly porous. It would seem that each medium has absorbed the other, leaving the photographic residing everywhere, but nowhere in particular (Batchen, G., *Each Wild Idea: Writing, Photography, History* p. 109).

This chapter presents a discussion on the findings from the three research phases, concerning the research questions. The discussion attempts to coalesce the previous chapters and focus on unpacking the evidence. The research was an investigation into why there has been a return to historical and traditional photographic methods, now known as alternative photographic processes, in this technology-driven era. Moreover, the research examined the range of alternative processes used, as well as the impact this engagement and the processes have had on creative photographic practices and the development of a contemporary photography aesthetic.

The confirmation of a contemporary engagement with alternative (historical and traditional) photographic processes is a notable finding. This represents a deviation from a previous understanding of the history of photography, which is presented typically as linear or progressive and not circular and inclusive. It uses a methodological approach to history which was based on innovation in camera technology and changes in light-sensitive material which made previous older methods redundant, as indicated in the Introduction chapter. This research suggests an alternative scenario where contemporary photographers work with a range of processes, both current and historical, in their practice.

Evidence from the research provided an understanding of why and how photographers work in this manner. It also determined how the outcome of this engagement was complicit in the development of a contemporary photographic aesthetic. The underlying concept derived from this research is that the traditional understanding of what is photographic may need to be reconsidered. Furthermore, as technology advances, some are contesting the authenticity of a photographic image produced with digital technology and wanting there to be a more tangible link between time, place object and the image created.

The introductory chapter presented a scenario which situated photographic practice in a “post-photographic” era. Mitchell (1992) at the very beginning of the digital imaging journey, voiced his concerns regarding the veracity of a digitally produced image, asking how we should

approach visual truth in a post-photographic age. Moreover, Lister (1995) theorised about how we should consider photography, once again positing the presence of a post-photographic era. Fontcuberta (2015) suggests that not only are we currently situated in this post-photographic era but traditional forms of photography as we have known it no longer exist or are relevant in a technology-driven society. He takes the stance that “while photography may have caused painting to change, it did not wipe it off the map”, however, in the age of post-photography, “photography seems to have been swallowed up” (Fontcuberta, 2015, p.10). Rubenstein in an essay further supported this stance, suggesting photography as we know it “has left the room”. However, Dewdney in response to the essay, indicated, that while we may be situated within this post-photographic era, schools and universities are still producing photographic work more aligned towards a more modernist aesthetic, and using conventional photographic technology.

This research project was an opportunity to examine what is the current status of photography in the 21st century with a focus on the current trend towards working with alternative photographic processes. While the study focuses on the practice of photography more than examining what is happening from a critical theory position, one cannot be separated from the other.

Evidence from the study suggests that the reasons for this contemporary engagement are varied. There is, however, connectivity between engagement with the photographic process itself, the production of a photographic object, and the allure of a distinct aesthetic produced through the use of alternative photographic processes. Additionally, the research found the relationship between light, subject, time and space, and the engagement with traditional forms of photography, was deemed essential for providing a genuine photographic experience, and to produce a photographic artefact deemed as authentic.

The research findings revealed that creative photographers are also choosing to work with alternative photographic processes for the following reasons:

- A desire to engage with a tactile and emotionally rewarding photographic process;
- Experimentation and complexity of the processes develops an interpretive and creative practice;
- Ubiquitous nature of digital imaging (photography) and the saturation of visual imagery through a range of mediums has led to a devaluation of photography itself;
- The production of a tactile photographic object or resulting artefact is deemed essential;
- A desire to have a distinctive aesthetic in their work;

- Authenticity with regards to the photographic process (technique) photography and its associated link to time, place and subject is a critical and overarching paradigm;
- The perception that a hand-made photograph or object is of higher value; and
- The return of interest in traditional forms of making and status associated with being a master craftsman.

This discussion chapter unpacks these critical concepts which emerged from the research findings the process, object and aesthetic and discusses how, while each of these is identifiable as a stand-alone concept, they are at the same time interrelated. Furthermore, the discussion determines how the notion of a perceived authenticity in alternative photographic processes underpins the motivation for contemporary engagement.

While the reasons for working with alternative processes and the processes employed which emerged from the research were at times inconsistent between the three research phases, grouping them under the headings of the process, the object, and the aesthetic provided some unity. It was determined that each rationale was not exclusive or a stand-alone concept. Instead, each was inclusive, with a level of interdependency. The process itself determined the object produced, and the process and the resulting object were identifiable by their distinctive aesthetics. Underlying concepts such as authenticity and emotional identified during the research phases provided a much more profound understanding of how these relationships work.

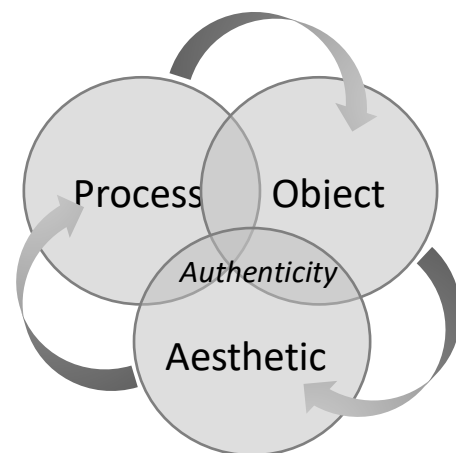


Figure 65 - Overview of research results

During both the survey and interview phases of the research, participants provided input or discussed the importance of the process itself as a reason why they engage with alternative photographic processes. This is for the enjoyment of working with a tactile and hands-on process. During the interviews, practitioners also discussed how the chosen process dictated the look of the final creative work, which was determined essential for the successful completion of work from ideation to output. Similar findings regarding why artists worked with alternative photographic processes emerged during the case studies when examining the practice of a range of contemporary photographic artists.

The slowness and complexity associated with alternative photographic processes was an essential finding throughout the research. It emerged as a significant reason why there is a return to working in this manner. Throughout all stages of the research project, it was evident that the slowness assisted the practitioner in becoming more engaged with the subject and

surrounds and provided them with a more thoughtful manner in which to work. Furthermore, the complexity of working with alternative processes compelled the practitioner to focus on the task, the complexity of the processes as part of the challenge. The tactile nature of working with alternative photographic processes, the hands-on involvement with each step resulted in an emotional attachment with the process and the resulting product. The emotional reward of working with alternative photographic processes included the successful mastery of processes which required a high level of mindful engagement, the following of each step meticulously as needed for a successful outcome.

The survey findings provided initial evidence that the slowness, the complexity and the ability to work in an experimental fashion which assists in extending the creative process were all reasons why practitioners are choosing to work with alternative processes. Furthermore, the survey findings provide evidence which reinforces the concept that working with alternative processes requires patience and perseverance and that engaging with the process and producing work in this manner is emotionally and creatively rewarding.

Further reinforcement of these points occurred during the interview phase. Interview participant 12 supports this view, indicating that the salt printing process was something which took him his entire degree to master. He also suggested that he avoided other methods and acknowledged they would be much harder, and so take more time and effort to work with, but it was time he did not have. Interview participants 5 and 7 suggested that the slowness of the process provided an experiential element to their creative portraiture by involving the client in the entire process. Interview participant 8 also related the slowness of the process, and the patience required to build and work within a room-size camera obscura. It is once again the experience of being within the dark body of a camera obscura, watching the light change and the images project into space, which makes this quite unusual. Only one of the interview participants did not agree that the alternative process was slow. Working out of doors with photographic paper to produce Lumen prints requires fast footwork. The exposure times are much faster than other forms of light-sensitive mediums.

Takashi Ari said the slowness and meditative manner of working with the daguerreotype process was a significant reason for him to work with the process. The production of a daguerreotype begins with the hand-polishing of a metal plate to a mirror finish. Preparation of the plate could take up to a day to complete. Furthermore, the slow exposure time associated with the light-sensitive medium allowed him time to become aware of the sounds and smell of the landscape when documenting the areas around Fukushima. This point was important, as the landscape impacted by nuclear disaster and tsunami which initially appeared barren and empty, was when one stood still, alive with sounds and smells. It was being in the

moment which allowed him to expand his process by collecting sounds from these areas which accompanied his exhibition work. There was the fantastic juxtaposition of imagery, devoid of habitation, displayed in a darkened room with only pools of light and the sounds reverberating which made the exhibition experiential, as well as visual.

Ben Cauchi works with wet-plate collodion and ambrotype processes, both particularly slow processes because of the low ISO of the light-sensitive medium itself. The method itself lends well to the subject matter in Cauchi's work, as both lead to a contemplative state of mind of artist and viewer. Posing questions through imagery about life, death and what lies in-between with titles such as *The Veil* and *The Portal*, and featuring windows filled with light, light streaming into dark interiors, doorways and veiled curtains forming voids as well as suggesting the presence of something behind all, asks the viewer to look, to see to discern and to consider the big question of life and the after-life. Cauchi works with themes of magic, or sleight of hand, which reference magic tricks of the 19th century. Cauchi's images at times also reference spiritualist movement from the 19th century, and the possibility of photographing ghosts, that is photographing those who have passed, with those who are still living as a type of memento mori.

One could even consider the haptic process employed by Daisuke Yokota, or at least the images produced, as also mediative as he asks the viewer to consider how memories may fade or become flawed over time. For Yokota, the slowness is in the complicated multiple-step method he employs. However, at times the decision-making processes around the visualisation or pre-visualisation from idea to output could also be described as mindful. It is such an essential part of the creative processes, but this is not unique to alternative photographic methods, as most would include this in their creative workflow.

Working with alternative processes is more complex as in most cases the entire process is hands-on from start to finish. That is the preparation of plates, paper or other substrates, mixing of chemistry, coating and sensitising, the exposure and then development. Each of the steps has to be carefully managed for any hope of a successful outcome. However, for all the practitioners who have participated in some way to the research, this is a positive element of working with alternative processes, not a negative factor.

Findings suggest that working with alternative photographic process enabled a higher level of experimentality, which at times and because of the unpredictable nature of these processes, also included some error in the outcome of the final product. While some of the practitioners who participated in the survey and interview phases of the research thought that producing an imperfect object was not the aim of working with alternative photographic processes, they did

agree that at times, when it occurred, it was described as serendipitous and was embraced. That is, the error, if replicated, could then become part of their distinctive style.

The blue of overexposed areas in a daguerreotype landscape image referenced the blue skies outdoors. The piece of photographic paper left in the environment to collect traces of pollen and dust was an innovative manner for a PhD student researching the success of revegetation on abandoned mining sites to collect botanical samples. Here, instead of collecting data in a more usual fashion, the integration of science and art was a way to both collect the pollen samples and produce beautiful Lumen images. Even working with moving images was an opportunity to employ the use of cyanotypes for interview participant 6. Family photographs once copied to film, are then contact printed to cyanotypes before then being included in the imagery which was transferred finally to Super 8 film instead of digital video capture. The reason for working in this complicated manner was because the content required a different approach which referenced the sadness and nostalgia, loss and family.

Working with a room-sized camera obscura could only be described as experimental and fraught with error. This practitioner not only built or repurposed the room as a camera obscura; she worked with large pieces of traditional photographic paper to document the fleeting imagery which appeared on the walls. Working only with her instinct for exposure times, she described the outcome as surprising. That is, surprising when it worked and less surprising when it did not. However, it was embracing the serendipitous nature of this process, and enjoying the process and the experience of working in the darkened chamber was what this artist enjoyed. “Making art with my own body” was how it was described not only by this participant but by others.

The level of experimentality of the process and unpredictability of the outcome is evident in the practice of Daisuke Yokota and Justine Varga which have already been discussed at length. Here, both photographic artists work with alternative processes in a non-traditional manner. Their use of the processes challenges the very notion of what is considered as photographic. Varga has no control over the production of her image beyond the location of her film. It is this distance from the production of the image and the lack of control over what is included in the image itself, which is an important part of her conceptual basis. Her practice, the way she engages with film to produce her work “has liberated film from the confines of the camera” (Johnson, A. 2016, Artist Profile, Issue 36). Varga strives to produce work which is not mediated. It is not about a subject but comments instead on simultaneous moments in time, each overlaid and embedded into the surface of the film. There is no identifiable subject matter but an abstracted description of the passing of time and place.

Daisuke Yokota's practice would be best described as a series of controlled experiments. Working with a diverse range of photographic, traditional and contemporary visual arts, processes and methods of output, his work produces an ever-changing and decidedly unique creative outcome. Yokota may at any one time work with images generated from a low-quality digital capture, large format film or darkroom processes where he overheats the developer or burns and scratches the negatives. Yokota employs each of these methods in a non-traditional manner. While the final prints may be produced using traditional visual arts printing such as photographic screen printing on paper or fabrics, or digital output on inkjet or Xerox printing, he always applies his distinctive finish to the imagery whether it be acid, wax or even the total destruction of the work as in *Matter: Burn Out*.

Thumbprints in Ben Cauchi's wet plates became part of his realisation of the underlying themes in his work. The thumbprints may at times obscure his face or become part of the ghosted imagery included in his work. Small specks of silver remaining on the plate are utilised as part of the overall narrative in the image. Cauchi embraces the error or artefact in his wet-plate collodion work which he describes as serendipitous.

Takashi Arai does not purposefully include artefact or error in his daguerreotype plates. However, as he works outside with these plates, the dust and detritus which lands on his plates form squiggles and imperfections which leads the viewer to interpret them as purposeful. Arai's work documents places, objects and people impacted by nuclear disasters, most recently the tsunami-ravaged areas of Fukushima prefecture. Viewers interpreted the squiggles as evidence of radioactivity.

While the work of Sally Mann did not suit the parameters for this research for inclusion in the case studies, her work produced working with the wet-collodion process and a camera with light leaks accentuated that her subject matter is suitable for discussion in this context.



Figure 66 - Sally Mann from her series 'Southern Landscapes'.

Her bodies of work *Southern Landscapes* and *Battlefields* exploit the way highlights, shadows and blacks are rendered with this traditional light-sensitive medium. Furthermore, her work *Faces* celebrates the imperfections inherent to the ambrotype medium. It seems to echo the sentiment of imperfection in humankind.



Figure 67 - Sally Mann, 2006, 'Faces' ambrotype, 20 x 25cm

Craig Tuffin is an Australian creative photographer who works with both daguerreotype and wet-plate collodion. This sentiment of matching process and aesthetic was echoed in a body of work, *Faulty as we Are*, which was about the imperfection of humanity. Here in a similar manner to Mann, he chose to work with the wet-plate process because of the inherent imperfections present which would match the concept in his creative work.



Figure 68 - Craig Tuffin, Myopic, from the series 'Faulty as we Are'



Figure 69 - Craig Tuffin, Elliot and the Lucky Elephant, from the series 'Faulty as we Are'



Figure 70 - Craig Tuffin, The Boxer, from the series 'Faulty as we Are'

In another of his works, a series of portraits of contemporary indigenous people, he chose to work with both daguerreotypes, which referenced the work of the Australian photographer J.W. Lindt from the 19th century who documented Aboriginal persons in a studio setting. The reason for working with alternative photographic processes is the link between process and

the final aesthetic, as well as the important elements of a physical hand-made object. The final image produced, because of its appearance, encourages the viewer to look, hold, touch and experience. The beautiful textured papers used in alternative printing processes are accentuated by the application of the light-sensitive medium. The matte finishes disperse the light and allow the image to become part of the substrate. The distinctive reflective surface of the daguerreotype may bewilder the viewer who is not familiar with its distinctiveness. Both daguerreotypes and wet-plate objects have a substantial presence about them, when held, the cold metal warms to the touch. The distinctive spread of tone in a wet-plate collodion image and the manner the light-sensitive medium registers light produces an image which while in monochrome, is unfamiliar to the viewer.

The reasons for working with alternative photographic processes instead of digitally, as indicated throughout the study, is the desire to achieve this distinctiveness in their work, and to produce a hand-made object with its perceived increase in value. The choice of process, and the associated aesthetic, becomes part of their identifiable style.

Furthermore, the research suggests that the tactile, hands-on component of working with alternative processes is an essential reason for practitioners choosing to work in this manner. "Making work with my body" was the way it was described by an interview participant. Working with their hands, having contact and control of all steps on the process were critical points from polishing a plate, mixing and then coating the substrate with the light-sensitive medium. Moreover, another interview participant described a feeling of not being connected to their photographic imagery when working with digital photography. However, a decision to work with alternative processes instead was a way to reconnect to their creativity and leaving "my artist's mark on the images ... wanting them to feel like their work again" (IP 5, 7.02). These practitioners are in contact with the process in a literal manner because when working with alternative processes there is no escaping the hands-on component of working in this way.

While the survey results do not support the current engagement with alternative photographic processes being a backlash against digital processes, the non-tactility or lack of connectivity was cited often as a missing element in of the digital process, which was present in alternative photographic methods during the interviews. While working with an image in post-production requires a range of decisions regarding the final look of an image, working on a computer produces distance between the creative practitioner and the imagery. The computer is only able to display a virtual representation of the image, it is not a tactile object. It is removed from the physical experience, which is available when working with alternative processes.

Batchen said images made with a cameraless process are "... Offering us the tactile other to the evanescent digital image, contemporary makers of cameraless photographs are making art that is all about the digital age, some of them explicitly so" (Batchen, 2015, p. 47).

There is further support for this point regarding tactility or the hands-on element of working with alternative processes throughout the research. Justine Varga describes her work produced with traditional negatives as sculptural. The feel of the negative in her hands, the ongoing contact with this negative *in situ* all speak to the tactile nature of her chosen creative processes. The experimental practice of Daisuke Yokota requires him to personally control each step, making decisions regarding what methods he should employ, loading and developing film in the darkroom, spreading acetic acid on his prints, how much and where.

The relationship between the process and the object produced is an important consideration in this discussion. While the process is hands-on, that is not machine-made or technology-driven, the object has a presence, a distinctive aesthetic and a perceived added value.

In the romantic idea of alchemy, through the intervention of chemical processes and the addition of light, one substance changes to another. This statement is an excellent description of photography, especially alternative photographic processes, where with the use of chemicals for the production of light-sensitive substrates, and the addition of light, what is before the camera lens is converted from a scene to a photographic object. In the case of cameraless or alternative printing processes, it is that conversion of a sensitised substrate to an amazing image just through the exposure to sunlight.

Alchemy, magic and sense of wonder, are descriptions for the moment when an image appears from a blank piece of paper or plate. This was a common theme in both the survey and interview phases of the research. The interview participants discussed the magic moment when the image appeared from nowhere, the appearance of a latent image.

For those who are working commercially with wet-plate processes as part of their professional photography practice, it was this sense of wonder when the image which emerged from the empty plate which formed part of the overall experience for the client. It is a "wow" moment. For this group of practitioners working with alternative photographic processes, this experience became their point of difference in their business. Moreover, it provided a fresh way of working and invigorated their practice which for them had become repetitious and lacklustre working with digital technology.

Within the interview participants, only one participant had some hesitation in using the term magic. However, he instead described the process as eliciting a “sense of wonder” — a term also supported by others in the interview phase.

During the case studies, and especially with Ben Cauchi’s work, alchemy took on further meaning. His underlying concept for his practice sat with the very lie which photography is based on, that is that each image is an undeniable truth. His narrative is based on smoke and mirrors magic of 19th-century wet-plate processes. Some of Cauchi’s work references magic tricks from these times but the strings or supports for the objects are visible. Furthermore, this is a photographic process where the plate itself is a mirror, a polished piece of metal where the collodion supports the light-sensitive wet chemistry — the addition of light, in turn, produces the image from this blank plate.

One of the central outcomes of the research was the concept or notion of authenticity. Authenticity as a concept should be considered in correlation with a range of other final critical ideas which was manifested in each of the research phases.

Authenticity as a word has a range of meanings and brings with it an array of connotations regarding genuineness, originality, validity and even truthfulness. With regards to this research project, however, the interpretations of authenticity include an authentic engagement with photography and photography processes, an authentic link between light time and place, authentic representation of the subject, and authenticity in the photographic artefact produced.

The topic regarding authenticity and digital and non-digital processes emerged notably during the interview stage. With the fourth interview participant, the reason for engaging with wet-plate processes was an effort to return to the authenticity offered in the process, engaging with an authentic photographic process. As previously mentioned, an interview participant suggested it was the wonder afforded by the addition of light to light-sensitive mediums which drew him to work in this manner, as well as the link to the history of photography itself and photography’s relationship to light, time and place. He was not alone in this sentiment, as multiple interview participants throughout this phase repeated it.

The description from the interview extracts regarding the moment when photons of light reflected from the subject intersect with the light-sensitive emulsion to form a perfect and permanent representation of what was before the camera lens, sums up this point beautifully and provided a robust discussion point during the interview process. This idea supports other arguments from the interviews, along with comments regarding the pureness and the authenticity of the “real” medium of photography. It was this action of capturing an image using wet-chemical, light-sensitive mediums which defined the differences between traditional forms

of photography and digital capture. With traditional forms of photography, the act of the light intersecting with the light-sensitive medium produced a permanent representation of the moment in time, the subject or object before the camera whereas, while digital capture is also reliant on light, it is the digitisation of the moment, the “chopping up” of the moment in time into millions of pixels which becomes a virtual representation of the moment. For the survey and the interview participants, there was a clear distinction between the two types of capture. One was authentic photography, and the other was not — digital was a virtual and ephemeral form of representation and photography.

The idea of authenticity and authentic photographic processes continued at the higher level of practice in the case studies, particularly in the work of Takashi Arai and Ben Cauchi. Photographic practitioners at the higher level of international practice also choose to work with alternative photographic processes for the reasons discussed and for that authentic look and feel to their work — that distinctive aesthetic.

Takashi Arai described his need to work with daguerreotypes, as a digital camera is not ample to document the destruction, loss and emptiness of post-tsunami Fukushima prefecture as well as other instances of nuclear disasters. It required this association between the radiation, the light and the place in both viewing and making the image to produce an image with an authentic intent.

For Ben Cauchi, it is the wet-plate medium, produced on either metal or glass, which for him links his concepts to the history of photography, which is of utmost importance. Interestingly, this process which produces a permanent representation of the subject in the time and place of capture, is used to comment on the inauthenticity of photography. Cauchi describes it as the perpetual lie of photography.

A discussion which has emerged through the case studies is what is photographic and what is considered photography. While this is not a part of the research aims, it may be of some importance moving forward when defining contemporary photography. This discussion follows on from the earlier distinction between digital and alternative processes.

Justine Varga’s work had produced some controversy over the past few years, firstly with her win in the Olive Cotton portrait awards in 2017, and again in 2019, when her work won the Dobell prize for drawing. It appears that Varga’s creative work extends beyond photography to contemporary art produced using photographic methods. Should it be considered a photograph? With her win in the Olive Cotton portrait prize, this was a heated discussion as the award has historically favoured the traditional understanding of portraiture, which is a likeness or representation of a person. However, Varga’s work was more akin to contemporary

or abstract illustration or drawing practices, where she had her children scratch and scribbled on the sheet of film along with spit from her grandmother. What part of this image is photographic, and where is the portrait? If one thinks of photography in a more literal manner, where each photograph provides a trace or evidence of a person, place or time, then the image does meet this criterion. The controversy was the lack of a person represented in the image. Varga again this year won the Dobell prize for drawing. She was not the only photographer who entered work into the award and was linked to more traditional drawing techniques. Peter Solness also entered light painting images. Varga seems to be continually challenging the traditional notions of these mediums with her work, and quite successfully.

While it was suggested a perception of lack of authenticity in non-digital practices was a reason for the need to engage with authentic photographic processes, it should not be considered as the only motivation for this contemporary engagement. The attraction of working with wet-chemical, light-sensitive processes, sourcing, mixing and experimenting with these mixtures, was a strong focus during both the survey and interviews and continued to be present in the case studies. The tactile, hands-on nature of these chemical-based processes is identified as a missing element in digital photographic technologies. Furthermore, the complexity and slowness associated with processes that encouraged the practitioner to stop and consider the subject, and to engage with the moment, are further reasons behind this contemporary engagement. In a fast-paced world, some are trying to make sense of what they see, hear and feel. To do so, slowing down to contemplate is a necessary task to provide that opportunity. This idea of slowing down is present not only in photographic practice but also may be seen in music, lifestyle and even now electronic gaming. It is that nostalgic link or retromania as suggested in Simon Reeves' book, where he explores this concept in music specifically.

What was also quite evident though the research is that contemporary artists and practitioners are quite happy to embrace a hybrid model of practice at many of the levels. For some practitioners, there were no boundaries around these methods of capture and output. In the survey, a majority of the survey population indicated they work in this manner with a majority of the participants identifying as an experimental photographer who works in a hybrid fashion, mixing both digital and analogue or alternative photographic processes to form their unique creative output.

Only two practitioners were working in this manner from the interview group, one who combines moving image and cyanotypes and another who works with Lumen process and digital scanning. However, the evidence of this style of working emerged again during the case studies and is especially evident with Daisuke Yokota's practice. Even though he relies heavily

on the attributes of analogue photography and associated errors he can produce, which contribute to his overall aesthetic, he also engages with digital technologies for both the capture and output stages.

Aesthetic, a theoretical concept relating to the perceived beauty of the object, is in this case, an object produced through the use of alternative processes. The distinctiveness of surface finishes, the textures, the range of colour and tone, and even the presence of the object when held in one's hand are uniquely linked to work produced from alternative processes. For those who work with alternative photographic methods, it is the distinctive aesthetic which they cite as a reason for working in this manner. When considering this statement in describing the look and feel of creative work produced with alternative photographic processes, one can see why creative photographers would choose to work in this manner.

A mirror with a memory is an apt description of a daguerreotype. The metal plate's surface requires polishing to a mirror finish before the application of iodine which turns it from a piece of metal to a light-sensitive medium and ready for exposure. This surface is now capable of capturing and replicating what is before the camera with minute details and contains a memory of that time, space and place. It is a testament to the event or person, the scene embedded indelibly on to the surface of the plate. Barthes (1980) suggests that all photography is about death, that as the moment passes; the "noeme" of the photograph points towards what has been and what will never occur again (Barthes, R., 1980, p 76, *Camera Lucida*). This moment however, may be relived an indefinite number of times through the viewing of a photograph. The mirror-like finish of the daguerreotype produces a reflection of the viewer on the surface of the plate. At that moment, image and viewer become one.

The distinctive aesthetic of wet-plate collodion is a product of the unique sensitivity to light. This medium is sensitive only to blue wavelengths. The final image produced provides the viewer with an altered representation of the subject. In the image, warm colours may appear much darker, while cool tones are always lighter. A viewer who is not familiar with the process will perhaps think there is something different about the image: the eyes are pale, the sky appears overexposed, it is sensitivity which provides the wet-plate work with its distinctive look.

Both the daguerreotype and wet-plate collodion processes require the plates to be exposed while still wet. This means they are both susceptible to picking up dust and detritus from the environment. For this reason, it also can create problems with accidental fingerprints, smudges and other unintentional errors, which may, for some of the creative practitioners, become part of their unique artistic style.

Cyanotypes, according to the survey results, are among the most popular alternative processes used currently. Their distinctive blue instantly sets them apart from other alternative printing processes. While the colour results in an identifiable look, the range of papers and other surfaces which this may be applied mean it is a very versatile process, and accessible to an extensive range of practitioners at all experience levels. While digital images may be produced to replicate this colour as a monochrome print, it is not quite the same as the original print created using a light-sensitive medium. Working with a digital negative will produce a crisp image, depending of course on the quality of the negative employed. However, when using this medium in a photogenic drawing technique, there is always those small moments of imperfection, the movement, the differing thicknesses of the object placed on the paper which gives it a quite distinctive look. The sensitised medium may be applied to the surface with a brush. Here, there is an opportunity for producing roughened edges — a look which is replicated in digital post-production with the application of borders.

This is one area where there is some experimentation. Some creative photographers are working with the cyanotype solutions while still wet, and adding resists such as vinegar, salt, liquid detergents and also wrapping under plastic wrap which also slows down the absorption rate of the solution, all of which alters the exposure times of the solution. The resulting image changes from the usual crisp blue to softer hues of blues and yellows. This effect cannot be replicated in any other technique except through the use of light-sensitive chemical formulas in this manner. This experimentation expands the distinctive look of a cyanotype beyond the crisp blue and white of the original intent.

The survey provided the first opportunity to ask the participants their opinion about aesthetic: whether they thought the aesthetic was an essential part of why they worked with alternative photographic processes. This topic was then included as a discussion topic in the interview series to allow for further investigation. While each of the interview participants agreed that each process has its own discernible aesthetic, they did not always work with only one method, and so that meant that the aesthetic or the distinctive look of their work might change with the process and associated aesthetic.

Furthermore, there was a consensus among the interview participants that the correlation between the subject matter of the work and the desired outcome including aesthetic was influenced by their decision regarding process. Most of the group agreed the decision on how the final work should “look” was made in the planning stages, and the process chosen to match the required outcome.

While there was a strong correlation between the process, the aesthetic and the object produced as a result of engaging with alternative photographic process, it is worth considering the object singularly and aside from both the process and aesthetic. When working with alternative photographic methods, the purpose is the production of an object as an outcome and the object itself becomes an important discussion point.

One of the biggest problems initially with the introduction of digital imaging technologies from a photographer's perspective was that the production of a tangible object was not a focus in the development of the technology. Instead, the focus was primarily on capture and transmission, and output was very much a secondary concern. Consider for a moment how digital technology enhanced the turnaround time in journalism or sports imagery, where the aim was to capture and transmit the image via the fastest means to meet publication deadlines. Press photography has always been about shorter deadlines. Bridging the gap between digital and non-digital processes is an ongoing concern with regards to output.

The past decade has seen this gap addressed through the introduction of pigment-based dyes for inkjet printers and a diverse range of papers from commercial to fine-art paper stocks. Archival substrates and longevity in the photographic print became a focus. The printing of digital images is now possible on canvas and acrylic substrates, with some more suited to consumer printing and others considered a fine-art preference. Digital imaging and associated technologies have attempted to replicate what was available with analogue photography, with the addition of the convenience of not having to work with wet-chemical processes. However, the distinctness of the aesthetic associated with alternative photographic methods is not able to be replicated authentically through contemporary digital printing technologies.

The consideration that digital images are virtual representations on a computer screen and could be reproduced an infinite number of times, downgraded their status as a photographic artefact. Also, images displayed online were at risk of theft and reproduction. The author was no longer the custodian of these images or able to control their distribution. This is a concern which continues at this time.

Digital files stored on a card, storage device or computer are transitional and are always at risk through computer or storage failure. This point was discussed during the interviews and noted that the technology changes so quickly, it was at times hard to transfer digital files from one storage device to another continually. At times, files thought safe were unable to be accessed because the technology had advanced. During the early stages of digital photographic technology, generations of photographs were lost forever for this reason.

It is the unique tactility and the presence of the photographic object produced through alternative photographic processes which for the majority of the research participants was an essential reason for working in this manner. The object commands a presence, as it is not a print on paper which is considered flimsy, and the object resonates with the viewer because of the distinctive aesthetic. The wet-plate image or daguerreotype with the metallic base, has a substance. The coldness of the metal itself, and the fact that as an object it may be cradled in one's hand, provides the viewer with a unique experience. For Takashi Arai, it was the longevity of the object produced through the Daguerreotype process, and its inherent substance in comparison to a photograph printed on paper, which for him was kindred to a monument and which would stand the test of time. It was this object which for him was necessary to document and remind humanity of the dangers associated with nuclear use and misuse and the disasters associated with it.

Alternative printing processes use traditional visual art papers with texture and body. The paper itself encourages the viewer to experience this tactile finish. This experience harkens to a traditional way of working with paper, one which has endured for centuries. Notably, papers once only for the use of printmakers or visual artists are now available for digital printing. It is this practice which is attempting to bridge the gap between the digital and alternative photographic processes to allow the contemporary practitioner an opportunity to experience producing work with this more authentic look and feel to traditional outcomes.

With all stages of the research, there was a resounding purpose for working with alternative photographic processes, and that was an aim to produce visually distinctive work. There was a correlation between the uniqueness of this object and its associated aesthetic. While there are now more options for digital photographic output, the research indicates the population believes these will never quite fulfil the standard which is possible through the use of alternative photographic processes.

The study has successfully answered the research questions and fulfilled the aims and objectives. This was made possible through the research design which allowed input from a wide range of practitioners. The research has confirmed a strong correlation between the photographic process, object and aesthetic and resulting object along with the uniqueness of this object which is the reason for this contemporary engagement. It is the tactile and experimental nature of alternative photographic processes which encourages practitioners to develop an interpretive and creative practice. Practice and its associated creative output, which, at times, is imperfect, is part of the appeal of working in this manner.

This research has provided a range of evidence about why there is a return to working with alternative processes. The most substantial reason which emerged was not so much rejecting one way of working over another, but instead making an informed choice with regards to process, based on the intent, the concept the aesthetic required for the project at hand. This contemporary engagement with alternative processes is an inclusive way of working which provides the practitioner with an innovative and creative manner of expressing a point of view or an idea photographically. Contemporary photographers are looking to connect with their craft, both philosophically and literally.

CHAPTER 7

7.0 CONCLUSION

CHAPTER 7 CONCLUSION

This final chapter addresses the primary and subsequent research questions, along with the research aims. The study employed an exploratory, sequential mixed-methods design, with three phases. While each phase was a standalone activity, the findings of each informed the next step. The study included a range of knowledge sources, including curatorial essays, news articles, industry press releases, artist interviews. It consisted of a response to current trends in the discourse regarding photographic theory.

This research has resulted in a revision to the understanding of the history of photography from one which is linear and exclusive to an inclusive and circular model. This study has revealed a contemporary creative practice which is inclusive of all photographic methods and technologies. The thesis proposes that photographers are now looking at all available techniques, methods and processes, both digital and non-digital and choosing one or a combination of processes appropriate for their aesthetic and their production outcomes. The process must suit the subject matter and the underlying concept.

7.1 PRIMARY RESEARCH QUESTION:

WHY ARE CONTEMPORARY CREATIVE PHOTOGRAPHERS ENGAGING WITH ALTERNATIVE PHOTOGRAPHIC PROCESSES?

Presentations of results from each of the three research phases in Chapters 3 (Survey Results), 3 (Interview Results) and 5 (Case Studies) provided insights into the demographics of the alternative process community and more importantly, why there is a contemporary engagement with alternative processes. These results were then discussed at length in Chapter 6.

The results indicated that photographers are choosing to work with alternative photographic processes for several reasons which alter with the practitioner and how they situate their practice within the broader creative arts network. Reasons change according to whether the intent is to exhibit, if they work as a professional practitioner, or their engagement is for personal enjoyment.

The reasons for this contemporary engagement include the following points as discussed in the previous chapter:

- Search for an authentic photographic experience, including the philosophical elements of working with light, time and space;
- The challenge and emotional reward gained from working with the light-sensitive wet-chemical process itself, including complexity, slowness and sense of wonder associated with the latent image;
- The distinctiveness of the photographic output, the object produced from an engagement with alternative processes; and
- The contemporary aesthetic produced when using a traditional process in conjunction with present-day themes and concerns and a non-traditional manner.

In a time when digital imagery of some type bombards us daily, in order to stand out in this crowded space, and viewed as uniquely creative, photographers have turned to alternative photographic processes, which in these modern times are distinctive in their usage and output. Working with alternative processes provides an opportunity to slow down and engage with a traditional form of making which has become more prevalent including in music and gaming.

7.2 SUBSEQUENT QUESTIONS:

7.2.1 WHAT PROCESSES ARE USED AND APPLIED IN A CONTEMPORARY CONTEXT?

Each of the three research phases addresses this question in some manner. The initial data collected in the survey provided an overview of the range of processes included in the alternative processes, and their hierarchy of usage. An opportunity to discuss how the processes are used and why practitioners choose to work in this manner ensued during the interviews. Finally, the case studies were an opportunity to investigate the practice of four internationally successful photographic artists and explore the same themes, the processes, the outcomes and the results of this engagement including the link to concept and associated aesthetic in their work.

- Chapter 3 - Survey results provide a preliminary overview of the range of alternative processes employed (Question 11);
 - Survey results indicated the majority of the population work with cyanotypes. By alternative process category, the highest percentage of responses were for alternative printing processes followed by analogue (darkroom) processes, and then direct positive processes (wet-plate collodion and ambrotypes);

- This survey also indicated that a majority of the population uses a hybrid process, that is some form of mixing alternative and digital processes and these identified as experimental photographers. An overview of survey questions and findings is available in Appendix B.
- Chapter 4 provides an overview of the processes employed by the interview participants. It was revealed while most of the practitioners chose to work with alternative processes in a traditional manner, there was some (3/n12) who work with the processes outside their original intended use and in a more experimental manner. An overview of processes and interview questions is provided in Appendix C and an overview of participants in Appendix D.
- Chapter 5 was an opportunity to examine the practice of and evaluate internationally successful contemporary photographic artists who work with alternative processes. The case studies revealed at this level of practice direct positive processes were used more than alternative printing processes. There was a high level of experimentality in the practices, and, for two of the photographic artists investigated, there was a challenge of the notion of what is photography and what should be considered as photographic output.

7.2.2 HOW HAS THIS ENGAGEMENT INFLUENCED THE CREATION OF A CONTEMPORARY PHOTOGRAPHIC AESTHETIC?

Chapter 5 confirms how working with a mix of contemporary subjects, themes and concerns and engaging with alternative processes has resulted in the emergence of a distinctive contemporary aesthetic. The topic of a contemporary aesthetic is discussed further in Chapter 6.

Daisuke Yokota's reinterpretation of the Provoke era aesthetic, though his destructive process, is one example of this contemporary aesthetic. Yokota, instead of looking for the refinement and the hyperreal output of a photographic object, is looking to destroy his images through a range of techniques including printing and re-copying images on film which is then impacted by heat and over development until there is a distinct grain which is similar to reticulation error in negative development. His work is further degraded through the use of acids, burning and printing. It deals with the destruction of memory over time, how it may degenerate to result in something quite different from the original event and subsequent memory.

The work of Justine Varga may be described as beyond photography. While she uses photographic materials, her work and the conceptual basis for how she engages with her process challenges what should be considered photographic.

While Takashi Arai may use the daguerreotype process in a traditional manner, it is the reasons why he works with this process instead of digital which makes his work distinctive. His work reaches beyond the photographic to produce memorials which will stand the test of time and keep the memory of nuclear disaster foremost in the minds of all.

Finally, Ben Cauchi's challenging images, banal in nature, however, highly conceptual are a magical mix of alchemy and photography. They take the viewer to another world, literally.

The use of alternative photographic processes in contemporary times has:

- Challenged the way we think about what photography is and considered as photographic;
- Has produced a contemporary aesthetic due the distinctive look of the object itself, and a result of the engagement with traditional photography in a non-traditional manner and the juxtaposition of traditional processes and modern-day concerns;
- Working with alternative processes in an experimental manner has engaged a new community of photographers to break down barriers between art and sciences, photography and established arts practice;
- Has contested the traditional idea of a linear history of photography which includes the idea of redundancy in the use of technology, processes and mediums for one which is circular and inclusive; and
- Revitalised the value of the photographic object, the artefact produced through working with alternative processes.

7.3 FUTURE RESEARCH DIRECTIONS AND OPPORTUNITIES

Ongoing research may include a broader focus on this type of innovative and experimental practice embracing alternative photographic processes; however, not limited to the past decade. Furthermore, the work produced by contemporary Japanese photographers such as

Daisuke Yokota and Takashi Arai is bringing a distinctive aesthetic to this type of practice and would be a further area of interest for ongoing research.

7.4 CONCLUSION

What is evident from the research is that traditional forms of photography are still relevant in the 21st century. The research, through the examination of contemporary engagement with alternative photographic processes, has provided an insight into the way creative photographic practitioners are ready to embrace all available methods of producing work, including historical and traditional photographic methods now referred to as alternative processes, however, not excluding digital photography.

This way of working does not align to the more traditional notion presented in the history of photography where the invention of a new method, equipment or process makes the older one redundant. The history of photography should not be considered one which is linear and based on a model of redundancy as is usually presented. Instead, it should be considered as one inclusive of methods both traditional and new. This change in itself has challenged the norm of how we consider the history of photography and associated eras. Pre-photography, pictorialism, modernism, post-modernism, and post-photographic all describe a period in photographic history; linked to both advancements in technology and a change of approach in the interpretation of photography.

As we move forward in the history of photography, the identification of what is considered photographic practice is changing. The current discourse regarding the end of photography, the identification of a post-photographic era refers to this changed understanding of what should be considered photographic practice and photographic output. Post-photographic describes the freedom to create using a range of wet-chemical, light-sensitive mediums in an innovative and contemporary manner. The introduction of digital imaging (photography) has done for photography what photography did for painting more than a century ago. At that time, the invention of the mechanical device, the camera, freed painting from the confines of representation and saw a new way of working with the introduction of impressionism. In turn, the invention of the digital camera and associated technologies has freed traditional photography also in a similar manner, and contemporary creative photographers are working in a new innovative and experimental manner, using traditional photographic methods to produce work which challenges the very foundations of what is considered photographic.

Photography has not left the room; it has not disappeared; it is just presenting itself in a different form. Contemporary photography is full of promise. What is evident from this research is an exciting future for a medium which has a growing number of options for practitioners to express their creativity. For this reason, ongoing research could include a broader focus on this type of innovative and experimental practice embracing alternative photographic processes; however, not limited to the past decade. Furthermore, the work produced by contemporary Japanese photographers such as Daisuke Yokota and Takashi Arai is bringing a distinctive aesthetic to this type of practice and would be a further area of interest for ongoing research.

REFERENCES:

- Abbe, D., 2012, American Photo, Shoot, Print, Repeat: An Interview with Daisuke Yokota. Accessed October 8, 2017 <http://www.americanphotomag.com/shoot-print-repeat-interview-daisuke-yokota>
- ACP <https://acp.org.au/blogs/exhibitions/the-chemists-rediscovering-photography-in-the-age-of-the-jpeg>
- A/FIXED, 2017, Re: *Japanese Photographic History*, Provoke Era, The Provoke Transcript: Takashi and Toward the City, <https://afixed.in/stories/> Accessed February 3, 2018
- Alternative Photography <http://www.alternativephotography.com/processes/>. Viewed September 2015
- Amison, P., 2012, Interview with Daisuke Yokota, 1000 Words <http://www.1000wordsmag.com/daisuke-yokota/> February 05, 2018
- Anderson, Christina Z, website viewed January 2018 <http://www.christinazanderson.com/>
- Andrews, D., Nonnecke, B., & Preece, J., 2003, 'Electronic Survey Methodology: A Case Study in Reaching Hard-to-Involve Internet Users', published in the International Journal of Human-Computer Interaction, Volume 16, pp 185 – 210 Accessed online 18th January 2018. Available through Research Gate: https://www.researchgate.net/publication/220302348_Electronic_Survey_Methodology_A_Case_Study_in_Reaching_Hard-to-Involve_Internet_Users 16. 185-210. 10.1207/S15327590IJHC1602_04.
- Arai, T., *Takashi Arai: Bright was the Morning*, video artist talk. Takashi Arai Vimeo channel Accessed 18th November 2017 <https://vimeo.com/user4591586>
- Arai, T., '*Exposed in a Hundred Suns*', Video artist talk. Takashi Arai Vimeo Channel. Accessed 5 December 2017. <https://vimeo.com/131992281>
- Arai, T., '*In The Wake*', video artist talk. Takashi Arai Vimeo channel Accessed October 2017 <https://www.youtube.com/watch?v=U8gzbbpRTcY>
- Arai, T., *Making of Daguerreotype*, podcast. Takashi Arai Vimeo channel Accessed October 2017 <https://vimeo.com/14472775>
- Arai, T., '*The Making of: A Multiple Monument for Lucky Dragon 5*', video artist talk. Takashi Arai Vimeo channel Accessed 18th November 2017. <https://vimeo.com/110201418>

Arai, T., 2012, *The New Theory of Daguerreotype as a Monumental Container*, Alternative Photography International Symposium (APIS) 2012, Nihon University, Tokyo.

Arai, T., 2018, Website accessed 18th November 2017. <http://takashiarai.com/>

Arai, T., Sutton-Hibbert, J., 2015, *Artist talk Takashi Arai and Jeremy Sutton-Hibbert*, Street Level Photoworks. Accessed November 2017 <https://www.youtube.com/watch?v=hUOI2BjF2QM>

Arnold, D., David Arnold Photography +, Portfolio, <https://davidarnoldphotographyplus.com/> Viewed December 2019.

Art Gallery of New South Wales, website, Photography symposium, Trafficking images: histories and theories of photographic transmission. Accessed January 2018 <https://www.artgallery.nsw.gov.au/calendar/photography-symposium-trafficking-images/>

Art Gallery of New South Wales, website, exhibition, The photograph and Australia, viewed April 2015. Website exhibition information <https://www.artgallery.nsw.gov.au/exhibitions/the-photograph-and-australia/>

Atkins, A., The J Paul Getty Museum collections, <http://www.getty.edu/art/collection/artists/1507/anna-atkins-british-1799-1871/>

Atkins, A., Cyanotypes of British Algae by Anna Atkins, (1843), The Public Domain Review, collections. <https://publicdomainreview.org/collections/cyanotypes-of-british-algae-by-anna-atkins-1843/>

Atomic Photographers Guild, 2018, *Takashi Arai, bio and web gallery*. Accessed 18th November 2017 <https://atomicphotographers.com/takashi-arai/>

Azurebumble, aesthetic investigations, 2012, *Takuma Nakahira: 'for a language to come'*. Accessed January 17, 2018 <https://azurebumble.wordpress.com/2012/07/03/takuma-nakahira-for-a-language-to-come-photography-2/>

Baker, S., 2017, *'The Provoke Generation: Rebels in a Turbulent Time'*, Provoke: Forword by Simon Baker for. *A/Fixed* magazine, The Japanese Photography Project (JPP).

Barkley, G., 2012, *Photography Will Eat Itself: some thoughts on Ben Cauchi*, Ben Cauchi Website accessed 4th July 2017 <http://www.bencauchi.com/glenn-barkley-essay/>

Basso, R., Taste of Cinema web site viewed January 2018. <http://www.tasteofcinema.com/2016/the-10-best-filmmakers-who-still-shoot-in-film/>

Batchen, G., 2001, *Each Wild Idea: Writing, Photography, History*, Massachusetts Institute of Technology, United States of America

- Batchen, G., 2012, *The Way of All Things*, essay on Ben Cauchi, Ben Cauchi website. Accessed 4th July 2017. <http://www.bencauchi.com/essays/batchen.pdf>
- Batchen, G., 2016, *Emanations: The Art of the Cameraless Photograph*, DelMonico Books, Prestel. ISBN-10: 379135504X ISBN-13: 978-3791355047
- Batchen, Geoffrey. "Ruination." *Art Monthly Australia*, no. 288, *Art Monthly Australia*, Apr. 2016, p. 38.
- Benjamin, W., 1927 -1934, *Selected Writings Volume 2, A Little History of Photography*, translated by Rodney Livingstone and Others Edited by Michael W. Jennings, Howard Eiland, and Gary Smith
- Best, S., 2016, *Art Guide Australia*
- Bohr, M., 2017, *Here and There by Takashi Arai | Visual Culture Blog*, Accessed 5th December 2017. <http://visualcultureblog.com/2015/03/here-and-there-by-takashi-arai/>
- Brennen, B., Hardt, H, (ed), 1999, *Picturing the Past, Media, History & Photography*, University of Illinois Press Urbana and Chicago
- Cameron, R., 2011, *Mixed Methods Research: The Five P's Framework*, published in the *Electronic Journal of Business Research Methods*, Volume 9, Issue 2. Accessed online 20th February 2018. Available through Research Gate: https://www.researchgate.net/publication/267722885_Mixed_Methods_Research_The_Five_Ps_Framework
- Dutch Alternative Photography survey. <https://www.slideshare.net/img-i/the-practice-of-alternative-photography-processes-worldwide-49402519>
- Cassell, C., & Symon, G., Editors, 1994. *Qualitative methods in organizational research, a practical guide. Qualitative research in work contexts.* (pp.1-13). London: Sage.
- Cauchi, B., 2016, *Ben Cauchi biography*, accessed 3/7/2017 <http://www.bencauchi.com/home/>
- Christchurch Art Gallery, interview with Ben Cauchi, provided by RDU 98.5FM, <https://christchurchartgallery.org.nz/multimedia/artist-interviews/ben-cauchi-interview>
- City Gallery, Wellington, 2105, accessed 3/7/2107, <http://citygallery.org.nz/exhibitions/ben-cauchi-sophists-mirror>
- Contemporary Daguerreotypes, *Takashi Arai*, web gallery. Accessed 30th October 2017. <http://cdags.org/arai-takashi/>
- Creswell J.W., (2003) *'Research Design: Qualitative, Quantitative and Mixed Methods Approaches'* 2nd Edition, Sage Publications.

Creswell, J.W. and Plano Clark, V. L., 2007, *Designing and Conduction Mixed Methods*, Thousand Oaks CA: Sage eBook PDF Version ISBN 13: 9781483344379

Close, Chuck, website, viewed January 2018 <http://chuckclose.com/>

Coe, B., *The Birth of Photography*, 1976,

Davre, A., 2017, *Seeing Nuclear Issues in Daguerreotypes: An Interview with Takashi Arai*, Volume 7, Issue 2: Technologies, Spring 2017

Davre, A., 2017, *Seeing Nuclear Issues in Daguerreotypes: An Interview with Takashi Arai*, Volume 7, Issue 2: Technologies, Spring 2017, *Trans Asia Photography Review*. Accessed 3rd February 2018 <http://hdl.handle.net/2027/spo.7977573.0007.204>

Dewdney, A., 2016, *Co-creating in the Networks: A Reply to 'What is 21st Century, Photography? The Photographers' Gallery Blog*, (Internet Publication), <http://researchopen.lsbu.ac.uk/2051/>

Dewdney, A. (2017). *Co-creating in the Networks: A Reply to "What is 21st Century Photography?"* [Internet Publication]. Retrieved from <https://thephotographersgalleryblog.org.uk/>.

Dykstra, J., 2016, *Residency Unlimited, In the Studio: Daisuke Yokota*, press release Accessed 5th January 2018. <http://www.residencyunlimited.org/in-the-studio-daisuke-yokota-by-jean-dykstra/>

Estrin, J., *Kodak's First Digital Moment*, *The New York Times*, Lens, Photography, Video and Visual Journalism, Accessed January 2016 <https://lens.blogs.nytimes.com/2015/08/12/kodaks-first-digital-moment/>

Fellini Gallery, Takashi Arai, Bio and Web Gallery. Accessed 30th October 2017. <http://www.fellinigallery.com/en/artists/takashi-arai>

Foam Museum, <https://www.foam.org/>

Foam Museum, 2016, *Announcements, Winner Foam Paul Huf Award*, <https://www.foam.org/museum/programme/winner-foam-paul-huf-award-2016>

Fontcuberta, Joan and De Kerckhove, Derrick and Paquet, Suzanne and Ritchin, Fred and Tomas, David. *The Post-Photographic Condition*. Montreal, Qc: Montreal's Photo Month; Bielefeld, Germany: Kerber Verlag, 2015.

Giddings, L., and Grand, B., 2006, *Mixed methods research for the novice researcher*, published by *Contemporary Nurse*, Volume 23, Issue 1, October 2006. Accessed online 28th January 2018. Available through Research Gate: https://www.researchgate.net/publication/6714260_Mixed_methods_research_for_the_novic

e_researcher

Gelinas, L, Pierce, R., Winkler, S, Cohen, G., Fernandez, L., Bierer, B., The American Journal of Bioethics, Volume 17, 2017 - Issue 3 17:3, 3-(online version) Accessed January 201714, DOI: 10.1080/15265161.2016.1276644

Gottschalk, M., 2016, [Artsy.net/article/artsy-editorial-have-we-reached-peak-digital-photography](http://artsy.net/article/artsy-editorial-have-we-reached-peak-digital-photography)

Grieve, Michael. "Destroy And Renew." The British Journal of Photography, vol. 164, no. 7858, Aptitude Media Ltd, Apr. 2017.

Grieve, M., 2017, Daisuke Yokota I sometimes (literally) blazing a trail through photography. The British Journal of Photography (online version), Accessed 5th January 2018 <http://www.bjp-online.com/2017/10/yokota-roman-road/>

Guimaraes Lima, M., 2008, Introduction to the History of Photography, Henry Fox Talbot, Photography History Blogspot <http://photographyhistory.blogspot.com.au/2008/01/w.html>

Hardt, H., Brennen, B., ed., 2013, *Picturing the Past: Media, History and Photography*, University of Illinois Press, Urbana and Chicago

Heckert, V., *Light Pater Process: Reinventing Photography*, published by J Paul Getty Museum, Los Angeles.

Henson, Bill, website viewed January 2018. <http://tolarnogalleries.com/artists/bill-henson/>

Hockney, D., Falco., C.M., 2006, *Secret Knowledge: Rediscovering the lost techniques of the Old Masters*, Revised Edition, Published by Thames & Hudson Ltd, Great Britain. ISBN: 9780500286388 ISBN-10: 0500286388

Hulick, D.E., Hershberger, A., E. ed, *The Transcendental Machine? A Comparison of Digital Photography and Nineteenth-Century Modes of Photographic Representation*, in Hershberger, A. E., (ed) *Photographic Theory: An Historical Anthology*, 2014, Published by Wiley Blackwell, UK

Huyssen, Andreas, *Twilight Memories: Marking Time in a Culture of Amnesia* (London: Routledge, 1995).

Ireland, P., 'Photography - New directions, the 1970s to 2000s', Te Ara - the Encyclopedia of New Zealand, <http://www.TeAra.govt.nz/en/video/43230/ben-cauchi> (accessed 15 July 2017) <http://www.teara.govt.nz/en/video/43230/ben-cauchi>

Johnson, A., 2016, Artist Profile, Interview with Justine Varga <http://www.artistprofile.com.au/justine-varga/>

Johnson, R., Onwuegbuzie, A., and Turner, L., 2007, 'Towards a definition of mixed methods research', *Journal of Mixed Methods Research*, Vol.1, Issue 2, pp. 112-133.

Keats, J., Forbes, (online news contributor), 2016, See How Chuck Close Reinvented Photography In This Ground-breaking Museum Retrospective. Viewed November 18, 2016 (<https://www.forbes.com/sites/jonathonkeats/2016/11/18/see-how-chuck-close-reinvented-photography-in-this-groundbreaking-museum-retrospective/#6fa1aa997ec4>)

Kenna, Michael, website viewed January 2018. <http://michaelkenna.net/>

Kodak Eastman company website, Ektachrome is back video promotion, viewed January 2019. (<https://www.kodak.com/us/en/consumer/ektachrome/default.htm>)

Kohlbacher, Florian, (2005). The Use of Qualitative Content Analysis in Case Study Research [89 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 7(1), Art. 21, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0601211>

Kooiman, M., 2016, Foam Profiles, Daisuke Yokota: *Synaesthesia*. Accessed October 8 2017 <https://www.foam.org/talent/spotlight/daisuke-yokota-synaesthesia>

Larkin, S., 2017, Why I chose the 'spit and scribble' photographs: Olive Cotton judge on the global furore. *The Guardian*, Australian Edition. Accessed 5th October 2017. <https://www.theguardian.com/artanddesign/2017/aug/02/why-i-chose-the-spit-and-scribble-photograph-olive-cotton-judge-on-the-global-furore>

Laurent, O., Time Magazine LightBox(online) Steve McCurry: I'm a Visual Storyteller Not a Photojournalist, <http://time.com/4351725/steve-mccurry-not-photojournalist/>

Lazar, D., 2015, The rise of the social algorithm, <https://science.sciencemag.org/> Sourced Jan 2016

Lensculture online book review accessed October 8 2017 <https://www.lensculture.com/articles/daisuke-yokota-matter-burn-out>

Lehman, G., 2014, Leaman, G., Rethinking retromania: temporality and creativity in contemporary popular music, website, garethleaman.com

Lens Culture Magazine, 2018, *About Takashi Arai*. Accessed 18th November 2017. <https://www.lensculture.com/takashi-arai>

Liew, R., 'The Gravy' Interview with Ben Cauchi, YouTube, accessed 4th July 2017 https://www.youtube.com/watch?v=-v_3xFW7o0w

Likert, Rensis, 2016, In Helicon (Ed)., *The Hutchinson unabridged encyclopedia with atlas and weather guide eBook*. Published by Helicon. Available from James Cook University Online library resources. ISBN: 1786845687, 9781786845689 Accessed 26th February

2018

Lister, M., 1995, *the photographic images in digital culture*, published by Routledge, London

Lomography.com.au: What the Hell is Lomography?

McMahon House, 2011, (author unknown), McMahon House Residency, Ben Cauchi.

accessed 4th July 2017

<http://www.mccahonhouse.org.nz/Residency/MeettheArtists/BenCauchi.aspx>

McRay, J., (Ed.) 2015, Rensis Likert in: *Leadership Glossary; Essential Terms for the 21st Century*, Published by Mission Bell Media. Available from James Cook University Online library resources. ISBN: 9780990730002 Accessed 26th February 2018.

Mann, Sally, <https://www.sallymann.com/>

Masters of Photography website Accessed 4th April 2018. (<http://masters-of-photography.com/>)

Man Ray Dust Breeding 1920 Metropolitan Museum of Art, accessed July 4, 2017.

http://www.metmuseum.org/toah/works-of-art/69.521/_Rosenblum, N., 1997 - *World History of Photography* page 31

Markham, A. N., (2017). Troubling the concept of data in digital qualitative research. In Flick, U. (Ed.). *Handbook of Qualitative Data Collection* London: Sage.

Man Ray, The Met online, Rayograph, 1922, Met Museum Collection. Accessed January 2020. <https://www.metmuseum.org/art/collection/search/265487>)

Michell, H., 2017, press release, Justine Varga, Winner of the 2017 Olive Cotton Photography Award, accessed 16th December 2017. <https://www.hugomichellgallery.com/>

Mitchell, W. J., 1992, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*. Page 19 Cambridge, Mass: MIT Press

Moakley, P., 2013, Bill Henson and the Dark Matter of Portraiture, Time online, the backstory, viewed <http://time.com/75947/bill-henson-and-the-dark-matter-of-portraiture/>

Moore, L., *Likeness*, 2015, <https://lauramoore.com.au/>, viewed December 2019

Mutual Art, Varga, J., Biography Accessed October, 2017

<https://www.mutualart.com/Artist/Justine-Varga/F28ECB7E1B1AE2B4/Biography>

Murphy, C., 2012, 7th AICCM Book, Paper and Photographic Materials Symposium, accessed 4th July, 2017, <https://aiccm.org.au/sites/default/files/MURPHYPaper.pdf>

O'Hagan, S., The Guardian, Arts & Design, 'Aphex Twin is my inspiration': Daisuke Yokota, the acid-loving photography of tomorrow. Accessed 8th October, 2017

<https://www.theguardian.com/artanddesign/2015/may/22/daisuke-yokota-acid-loving-japanese-photographer>

Opalenic, E., website, <https://elizabethopalenik.com>

Otieno, D., Matoke, V., 2014, Social Media as a tool for Conducting Academic Research, International Journal of Advanced Research in Computer Science and Software Engineering, p 963

Panofsky, E., in Daniel Talbot (ed) 1959, Style and Medium in the Moving Pictures, Film New York Simon and Schuster Page 15

Phelan, H., Business of Fashion, 2016, Fashion Photographers Return to Film, website, <https://www.businessoffashion.com/articles/intelligence/fashion-film-photographers-hawkesworth-weir-dodgson-ghertner>

Photobook Reviews, Wo1/2018 accessed 4.1.201 <http://cphmag.com/daisukeyokota/>
20x 24 Studio, 2014, Chuck Close and the Vanity Fair Hollywood Issue, <https://20x24studio.com/?p=2282>, viewed January 2018

Piper, JE, In camera cyanotype technique, alternativephotography.com. viewed March 2020.

Rattray, J., Jones, M., 2005, Essential elements of questionnaire design and development. Journal of Clinical Nursing, Issues in Clinical Nursing, Issue 16, pp 234 to 243. Blackwell Publishing Ltd. Accessed online 20th February 2018. Available through Wiley Online Library: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2702.2006.01573.x>

Residency Unlimited, 2015, press release, Daisuke Yokota Accessed 5th January 2018 <http://www.residencyunlimited.org/residencies/daisuke-yokota/>

Richter, F., The Statistics Portal, Felix Richter, Fe 13 2019 <https://www.statista.com/chart/5782/digital-camera-shipments/>

Rosenblum, N., 1997 - World History of Photography page 31

Rubenstein, D. 2016, What is 21st Century Photography? The Photographers' Gallery Blog, viewed <https://philpapers.org/rec/RUBWIS> Commissioned by The Photographers' Gallery, in this essay Rubinstein answers "one of photography's most complicated questions": In our contemporary image-world of computers and algorithms, what are the key philosophical questions proposed by the medium of photography today?

Rudman, Tim, website viewed January 2018. <http://www.timrudman.com/>

Sarvas, R, Frohlich, S.L., 2011, From Snapshots to Social Media - The Changing Picture of Domestic Photography, Springer-Verlag London.

Listening to Photographs: (In)audible Temporalities in Daisuke Yokota (TSpec3) Accessed January 16, 2018 <https://www.youtube.com/watch?v=2ruM69umfr0>

Seymour, T., *British Journal of Photography* (Online), Leading Japanese photographer Daisuke Yokota wins Foam Paul Huf Award 2016 Accessed October 8 2017 <http://www.bjp-online.com/2016/03/leading-japanese-photographer-daisuke-yokota-wins-foam-paul-huf-award-2016/>

Shannon, D., Johnson., T., E., Searcy, S., Lott, A., 2002, Using Electronic Surveys: Advice from Survey Professionals. *Practical Assessment, Research & Evaluation*, Volume 8, number 1 2002 Online resource accessed 20th February 2016 at <https://pareonline.net/htm/v8n1.htm> **ERIC Number:** EJ670703

SohoPhoto Gallery, 'How JE Piper took his prize-winning image with his real Krappy Kamera', viewed March 2020. <https://myemail.constantcontact.com/Krappy-Kamera-1st-prize-winner-tells-all---show-closes-Mar-1--.html?soid=1102433539713&aid=GH9wAzgJ9jU>

Somerset, G., 2012, Ben Cauchi interview – the long version. accessed 4th July 2017 <http://www.listener.co.nz/culture/arts/ben-cauchi-interview-the-long-version/>

SOURCE Photographic Review, editorial, edition 80, Autumn 2014.

Source Cord Photography Prize, 2015, Takashi Arai, video artist talk. Source Photographic Review Vimeo site. Accessed 30th October 2017 <https://www.youtube.com/watch?v=qIDROAEcQfk>

Spagnoli, Jerry, website viewed January 2018 <https://www.jerryspagnoli.com/>

Squiers, C., (ed) 2000, *OverExposed*, essays on contemporary photography, published by the New Press, New York.

Sternbach Joni, website viewed January 2018 <http://jonisternbach.com/>

The American Museum of Photography, The Mumler Mystery, accessed 4th July 2017 <https://www.photographymuseum.com/mumler6l.html>

The Eye of Photography, *Cent Soleils*, by Takashi Arai. Accessed 30th October 2017. <http://www.loeildelaphotographie.com/en/2017/04/11/article/159946217/cent-soleils-by-takashi-arai/>

Uelsmann, Jerry, website viewed January 2018. <http://www.uelsmann.net/>

University of the Arts, London (UAL), research online viewed January 2018, http://ualresearchonline.arts.ac.uk/9490/1/Rubinstein_What%20is%2021st%20C%20Photography.pdf

Varga, J., 2017, Justine Varga: making photos without a camera in pictures, *Art and Design*

Gallery, The Guardian, Australian Edition, Accessed 5th October, 2017
<https://www.theguardian.com/artanddesign/gallery/2017/aug/02/justine-varga-taking-photos-without-a-camera-in-pictures>

Varga, J., 2017, *Artist Interview, Emanations: The Art of Cameraless Photography*, Accessed October 2017. <https://www.youtube.com/watch?v=-rwa0dO-Pkg>
<https://www.dialogues.org/interview/07/15/2016/justine-varga-artist-interview-emanations-the-art-of-cameraless-photography/1483000675>

Yamamoto, Masao, website viewed January 2018. <https://www.yamamotomasao.jp/>
Victoria and Albert Museum, V&A Blog, Accessed October 2018.
(<https://www.vam.ac.uk/blog/news/our-new-photography-centre-is-now-open>)

Ware, Mike, 2008, Website, The New Cyanotype Process, viewed March 2108.
<https://www.mikeware.co.uk/mikeware/main.html>

Wolifson, C., Ben Cauchi: One's Own Grey. Raven, A Platform for Contemporary Art and Events. accessed 4th July 2017 <https://ravencontemporary.wordpress.com/portfolio/ben-cauchi-ones-own-grey-chloe-wolifson/>

Zang, M., 2017, PetaPixel, Photographer Wins \$20,000 Prize for 'Photo' of Scratches and Spit. Accessed August 03, 2017 <https://petapixel.com/2017/07/27/photographer-wins-20000-prize-photo-scratches-spit/>

APPENDIX A - GLOSSARY OF ALTERNATIVE PROCESSES TERMINOLOGY

Process	Year Released	Description
Albumen Prints	1840's	Beaten egg whites are combined with salt and potassium iodide which is applied to a 100% cotton paper substrate.
Alternative processes	<i>1835 to current</i>	Historical photographic processes; chemical-based wet processes; camera obscura; pinhole photography; darkroom (silver gelatin) processes; infrared; experimental hybrid processes.
Ambrotype (also known as amphitype or collodion positive)	1851	Similar process to wet-plate collodion; however, the light-sensitive medium is on a glass plate, not metal. The resulting image appears as a 'negative' until the back of the glass is coated in black or it is placed in a plate holder. This produces a positive image.
Anthotype	1840's	Uses juice from fruit or flowers as the sensitising medium. Long exposure times are required, and the image will fade over time.
Bromoils & Oil Printing	Early 20 th century	Bromoils, oilprints, resintypes and oleobroms. Developed to enable control over black and white printing. A complex multistage printing process which produced a warm tone print.
Cameraless (photogenic drawing)	1700	Contact printing process where objects are placed onto light-sensitised substrates. Where the object stops contact between the medium and light there is no exposure. Where the light is able to

		intersect with the light-sensitive medium, it is developed. This results in the production of a stencil or shape of the object.
Carbon and carbonyl printing	1846	Uses pigmented tissue, potassium dichromate and gelatin to produce a print.
Chemigrams	1956	Discovered by Pierre Cordier. Uses resists on photographic paper in a similar way to wax is used with batik dyeing. The resist stops the effects of the developer on the black and white photographic paper. The paper turns black where it has been exposed to light and light where there the resist protects the paper.
Chlorophyll printing process	2005	Images are printed onto living leaves through the photosynthesis process. Negatives or digital negatives are used to either allow or block light from intersecting with the leaf. Process invented by artist Binh Danh.
Chrysotype (chrypotype or gold print)	1842	Uses colloidal gold to record images on paper.
Cyanotype	1842	Also known as the blueprint. Potassium ferricyanide and Ferric ammonium citrate in solution as a light-sensitive medium.
Direct positive		Final image produced in-camera as a (direct) positive image not negative to be printed later. For example, daguerreotype, wet-plate collodion, tintypes.
Daguerreotypes (mercurial)	1839	Sheet of silver-plated copper is polished to mirror finish. This is sensitised using silver iodide exposed

		to bromine fumes. It is then developed with heated mercury (fumes) and fixed with sodium thiosulfate.
Daguerreotypes (Becquerel)	1840	Polished metal plate polished to mirror finish which is sensitised by fuming with iodine alone. Once the plate is exposed in-camera using bright light it is developed by exposure to sunlight filtered with yellow or red glass.
Gelatin Silver Prints or Gelatin Dry Plate (negative and print)	1880	Replaced wet-plate processes. Silver salts are suspended in solution and used to coat glass, film or paper. Also referred to as Darkroom Processes.
Gum bichromates	1839	A multi (or single) layered photographic printing process which produces a colour print over a monochrome base print. Separation negatives (cyan, magenta, yellow, red green) are used to lay down watercolour pigment to precise areas of the print. Each layer is individually registered and then coated.
Gumoil	1990	The process was developed by Karl P. Leonig. The method of creating prints involves sensitising a sheet of 199% rag paper with polychromatic gumoil the paper is then exposed with intense ultraviolet radiation. Once the paper is developed in water it is dried and rubbed with a dark pigment. Once excess pigment is wiped off and the paper is dipped in bleach to remove some of the light-hardened residual gum, the

		paper is ready for another pigment application. This is a long and complex process which may take days.
Hybrid processes – digital capture and alternative output.	Current	Images are captured using digital technology e.g. camera and or scanner. A digital negative is produced from the image and printed onto transparency film via an inkjet printer. This digital negative is used to print using one of the alternative printing processes. Another process is to record camera obscura imagery with a digital camera.
Infrared	1910	Traditionally infrared film or now digital camera with sensor converted to capture and record the near infrared electromagnetic light waves between 700 and 900 nanometres (nm). This process records infrared radiation reflected off surfaces and is especially evident off leaves, grass and other subject which reflect IR. Contrast is produced in an image when there are subjects which both absorb and reflect IR radiation. That which absorbs remains black or in the darker tonal range, that which reflects is becomes white or is rendered in the lighter tonal ranges.
Digital processes – digital capture (camera), process and output	1975 - 1986	First self-contained electronic device developed in 1975. First DSLR released in 1986 by Nikon
Lomography –	1992	Creative film and camera range originally based on the Lomo LC-A a popular Russian camera from the

		1980s. Lomography continue to release new art films, cameras and lenses. The range includes the plastic Holga cameras and lenses.
Kallitype	1889	Similar process as Van Dyke. Developed by W. W. J. Nicol. The paper is coated with a mixture of ferric salt and silver nitrate solution and exposed through a negative and developed in a solution of sodium acetate, sodium citrate or potassium oxalate or Rochelle salts depending on the intended print colour.
Liquid Emulsion (Liquid Light)	2007	Liquid silver emulsion which can be applied to a range of surfaces. Exposure and development are the same as for gelatin silver printing.
Lith Printing	1997 (approx.)	Silver gelatin print is overexposed and developed partially in highly diluted lith film developer. The result is a soft, warm tone highlights and mid tones and cool gritty and harsh shadows. Success is dependent on paper choice.
Lumen Prints		Contact printing (photogenic drawing) process which uses photographic paper and either sunlight or UV light source to produce the image. No development required however, the paper must be fixed to retain the image. The object blocks the access of light to the paper or allows contact with light where there is no object.
Mordancage	1960	Etch-bleach process. Silver gelatin print is manipulated

		through acid bleaching, rubbing and lifting the emulsion layer. Original process invented by Jean-Pierre Sudre however, is based on bleach etch gelatin relief or reversal relief. First documented in 1897 by Paul Liesegang. A toxic process which uses hydrogen peroxide and hydrochloric acid or ammonium persulfate.
Platinotype		Also known as platinotypes are a monochrome print process which uses platinum salt instead of silver nitrate as the sensitising medium.
Platinum Palladium		Monochrome prints which use platinum and palladium in the process
Photogram		A process made popular by the work of Man Ray in 1922. Similar process to photogenic drawing, however, using silver gelatin papers in the darkroom.
Pinhole		Handheld or smaller version of the camera obscura. Dark box and 'pin hole', no lens used. A variety of light-sensitive emulsions from film to other types such as sensitised paper. It is known to have prolonged exposure times. Modern pin hole cameras utilise digital cameras with the body cap and a 'pin hole' aperture.
Polaroid Transfer (printmaking process)		Artistic approach to using Polaroid photographs. Once expose the image is removed from the support or backing Develop by pulling the film from the holder. Wait about

		10-15 seconds and quickly pull the film apart, not letting the two sides (the picture and the negative) touch. Put the pulled apart negative face down on paper (or other material). Place pressure over negative and let sit for about 20 minutes. Then pour hot water over each side of the negative/paper sandwich. Gently peel the negative from the paper. Allow transfer to dry, face up.
Salt Printing	1930	One of the earliest photographic printing processes. Invented by Henry Fox Talbot to produce a positive photographic print. Paper is soaked in sodium chloride and then sensitised using silver nitrate. The final print is fixed using sodium thiosulfate.
Tintype		Also known as melainotype or ferrotype. A process which a photograph is made creating a direct positive image on thin metal substrate coated with light-sensitive medium which is collodion sensitised with silver nitrate.
Wet-Plate Collodion	1851	Invented by Frederick Scott Archer and Gustave Le Gray simultaneously. Plate (substrate) is coated with collodion mixture which is then sensitised through immersion in a solution containing silver nitrate which is then developed after exposure. May be used in either wet or dry

		form. Replaced the daguerreotype.
Dry Plate Collodion	1851	Same process as above however, plate is dried and stored until required. Dry plate process required longer process times.
Vandykes	1842	Van Dyke or Van Dyke brown prints take their name from the final colour of the image and was named after Anthon VanDyke. Paper is coated with a mixture of ferric ammonium citrate, tartaric acid and silver nitrate.

APPENDIX B – SURVEY QUESTIONS AND RESPONSES

Question 1 What is your age? (n/ = 115)				
15-24	25-44	45-64	65-74	Other
3	36	63	13	0
2.60%	31.30%	54.80%	11.30%	

Figure 1- Question 1 data with percentages

Question 2 What is your gender? (n/= 113)			
Male	Female	Other	No response
70	43	0	2
79.1%	48.59%	0.0%	2.26%

Figure 3 - Question 2 data with percentages

Question 3 What is your location? (n/= 115)					
Australia	Asia	The United Kingdom	The United States	Europe	Other
34	2	23	34	14	8
39.1%	2.3%	30.42	39.1%	16.1%	9.2%

Figure 4– Question 3 data with percentages

Question 4 How would you best describe your experiences in photography? (n/=112)				
Amateur with a strong interest in photography	Exhibiting and or professional artist	Educator and or academic	Experimental photographer	Other
18	57	26	44	12
20.16%	63.84%	29.12%	49.28%	13.44%

Figure 6 - Question 4 data with percentages

Question 5 – How would you describe your photographic practice or genre? (n/=114)

Portraiture	Landscapes	Natural or botanical form	Abstract or Surreal	Other
25	43	29	30	27
28.5%	49.02%	33.06%	34.2%	30.78%

Figure 9- Question 5 data with percentages (original data extracted from Google Forms survey)

Question 6 – How long have you been working with alternative processes? (n/=114)

Less than 5 years	5 to 9 years	10 to 19 years	20 + years	Other
35	30	19	26	5
30.45%	26.1%	16.5%	22.6%	4.5%

Figure 13 - Question 6 data with percentages

Question 7 How would you best describe your experiences with alternative processes? (n/= 113)

Interested but not produced work	Novice, with basic understanding and skills	Intermediate, have produced some work	Experienced, use these processes as part of my professional and/or exhibition work	Other
4	6	39	64	4
3.50%	5.40%	34.50%	56.60%	3.60%

Figure 16- Question 7 data with percentages

Question 8 - What was your first introduction to alternative processes? (n/= 113)

Through a photography or enthusiast group	At or through an exhibition	In a magazine, journal or internet site	At secondary school or college level education	Other
12	5	27	51	12

Figure 19- Question 8 data table

Question 9 – Would you describe your education in alternative processes as? (n/=112)				
Self-taught from book (written instructions)	Self-taught from internet e.g. YouTube video instructions	Workshops conducted by artist	University or college degree which included these processes	Other
31	18	23	34	6
27%	15.70%	20%	29.60%	8%

Figure 21 - Question 9 data with percentages

Question 10. Have you ever worked with digital processes? (n/=113)				
No, I have never used digital capture and or output in my practice	Yes, I embraced digital technology and use a hybrid model of practice	Yes, I have used digital processes, but have returned to alternative and or analogue practices.	Yes, I primarily use digital capture and output, and only use alternative processes as an interest	Other
3	67	17	16	10
3%	59.30%	15%	14.20%	9%

Figure 23 – Question 10 data with percentages

Question 11 – Which of the following alternative processes are included in your photographic practice? (tick more than one response if applicable) (n/=116)				
Cyanotype	Van Dyke Brown	Salt Printing	Carbon Printing	Daguerreotype
88	38	33	15	8
75.9%	32.8%	28.4%	12.9%	6.9%
Tintype	Wet Collodion	Ambrotype	Gum Bichromate	Gumoil
29	25	20	52	10
25%	21.6%	17.1%	44.8%	8.6%
Mordancage	Gelatin Silver	Chrysotype	Calotype	Bromoil & Oil Printing

8	63	4	5	14
6.9%	64.3%	3.4%	4.3%	12.1%
Albumen Prints	Photogravure	Platinum & Palladium	Polaroid & Polaroid Lifts	Lumen Prints
21	15	26	40	30
18.1%	12.9%	22.4%	34.5%	25.9%
Liquid Emulsion	Anthotype	Add option ('Other')		
39	12	22		
33.6%	10.3%	14.4%		
<i>Figure 26 - Question 11 Original data with percentages</i>				

APPENDIX C – INTERVIEW QUESTIONS

Interview Discussion Points

Background information about the artist and their practice:

1. What type of processes you use? How long?
2. Have you tried other processes?
3. Do you use alternative/chemical or analogue processes exclusively in your practice?

And/or

4. Do you use digital technology as part of your practice?

Why do you work with alternative/chemical or analogue processes?

1. What inspired you to investigate alternative processes? /What originally drew you to work with alternative processes?
2. Do you think an object (photograph) produced using alternative processes is more unique than one created using digital technology?
3. Do you think that the slowness or the complexity of is the appealing part of alternative processes?

Do you think there is a unique aesthetic?

1. Would you agree that each type of photographic process produces its own type of look, or aesthetic?
2. How would you describe the aesthetic in your work?
3. Do you think incorporating the use of alternative or hybrid digital/analogue processes in your practice has produced a unique visual aesthetic?
4. Do you think the mix of alternative processes and contemporary subject matter creates a distinctive and unique contemporary look?

Subject matter in the work

1. When working with alternative processes, do you think the choice of subject matter is important to the success of your work?
2. Do you look to photograph classic or more contemporary subject matter in your work?
3. Do you think that working with alternative processes assists you with the creativity in your practice?

Exhibiting

1. Are you an exhibiting artist?
2. Have you exhibited in the past 5 years?
3. What type of work did you create for this exhibition?
4. Do you think alternative processes have a place in mainstream galleries?
5. Do you see or envisage a trend towards galleries exhibiting or looking to exhibit work created using alternative processes?
6. Do you think that this current interest in alternative processes will continue?

APPENDIX D – OVERVIEW OF INTERVIEW PARTICIPANTS, PROCESSES AND LEVEL OF PRACTICE

APPENDIX D - List of Interview participants, processes and level of practice.		
Interview participant	Type of process	Level of Practice
1	Darkroom	Exhibiting artist/ workshop convenor/ runs public access space and gallery
2	Camera Obscura	Exhibiting artist
3	Daguerreotype	Exhibiting artist/educator
4	Wet Plate	Professional photographer/emerging artist
5	Wet Plate	Professional photographer/ exhibiting artist
6	Cyanotype/Experimental Filmmaker/ Moving Image	Emerging artist/ works outside of this area currently.
7	Wet Plate	Professional photographer who uses digital for this and emerging artist using wet plate
8	Lumen	PhD student in sciences using alternative processes to collect data/ exhibiting artist
9	Darkroom	Exhibiting artist/ academic and educator
10	Wet Plate	Engineer who works with wet plate as a hobby and with students for educational purposes.
11	Silver gelatin film/ papers/cyanotypes/photographic etching/digital photography	Exhibiting artist/ runs alternative photography (international but based in the UK) collective/ website/ exhibition and education space.
12	Silver printing/dry plate/pinhole	Emerging artist/Honours student