ALTERNATIVE PHOTOGRAPHY IN THE DIGITAL AGE:
PERFECT PHOTOGRAPHS IN AN IMPERFECT WAY

A Master's Thesis

by

SERDAR BİLİCİ

Department of
Graphic Design
İhsan Doğramacı Bilkent University
Ankara

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by

SERDAR BİLİCİ

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in

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ANKARA

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I certify that I have read this thesis and in my opinion it is fully adequate, in scope and in quality a thesis for the degree of Master of Fine Arts in Graphic Design.

_____

Assist.Prof.Dr. Dilek Kaya
Supervisor

I certify that I have read this thesis and in my opinion it is fully adequate, in scope and in quality a thesis for the degree of Master of Fine Arts in Graphic Design.

_____

Dr. Özlem Özkal
Co-supervisor

I certify that I have read this thesis and in my opinion it is fully adequate, in scope and in quality a thesis for the degree of Master of Fine Arts in Graphic Design.

_____

Assist. Prof. Dr. Marek Brzozowski
Examining Commitee Member

I certify that I have read this thesis and in my opinion it is fully adequate, in scope and in quality a thesis for the degree of Master of Fine Arts in Graphic Design.

_____

Assist. Prof. Dr. Ersan Ocak
Examining Commitee Member

Approval of the Graduate School of Economics and Social Sciences

_____

Prof.Dr. Erdal Erel,
Director

ABSTRACT

ALTERNATIVE PHOTOGRAPHY IN THE DIGITAL AGE:
PERFECT PHOTOGRAPHS IN AN IMPERFECT WAY

Bilici, Serdar

M.F.A., Department of Graphic Design

Supervisor: Assist.Prof.Dr. Dilek Kaya

Co- Supervisor: Dr. Özlem Özkal

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This thesis explores the possibility of an alternative future of photography from the union of digital and chemical domains of the photographic medium. The historical photographic processes known as Cyanotype, Salt print and Vandyke Brown are employed for this project in conjunction with the modern inkjet printer produced digital negatives.

As being highly sensitive to the variables during the process, each alternative photographic print exhibits a visual uniqueness. In this aspect, there is conceptual correlation with the visual uniqueness of alternative photographic processes and the visual uniqueness of albinism. Emphasizing the human element in subject, vision and craft of making photographs, this project aims to produce unique photographs of a visually unique subject.

Keywords: Alternative Photography, Digital Negative, Antiquarian Avant-Garde, Cyanotype, Van Dyke Brown, Salt Print, Sun Print, Albinism

ÖZET

SAYISAL ÇAĞDA ALTERNATİF FOTOĞRAFÇILIK:
KUSURLU MÜKEMMELİKTE FOTOĞRAFLAR

Bilici, Serdar

Yüksek Lisans, Grafik Tasarım Bölümü

Tez Yöneticisi: Yrd. Doç. Dr. Dilek Kaya

Ortak Tez Yöneticisi: Dr. Özlem Özkal

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Bu tezin amacı fotoğrafçılığın kimyasal ve sayısal alanlarının birlikteliğiyle biçimlenecek olası bir alternatif fotoğraf geleceğini keşfetmektir. Bu çalışmada, Cyanotype, Salt Print ve VanDyke Brown olarak bilinen tarihi fotoğraf teknikleri, modern mürekkep püskürtmeli yazıcılar ile elde edilebilen sayısal negatifler kullanılarak oluşturulmuştur. Baskı sürecindeki türlü etmenlere karşı son derece duyarlı olan alternatif fotoğraf baskıların her biri görsel açıdan kendine has ve eşsizdir. Bu bağlamda, alternatif fotoğraf tekniklerinin sergilediği görsel eşsizlik ile albinizmin görsel benzersizliği arasında bir bağlantı kurulmuştur. Fotoğraf üretme eyleminin öznesinde, vizyonunda ve zanaatında insan etmenine vurgu yapan bu çalışma benzersiz bir konu üzerine benzersiz fotoğraflar üretmeyi amaçlar.

Keywords: Alternatif Fotoğrafçılık, Sayısal Negatif, Antiquarian Avant-Garde, Cyanotype, Van Dyke Brown, Salt Print, Güneş Baskı, Albinizm

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CHAPTER 1

INTRODUCTION

1.1 The Purpose of the Study

In the early days of the invention of the camera, its optical accuracy heralded it as the tool of objective documentation. As the photographic medium was kept being employed for various applications, it was realized that the indexical nature is only but one of the qualities of a photograph. The indexical nature and optical accuracy did not ensure truthfulness of the information on a photograph, but rather information was shaped by the intention of the photographer. William Henry Fox Talbot named his photographs as *photogenic drawings* realizing the creative possibility in it. It was the photographer's intention to create art with the camera from the start, but being accepted to the art world was no easy transition.

Initially photographers imitated the aesthetic qualities of classical paintings in order to be accepted to the art world, and when the Photo-Secessionists succeeded to sell

photographic collections to a fine art museum, they decided not to pursue the aesthetics of pictorialism any longer. They realized how much photography changed and freed painting from its duty to depict faithfully in their encounter with the modern and avant-garde, so they would strive to be free as well and explore their medium's unique qualities. Many other photographic movements came after Photo-Secessionists focused on the subject of freedom of expression through their medium. Some emphasized and advocated the craft to its excellence such as Straight-Photography. Some believed that the negative is just a starting point for the creative process and embraced post-visualization theory. Some, in order to attain freedom of expression, integrated any kind of innovation into photography and experimented. Some movements like Lomography advocated not minding the rules but rather accepting happy accidents.

Due to its technological nature, photography constantly evolved. Paper negatives become glass and later celluloid, orthochromatic black and white emulsions turned panchromatic and even color photography became possible. The papers and the negatives become more sensitive, consistent and commonly available. Photography today is even more common, installed in every cell phone and gadget, an electronic way of imaging has flooded, and intangibility became the latest quality of a photograph. The majority of photographers quickly embraced the electronic imaging, and some strongly opposed the idea, at any rate the electronic imaging become a reality for photography.

Camera manufacturers produced new and digital cameras, while stopping the production of film cameras and accordingly lowering the production of film related products. It was at this stage that some photographers, enraged by the change, have come to realize how the industry of photography shaped its means of practice and

robbed them from their favored ways of photographic expression. Many photographic movements overlooked what the industry of photography has offered them. Actually, their freedom was heavily dependent on what the industry offered as film, paper or camera. They were not free as they thought as they were, after all cameras are technological by nature. Vilém Flusser (2000) stated that true photographer struggles against the automation in apparatus, and snap-shooter is intoxicated from the automation it offers. However, it is not just about controlling and struggling the automation of the camera apparatus. The industry of photography is also part of this problem, it defines the way the apparatus is programmed to operate. Ansel Adams (1981) acknowledged the problem that the photo industry fueled by stating that he feels sometimes the progress gets in the way of the creative process. With the desire to attain higher automation, the photographic industry created such fail safe photographic appliances that it might seem there is no longer need for the photographer. With the great revolution, the electronic imaging, the photo industry integrated almost two hundred years of photographic possibilities into the "newer" and "better" photographic appliances.

At this point, the question of what will be in the future of photography has to be asked. The digital medium, due to its youth, lacks certain distinction, but rather chooses to imitate the analog medium. The analog and digital domains seem to be in conflict mostly for the reason that the industry of photography seems like it had forsaken the old medium in favor of faster, easier and more consumable newer counterpart. Regarding the future of photography, Nazif Topçuoğlu (2010) refers to a prediction made by Grundberg in 1989 and states that the future of photography relies on the images that are digitally or manually altered that look like unique works of craftsmanship

and look more like artworks rather than the reality that the photographs capture. This question "what the future of photography would be like" is the main motivator of this thesis and the visual project is based on. How can the prophecy of Grundberg, shared by Topçuoğlu as well, and by many others, be possible to achieve. I believe there is so much in photography's past that helps to envision today. There is an alternative future for photography in its past.

There are photographers who share the belief that the future of photography resides in its past. The photographic movement of Antiquarian Avant-Garde deals with the long obsolete photographic processes in creating contemporary photographs. However romantic and tempting these processes are, there is no sense from the view point of photography's future to embark on a quest to practice puritan analog/chemical photography. However as a result of the union of chemical and electronic domains, photographs that were not possible by then can be done today. In doing so, it is also possible to show that there is another possibility to attain the freedom and enrich the expression that critical photographer's long sought for — a deliberate attempt to outwit the apparatus.

As the small differences in chemicals determine each photographic process's unique appearance, unique visual traits of people with albinism are also determined by such small chemical differences. These differences make each human distinct, unique and precious. In this aspect there is a conceptual correlation with the visual uniqueness of albinism and the visual uniqueness of alternative photographic processes. The *human* both as subject and in the vision and craft of making photographs is the concern of this study which aims to produce unique photographs of a visually unique subject.

This project consist ten photographs of two people. The reason that there are only two models for the project is the difficulty to get in touch with the albino community. This problem is mostly due to the lack of a foundation for people with albinism. Another reason is that the people I contacted were concerned about how they were going to be represented in the photographs. So, I offered to sign model release contracts with them ensuring that their photographs are not going to be sold or distributed without their knowledge.

The photographs of this project were shot using a digital camera and they were printed using three different alternative photographic processes respectively Salt Print, Cyanotype and VanDyke Brown. The chemicals required for each of the processes were prepared from raw chemicals. The negatives required for each processes was produced using an inkjet printer. These negatives were calibrated and linearized digitally to get the most detail out of each alternative processes.

1.2 Overview of Chapters

Chapter Two focuses on the history of photography and its use in pseudo-scientific practices. It also discusses the belief that a photograph cannot lie and therefore it is truthful, and remarks the overlooked involvement and the intention of the photographer in the process of making photographs. It also explores the struggle of photography to be accepted as a means of creating art, and formulating the qualitative distinction about how the mechanical apparatus can be employed for artistic purposes.

The intention and the struggle to outwit the apparatus automation is explained and exemplified. Finally, the contemporary photography movement, Antiquarian Avant-Garde, in search for enriching the means of expression in photography is discussed and some of the principles of the movement that are embraced by this thesis project are stated.

Chapter Three explores the subject of albinism defining the condition in itself. Earlier photographic representation of albinism is discussed in relation with the myths and stereotypes woven around the condition as well as albinism in popular culture that feeds these myths and negative representation. Contemporary photographic works on the subject of albinism are examined and the relation between albinism and the particular way of producing photographs embraced in this project are stated.

Chapter Four explains the alternative photographic processes employed in the making of the photographic works of this project. Brief historical and technical information on each process is given together with the observations on the process. The subject of inkjet digital negatives is explored. Its advantages, varieties, different complexities and principles are stated as well as thoughts and observations on the process.

Chapter Five is a collection of the project statement, the approach to photographing the subject. It also explains the process of photographing. The reasons and the significance of each photograph, as well as the process used for them are explained. The exhibition format for the photographic works of this thesis is also stated in this part.

The Final Chapter is reserved for observations and further suggestions on the subject as well as the photographic prints.

CHAPTER 2

THE PAST AND THE ART OF PHOTOGRAPHY ENVISIONED TODAY

2.1 Photography as Ocular Protagonist

After the invention of a simple device, camera obscura, which allows a beam of light entering a dark room through a tiny hole and reflects the outside world upside down, it took centuries for photography to be born from the union of sciences. Over the centuries, with the advancements in optics and in chemistry, the ephemeral world inside the camera obscura, which very much resembled ours, could be fixed on surfaces, detached from space and time permanently. The invention of photography reformed how the world is perceived as well as it reformed the world.

Beginning with the 19th century, the camera's ability to record what is in front of the lens indiscriminately and to capture the geometric space accurately heralded photography as

the possible means of objective documentation. Thus, photography took on the role of providing evidence for many scientific fields such as astronomy, anthropology, medicine and even used for surveillance and criminal studies. Susan Sontag (1977: 3) described the photography's service to provide evidence and pointed out that "Something we hear about, but doubt, seems proven when we're shown a photograph of it". Nonetheless, photographs were not only endorsed as evidence". Anne Marsh (2003: 13) points out that:

> Photography has a multifarious history: it is both a surveillance mechanism and an instrument of creating fantasy; a serious tool in the service of science and a major component of the entertainment industry.

Its optical accuracy for reproducing the world out there put photography in the service of positive sciences, despite the subjective vision of the camera's operator. John Szarkowski (2003: 99) points out "the public believed that the photograph could not lie, and it was easier for the photographer if he believed it too, or pretended to". Marsh (2003: 14) points out that photography seduced masses by the myth that "seeing is believing" and created "through a variety of means, that the discourse surrounding the photograph is *true*". The photographs dissipate the doubt as Sontag (1977) stated. However, the photographer's involvement in the process was overlooked due to the youth of the invention. It took time for photographers as well to realize how their involvement affected the *truth* of a photograph.

There was no surprise that photography, a wonder of the modern world, was burdened by the needs of modern ways as modernism aimed to produce a new world and it required a new way of seeing. Photographs, in the service of science were not only used to create the visual data for scientific records, phenomena and experiments, but also as Wells describes, were "entrusted with delineating social appearance, classifying the face

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of criminality and lunacy, offering racial and social stereotypes" (1997: 26). Wells (1997: 26) states that:

> Modernism aimed to produce a new kind of world and new kinds of human beings to people it. The old world would be put under the spotlight of modern technology and the old evasions and concealments revealed.
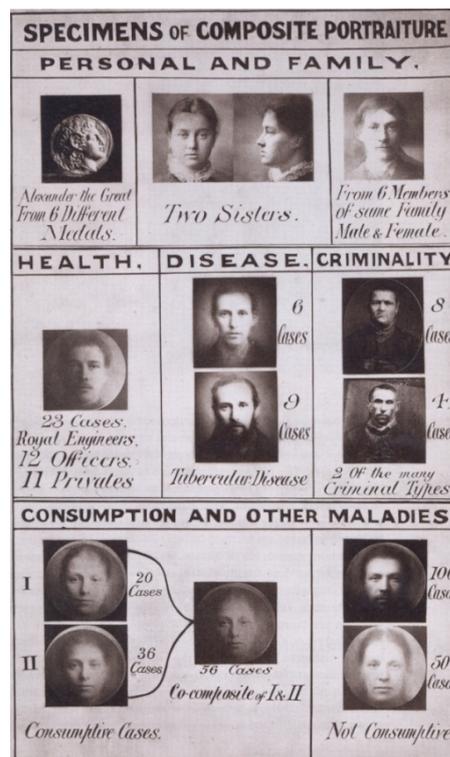
Figure 1 - Sir Francis Galton, *Inquiries into Human Faculty and Its Development*, 1883 (Sturken and Cartwright, 2009: 356)

Photography's use as a method of scientific taxonomy[1], cataloging and classifying people, is one of the most important parts of the photographic history. In this period, scientific photography dealt with the morphology of the human body; interior and

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[1] **Modern systems of scientific taxonomy introduced in the eighteenth century by the Swedish botanist Carl Linnaeus grouped animals in a manner that did away with the subjectivity and arbitrariness of descriptive names alone. Linnaeus introduced a dual system that divided animals according to generic (genus) and specific (species) names. The Linnaean system grouped species according to an ideal morphology (shape). (Sturken and Cartwright, 2009:357)**

exterior, in an attempt to create a visual encyclopedia of the human species. Human specimens were categorized to their cranial shape, skeletal structure, body morphology and these categories were associated with intelligence, breeding, criminal tendencies, mental and physical diseases. The founder of eugenics[2], Sir Francis Galton, used superimposed photographs of criminals, prostitutes, and people with tuberculosis and categorized them as deviants (see Figure 1).

During the same period, photographic categorization was used to determine criminality in other countries. In Paris, police official Alphonse Bertillion used photography to determine criminal body types, thus creating the early mug-shots. An Italian psychology and medical law professor, Cesare Lombroso, photographed criminals to classify physical traits of criminality. After all, the photographs were believed to be truthful, and the camera to be a means of objective documentation and there was not much doubt that the photographs could lie. Photographer was assumed to be a mere operator, pushing the buttons ensuring the apparatus did its job to reproduce reality faithfully.

The visual traits of certain social stereotypes suddenly became an evidence against the people that were photographed. As Sturken and Cartwright (2009: 359-360) pointed out, "these were pseudosciences, mere cultural ideology", and this tendency to differentiate, identify and create a discourse using science was troubling:

> This idea would feed into racist eugenic political programs such as Nazism in Germany that used scientific discourse to justify genocide (the killing off of an ethnically or culturally linked group of people who are believed to constitute a genetically distinct group).

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[2] In the eugenic view, not all races were deemed worthy of reproducing; that is, eugenics was guided by the belief that certain types and races should not breed in order to eliminate their traits from humankind. (Sturken and Cartwright 2009: 360)

As Marsh (2003: 16) pointed out, "Thus the camera became an ocular protagonist in the scopic regimes of modernity. In short, an apparatus of would be dominant ideology". All the visual markers derived from photographic categorization and classification methods used to determine and point out people that are considered different, deviant or *other*. However, this was not a vice of the photographic medium. Even though the process of photographing can be superficially described as a recording of light that reflects back onto a light sensitive surface, a photograph is not necessarily a faithful recording of a specific moment in time. Photographed world resembles the world it has been captured from, but clearly it transforms what it describes. This transformation of meaning is a result of many variables inherent in photographic medium; one of which is the channel the photograph is distributed. Flusser (2000) pointed out that with each change of channel a photograph is distributed, its meaning is altered, and he stated that "it is a codifying procedure". Flusser (2000) underlined an important, but overlooked aspect, about the information of photographs and states "it is an uncanny fact that the normal photographic criticism fails to detect this dramatic involution of the photographers' intention with the channel program in the photographs."

The intention of the photograph is often what shapes the information of a photograph. The photographs of the criminals, prostitutes, diseased and *others* did not proved to be any evidence; they had no more truth than the pseudo-scientific discourse woven around them. It was a mistake to blindly trust the myth of photographic truth. Later on, as wider range of medium's capabilities were realized "people became aware that documentation is better achieved by fully automatized cameras… and that human intervention disturbs documentation" as Flusser (1984) remarks. Similarly, Marsh (2003: 13) describes the camera as prosthesis of the operator, and claims that it is deeply

connected to his desires and not every photograph "confirms and perpetuates a dominant ideology".

Roland Barthes (1981) also remarks how the mechanism of desire works and clashes with the photographer who shapes his portraiture; "The one I think I am, the one I want others to think I am, the one the photographer thinks I am, and the one he makes use of to exhibit his art". So, in the process of photographing, the visual qualities of Barthes' photograph no longer matters. The visual information about Barthes is transformed into what the photographer intends and the way photographer exhibits his art is the channel that he distributes it and this is the way that the photographic image is coded. It was not only what the camera has recorded, but what the photographer abstracted and the observer saw and remembered as final product.

Another early and popular use of the medium was the photographing of ghosts, spirits and supernatural phenomena which was nourished by the discourse that photography depicts reality and therefore is true. Spirit and supernatural photography actually undermined the myth that the photographs are truthful as all spirit and supernatural in this period turned out to be hoaxes. These early attempts of using photography to nurture fantasy and tackling with the subject of the unknown in later years found a similar use, after being adopted by the Surrealists. Photography was not necessarily fundamental to Surrealism, but Surrealists found great benefit in its use, and as Marsh (2003: 175) pointed out "After surrealism, especially its magazine culture, it is impossible to think of photography in terms of faithful record of the world" (see Figure 2).

Figure 2 - Man Ray, *Ingre's Violin*, 1924 (Ray, 1996)

Photography's use to discriminate people is an ideological one, and it is a darker part of the photographic history. The photographs can be used in accordance to the intention of the owner of the photographs. Some photographs are used by certain ideologies, relying on the myth of photographic truth, to promote their views. Photographs do not reflect the objective truth, but rather the intention of its operator. Recognizing the involvement of the photographer within the photographs unravels the falsity of photographic truth.

Since its early days of invention, many enthusiastic photographers strived to make art with photography. Even though, Talbot named his prints as *photogenic drawings,* realizing the artistic potential of the medium, it took many years for photography to be

recognized as a medium capable of being more than just an apparatus of indexical reproduction of the world.

2.2 Photography's struggle to become Art

Photography as a new technology and a mechanical reproduction device, created a debate whether it is art or useful technology. The debate continued for almost half a century. In the early half of the 20th century photographers took on the role of taking pictures of the battlefields and documentary photography gained a stronger foothold. This was later established and distinguished as photojournalism, and it showed the public that the photographic medium was not just a means for mechanical reproduction but it also conveyed messages. It was no more seen as a tool for mining data by science but making the necessary connections, thus revealing information. Flusser (1984: 2) remarks this process of realization stating that "Photo history is a process of becoming aware of the meaning of *information*".

There were many argued against the idea that photography can be art. For example Baudelaire (Rexer 2002: 12) and on photography's claims to be art, stated that:

> If photograph is allowed to supplement art in some of its functions, it will soon have supplanted or corrupted it altogether, thanks to the stupidity of the multitude, which is its natural ally…if it be allowed to encroach upon the domain of impalpable and the imaginary, upon anything whose values depends solely upon the addition of a man's soul, then it will be so much the worse for us!

Even the photographic societies of the time were uninterested in photography as art. Wells (1997: 208) points it out as follows:

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> Photographic society of Great Britain - in the 1870s and 1880s had emphasized the science and technology of photography, and offered no support for the progress of photography as Art.

It was the Photo-Secession movement in early 1900s that, "in an effort to make people realize that photographers were artists and not simply people shooting snapshots" (Bamberg 2012), that made the significant case for the medium's artistic possibilities. It was not only the Photo-Secession movement during the period that searched for means to unburden photography of its shackles. There were many other photo groups and movements aimed to fulfill the same goal. These movements were looking for ways to use the medium as a "more impressionistic and flexible tool and realize a valid form of artistic expression, much as painter used paint, brushes and canvas and sculptor marble, stone and chisels" (Kieseyer, Krumhauer and Philippi 2008: 10). Members of the Photo-Secessionists coined the term pictorialism[3] to define their adopted aesthetic sense, much inspired by traditional paintings. There is no need to deny that the movement's approach was also a defensive position with regard to the old arguments against photography's artistic claims such as Baudelaire's. At any rate, it was an attempt for independence from the documentary duties in order to enrich its possibilities.

The founding father of Photo-Secession movement, Alfred Stieglitz, together with the collaboration of Edward Steichen, published the magazine entitled *The Camera Work* which paved the way for photography as art (Kieseyer, Krumhauer and Philippi 2008: 8):

> He created the Photo-Secession from a group of American photographers who had begun by emulating European pictorial ideals with a sense of underdog apology, but who rapidly developed their own

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[3] Although pictorialism was termed by Photo-Secessionists, Rexer argues that the term Pre-Raphaelite is more accurate.

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confident photographic language which eventually became photography's lingua franca.

Figure 3 - Alfred Stieglitz, *winter on 5th Avenue*, 1893, (Kieseyer, Krumhauer and Philippi, 2008)

Stieglitz gathered a group of elite photographers to form the Photo-Secession group and rented a salon for photographic exhibitions at the 291 Fifth Avenue, later known as 'No. 291'. *The Camera Work*, the first photographic journal, contained handmade reproductions of photography in the highest quality possible and texts which promote photography's artistic traits. At the gallery 291 photographic works of various photographers, as well as Photo-Secessionists' works, were on display, and not just photography. Stieglitz also created exhibitions for various European modern and avant-garde artists at gallery 291 including Matisse, Rodin, Cézanne and Picasso. The efforts of the movement achieved the recognition photography long yearned for in America. An

American fine arts museum[4] bought a number of Photo-Secessionists' photographs, but by that time Stieglitz encouraged and influenced by the modern avant-garde, decided that pictorialism was of another era, and it had to end. Thus many photographers influenced by the movement embraced the idea of finding freedom of expression whatever the medium is (Kieseyer, Krumhauer and Philippi 2008).

In this way, fresh ideas about what photography should be like were born. They were no more felt bound to pictorial aesthetics but were open to many possibilities. It was photography that liberated painting from its old confinements to depict realistically and faithful to its subject. It was after then painting had blossomed and found more means to express, which Stieglitz realized in his dealings with the avant-garde. This awakening was described by Sturken and Cartwright (2009: 194-195) as follows:

> Art photographers established what was significantly photographic, emphasizing the unique qualities of the photographic surface, black-and-white imagery, and shadow and light that the technique afforded and what would arouse aesthetic appreciation within the terms of photography's own distinct codes. Art photographers thus gained acceptance for their medium as a form that has its own unique qualities.

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[4] Albright Art Gallery, now known as Albright-Knox Museum, at Buffalo, New York bought fifteen photographs in 1910. (Adato, 1999)

Figure 4 - Paul Strand (New York: The Metropolitan Museum of Art, 2004)

Even with a fresh mindset for photography as an art form, this transition would not happen over a short period due to the destruction brought by the First World War and later by the Second World War. In the years to come what is called "Straight-Photography" would prevail over pictorialism. Photographers like Paul Strand, whose works was previously published in *The Camera Work*, used stark abstractions of shadows and geometric structures (see Figure 4), and the group f/64, formed by artists such as Imogen Cunningham, Ansel Adams and Edward Weston, strongly opposing pictorialism in their manifesto, would contribute greatly to redefine what their medium would look like.

Photographers embracing and emphasizing the distinct qualities of their medium eventually proved their claim that photography can be a means to produce art. Photography was eventually free to experiment, express and progress no longer bound only to document reality. Cameras evolved as well as light sensitive films. Many people were able to own a camera and make photographs, not just only artists.

2.3 Automation and Photographic Apparatus

By the 20th century, photography considered itself as free from the traditional aesthetics of pictorialism and from the duty of faithfully reproducing reality. Photographers could concern themselves with creativity; visualize their imagination by using the distinct qualities of the photographic medium.

On the other hand, the photographic apparatus, the camera, is a technological construct, and it produces technical images[5], but not necessarily art. The desire to make art with the camera requires a certain amount of control over what is going on in the black-box of the apparatus. Snap-shooter is also able to control the apparatus and it would not be a far-fetched claim to say that a trained monkey can do it too. If a strong distinction between ordinary camera user and the critical photographer who intend to produce art is necessary that requires some qualitative difference.

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[5] "The technical image is one produced by an apparatus. Apparatus, in turn, are products of applied scientific texts, making technical images indirect products of scientific texts". (Flusser, 2000:5)

Flusser (2000: 8) proposes that photography is a technical image in nature. His definition for imagination in terms of technical images is important:

> The specific capacity to abstract planes from the space-time "out there" and to re-project this abstraction back "out there" might be called "imagination." It is the capacity to produce and decipher images, the capacity to codify phenomena in two-dimensional symbols, and then to decode such symbols.

Figure 5 - Ansel Adams, *the Tetons - Snake River*, 1942 (Adams, 1998)

Ansel Adams (1981: ix), an American landscape photographer, pianist, one of the founding members of the f/64 group and the creator of the zone system; describing his photographic work states something in parallel:

> Many consider my photographs to be in the "realistic" category. Actually what reality they have is in their optical-image accuracy; their values are definitely "departures from reality." The viewer may accept them as

realistic because the visual effect may be plausible, but if it were possible
to make direct visual comparison with the subjects, the differences
would be startling.

Ansel Adams' work was not simply an abstraction of the majestic landscape, his *re-projection back out there* was codified and simply not by the apparatus. Through the zone system he was able to shift the grey values to his needs. Exposing dark blacks as if they were greys or lightest greys as darker values, controlling the chemical development, if necessary making it two step distinct developments (highly unusual in terms of standard procedure), and placing these values again in the print in accordance to his vision, he was able to produce photographs that are familiar yet not existed *out there* in truth. This is how the values in photographs are departures from reality. His vision was not only finding what he saw worth photographing but he translated what is *out there* into what he would like it to look *out there*. Adams believed that the final photograph should be realized the time shutter is pressed and he theorized the term "pre-visualization".

The methods he used to create his photographs, as Flusser (2000) pointed out, were within the many possibilities[6] of the apparatus, but it was not the part of the automation that the apparatus had offered. Ansel Adams' work is supportive of what Flusser (1984: 2) proposes: "This is the difference between a snap shooter and a true photographer: the one loves automation, the other one struggles against it".

Jerry Uelsmann's works fall into another category diverse from the principles of straight photography. His method can be shortly summarized as photomontage, which is interchangeably used with the term photo-collage, but photo-collage is cutting and

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[6] Flusser (Flusser, Towards a philosophy of photography 2000) describes these possibilities as virtualities contained in the program of the apparatus. "The camera has been programmed to produce photographs, and every photograph is the realization of one of those virtualities contained in that program"

gluing together photographs that do not require the creator of the process to be the photographer of those images. "Uelsmann creates a world in which the unexplainable can occur" (Pagani, 2007: 66) and he refrains from titling his works so that no textual guidance to the meaning of the image could distract the viewer. His works often explore the relation between the human and the world and preoccupation with death. Pagani (2007: 66) interviewed Uelsmann and explains the process he uses:

> Uelsmann employs up to eight enlargers to create his combination prints, a process he envisioned while waiting for some of his prints to wash. He realized that he could place negatives in separate enlargers and move his paper from one to another.

Figure 6 - Jerry Uelsmann, *Mechanical Man* (Uelsmann, 2000)

Uelsmann, in 1965, presented his theory of post-visualization in opposition to the Adam's theory of pre-visualization; his theory proposes that negative is just a material

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start for the creative process. Uelsmann's post-visualization theory is described by Pagani (2007) as:

> He spent time talking with other artists in other media and saw they had a dialogue with their materials. They engaged in in-process discovery; that is, they composed images as they worked. Uelsmann observed that painters and sculptors were free to admit they did not have a complete vision of what they meant to create when they started working but, rather, figured this out as they went along.

Similarly Uelsmann's way of making photographs starts with materializing abstractions of space-time *out there,* the negatives he uses in photomontage. His re-projections *back out there* are translation of *what is out there* and he was even able to create photographs in which he achieved an uncanny resemblance to what is *out there*, but more than those things that are impossible to be *out there*. He then enriched his photographs' meanings through relations between the elements. The relations required to form the meaning of his photographs can never be achieved through the apparatus' automation and these concepts being abstract in nature and cannot be recorded by the apparatus, but only through human intention and intervention they can be surfaced.

The process of photomontage, at least the way Uelsmann does it, is also within the possibilities of the apparatus. But not within the camera, rather within the enlarger apparatus [7] which does not involve automation. His way of struggling against the automation of apparatus is in the post-visualization stage.

This is not an attempt to start a polemic between these approaches in favor of one over the other, or not to propose anything goes when making photographs, but to clarify that there is more than one way to print a negative and there is even more than one way to

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[7] **The model of the apparatus Flusser offered can be applied here, to the enlarger as well.**

capture an image in an attempt to make photography an artwork. These theories of how to make photographs is not strict to the analog methods and to the darkroom, they can also find their equivalent appliances today in electronic imaging technologies of photography.

Aesthetical debates in photography, the theories to make photographs and its technological nature aside, the struggle against the automation in apparatus is probably the most important principle that empowers the photographer to be able to make art with a camera. As "Images are significant surfaces" like Flusser (2000: 7) described, no matter who takes the photographs, they will be rich in meaning with all they can possibly signify, precious family albums can testify that.

The critical photographer shows how stupid is the apparatus "by showing us that it is possible to play against automation. To introduce human intention into blind computing" (Flusser 2000). The freedom to express in photography demands to outwit the automation of apparatus, by introducing the *human touch*.

2.4 Automation and the Photography Industry

Although crucial, the human element, that enables photography to become art does not solve the limitation that photography faces. Today, contemporary photography is going through another radical transformation, a technological one, which was foreseen a decade ago by many: the digital revolution. Ansel Adams (1981) mentioned that he eagerly awaits the possibilities that electronic imaging would offer, and expressed his

belief in its practitioner's effort to gain control over it. Even though it provides greater speed and ease of use over the analog medium, due to its being young, digital photographic medium struggles to find its distinct ways to express.

One might consider that after almost two hundred years of accumulation, the analogue medium is free from such troubles, but the case is quite the opposite because of the fact that photography, digital or analog, is dependent on the industry of photography. The process of creating meaningful photographs is not a one-step operation that is completed inside the camera apparatus.

Even though certain level of freedom is attainable from the automation of apparatus' partly technological nature, there is still a dependency on what the photographic industry offers. In terms of the analog medium's print choice Mike Ware (1990: 6) states that:

> In the interests of maximising profits the hegemony of volume production, coupled with years of unidirectional research and development, has left us heirs to a single product only: the gelatine-silver halide paper. This is undeniably a supremely convenient medium: fast, sensitive, of high resolution and consistent quality. It also shows an unparalleled homogeneity: that is to say, it is *monotonous* in the literal sense.

Ware's conclusion exposes a limitation for the photographic print, the fine object of photography, due to the scarcity of choice. Whether the photograph is digital or analog, and whether the print is electro-mechanically or chemically produced, Ware (1990: 6) points out "there can be very few photographers who are genuinely indifferent to the way their images are printed".

Ware also utters the counter argument against his opinion on the importance for print medium stating that certain photographic practices, like photojournalism, documentary and scientific works suggest that the medium is inconsequential but the meaning is paramount. It is necessary to address this counter argument to clarify the importance of the fine object of photography. The photographic print of a constellation on high resolution paper is not the same as the photographic print of the constellation on heavily textured paper. The precise measurability of the symptoms of the world out there no longer exists on the latter print, as the legibility of the scientific text on the surface is heavily deteriorated. Similarly, the color print of a flower is not the same photograph of that flower in black-and-white, as certain information on the black-and-white print will be lost. Not only the medium but also the channel a photograph is distributed codifies and alters the meaning of the photograph as Flusser (2000) describes. Identical images do not necessarily mean the same; the photo of the Loch Ness monster in a tabloid is different than the photo of the Loch Ness monster in a science magazine. The vacation photos of the royal family in their family album are not the same vacation photos of the royal family in a gossip magazine. The photograph of an ordinary object tucked away in a box is not the same photograph of that ordinary object hanging on a gallery wall, as a result of the difference in channel. The meaning of a photograph is codified through the medium and the channel. Furthermore, on the importance of photographic prints James (2009: 542) states that:

> In alternative processes printmaking, the hand and the eye are equal partners in the art of crafting of the image. The print itself is a sign, a symbol, and a mark…perhaps even a metaphor for the process of making the print.

To default every photograph to be printed on an indistinct, standardized print medium, narrows the means of expression, and this attitude would direct photography to a dead end, robbing it off its richness to express.

The scarcity of choices in silver-gelatin monoculture is a symptom of the desire to attain higher automation and it is a consequence of the industry's choice to maximize production in order to increase profit. These forces are not only limiting and interfering the analog processes as but also restricting digital photography as well. Adams (1981: xii) remarked this problem as:

> There are few exceptions, but the general trend today is to apply high laboratory standards to produce systems which are sophisticated in themselves, in order that the photographer need not be. This tendency toward fail-safe and foolproof systems unfortunately limits the controls the creative professional should have to express his concepts fully…I cannot help being distressed when "progress" interferes with the creative excellence.

The progress of the industry brings us to a narrower choice of printing papers in favor of the homogenous, high resolution monochrome paper. Not just papers, but the diminishing analog market leaves us with fewer film and chemical choices as well[8]. All in the favor of more automated systems. Today the photographic industry has accumulated two hundred years of photographic possibilities, and programmed this information into digital cameras and its appliances. That is a paramount automation, but the complexity of the apparatus' automation is what intoxicates snap shooters as Flusser (1984, 1) points out. The oversaturation of photographic media is a testament to how

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[8] An iconic product, Kodachrome, is discontinued by Kodak in 2009 and in 2012 Fuji announced the discontinuation of their famous Velvia films. These decisions do not necessarily mean the film industry is dying, but points out the dependency on photo industry. Kodak introduced new and technologically superior color film products in 2011, and in the last five years they have re-formulated and improved certain black and white film emulsions. In 2012, Ilford announced revenue increase in black&white film and paper sales.

intoxicating it has become to produce more photographs in quantity, but not necessarily the other way around.

Re-formulating, the qualitative distinction of photography as a means to produce art, still narrows down to the human factor, that struggles against the automation in all sorts of the apparatus. In the entire process of making photographs, the critical photographer's purpose is to work against the automation through pre-visualization, realization and performance[9]/post-visualization; seeing, capturing and printing. The automation of the photographic process might get in the way of the creative pursuit as Adams (1981) suggests, and it results in redundant photos as Flusser (2000) points out.

The means for breaking free from the automation in photography can come from anywhere, but some clues can be found within the history of photography. Otto Steinart proposed the term "subjective photography" and with Fotoform, a West-German avant-garde photo group, created the principles of experimental photography. Gezgin (1997: 26) describes the significance of experimental photography as:

> As all plastic arts, photography needs to enrich its own particular language and acquire new means of expression in order to survive…experimental photography integrates every kind of innovation and experience to be found in its field.

In favor of the approach of the experimental photography Flusser (2000: 48) states that:

> They are conscious of the fact that image, apparatus, program and information constitute their basic problems. They are aware that they are trying to fetch those situations from out of the apparatus, and to put into the image something which was not inscribed in the

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[9] Ansel Adams (1981: ix) points an analogy between photographic print and musical performance: "We know that musicianship is not merely rendering the notes accurately, but performing them with the appropriate sensitivity and imaginative communication. The performance of a piece of music, like the printing of a negative, may be of great variety and yet retain the essential concepts."

apparatus program. They know that they are playing against the
apparatus.

Integrating every kind of innovation, two dimensional, three dimensional spaces or moving images as the final product, images can be procured to be freed from the monotonous automation of the photographic industry. This necessity of integration of innovations and deliberately introducing the human factor to the photographic process to outwit the automation is one of the underlying principles of this thesis.

2.5 Antiquarian Avant-Garde

The Antiquarian Avant-Garde is a photography movement, which unlike many prior photo movements, is not associated with any name or any group. It does not have a manifesto. The movement explores the photography techniques that are long obsolete. On the other hand, it is not a way to make photographs look aged or to promote nostalgia, but rather to create contemporary works. In this respect, "the Antiquarian Avant-Garde is anything but antique" as Lyle Rexer (2002: 8) states, "the past informs this work, it is the present that incites it". Rexer (2002: 9) defines Antiquarian Avant-Garde as:

> Camera artists with a wide variety of attitudes and motives were deliberately re-engaging the physical facts of photography, that is, its materials and processes, and turning to the history of photography for metaphors, technical insight, and visual inspiration. We call the movement to return to old photographic processes the *antiquarian avant-garde.*

Christopher James (2009: 542) is in agreement with the name of the movement that Rexer proposes and states that:

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> I nonetheless believe the future of photography as a distinctive
> medium is to be found in its past. Contemporary alternative processes
> artists are, as Lyle Rexer coined well, the Antiquarian Avant-Garde.

The range of techniques that these artists use are numerous and they are often referred as alternative photographic processes; Daguerreotype, Wet Plate Collodion, Tintypes, Pinhole, Cyanotype, Salt Print, Albumen, Calotype, Kallitype, Platinum/Palladium. The term "alternative photographic processes" refers to most of the historical photographic techniques. The term's origin goes back to the 1960s, "a slogan in opposition to Kodak, which threatened to dominate all photographic processes and materials" (Rexer, 2002: 10). They are not mainstream photographic processes but practiced by a limited number of photographers. Suffice to say, the naming of alternative processes was an anti-statement against Kodak monopoly on the ways of photography, as "the first antiquarian avant-garde defined itself in opposition… to industrial photography, to narrow professionalization, standardization, and technical progress, and especially to photography's use as a mere instrument by almost every sector of society, wherever images are presented and consumed" (Rexer, 2002: 14).

Although, these alternative processes were the latest technological means of photographic imaging the time they were invented, they were abandoned from the mainstream in favor of newer (standardized) processes. Ware (1990: 7) states that:

> Technical limitation will probably always confine alternative processes
> to a minority practice compared with the ubiquitous 35mm silver-
> gelatine culture. Many photographers will rightly deem them
> inappropriate for their purposes, either technically or aesthetically.

The technical limitations of these processes can be considered no longer an obstacle. The digital revolution that photography is going through today unintentionally provides means to overcome some of these limitations.

It is necessary to clarify some points about the analog and the chemical methods of photography that the Antiquarian Avant-Garde embraces in opposition to today's highly automated systems and electronic imaging. The analog versus digital debate is quite artificial and counterproductive. Surprisingly, it is never strongly questioned whether if there could be a similar debate possible in another medium that would prove this debate to be meaningful; e.g. watercolor versus oil paint. Ware (1990: 7), in defense of the alternative processes in opposition to silver-gelatine monoculture's dominance, ignites a similar question: "Are painters now expected to give up traditional pigments and use only acrylics?" Both appliances of the medium, in either case, provide distinction regardless of their advantages and disadvantages.

Nonetheless, it is ironic that the digital photographs are trying to look more like film, and "software engineers are pumping out new programs and applications for making digital images look less digital", as Bamberg (2012: 125) pointed out. It is almost the same struggle that the analog medium had gone through. The analog medium strived to be recognized embracing pictorial aesthetics, the look of paintings and in correlation the digital medium mimics the grain of film, color palette and other distinct looks[10] that analog medium accumulated over almost two centuries. If not its authenticity, the digital medium can mimic the looks of the analog processes effortlessly. However, this imitation is the sincerest form of flattery as stated by Graves (2012). Analog photography was stuck in a vicious cycle until it renounced pictorialist approach in favor of finding its own unique ways of expression. This assessment does not conclude that digital medium have no distinct look or possess no certain qualities unique to its own.

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[10] See Instagram, and similar photo effect software

If we can say that photography in the 19th century unburdened the painting from its duty to depict realistically, we can claim similarly that the digital photography released analog/chemical photographic processes from certain utilizations to a great extend; such as passport/identity photos, magazine and news photography. The productive criticism would be to identify the digital domain's unique qualities, encourage and emphasize those qualities, and the critique would be not to succumb to the high degree of automation it offers, and its counter creative consequences. It is possible to propose at this point, and essential to credit the digital medium for it, that the fail-safe applications and high laboratory standards of photographic industry and the high automation within the digital medium have awakened the photographers to other photographic possibilities and became one of the forces that flared up the rise of the Antiquarian Avant-Garde. Flusser (2000: 48) points out the aim of his essay as: "the task of philosophy of photography is to question these photographers about their freedom, and to investigate their search for freedom". In this respect, the challenge towards the photographic industry's automation is the motivation behind the Antiquarian Avant-Garde photographer's search for freedom.

Although, Antiquarian Avant-Garde photographers are exceptionally skilled in the craft of specific photographic processes they chose to practice, they embrace the possibility of accidents, failure and imperfections. The involvement of the photographer is often visible in the making of the photograph. Every photographer's reason to engage in the antiquarian methods of photography differs, but often, there is a strong correlation between the photographic object and the idea. Similar to what James (2009: 542)

suggested for alternative photographic prints, these images are also sometimes a sign, a symbol and a mark even a metaphor on the process.

In a short documentary, Luther Gerlach, one of the Antiquarian Avant-Garde artists, who practices Wet Collodion technique demonstrates his way of making a Wet Collodion Ambrotype [11] photograph of his daughter Amelie (Brazhnik 2009). The documentary displays the meticulous work of preparing a wet plate required for the process, but more importantly the statement of Gerlach is crucial. He explains what he

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[11] Wet Collodion Ambrotype is photographed onto a black glass and thus the final image is observed as a positive. Ambrotypes are one of kind images and they are not reproducible. The word Ambrotype is derived from the Greek word Ambrotos, which means immortal.

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feels about the final image and states that "if it was not for the final image looking this way, I would not do it" and also states about the final image that "in its own imperfect way, it is perfect" (Brazhnik 2009).

The camera and the lens he uses for the process are authentic 19th century equipment. The lenses made in 19th century are optically inferior compared to modern lenses, and this difference represents itself in the image. Out of focus areas show a circular swirling distortion, and the lens is sharp enough only at the center. The final image shows irregularities close to the edges, the emulsion flaking off; even there is a finger print of Gerlach himself. Most importantly Wet Collodion emulsion is totally insensitive to red spectrum of the visible light. Despite all the things that can be considered as imperfections, I cannot help but agree with Gerlach, that the final image is perfect in its imperfect way. Amelia is transported into a magical wonderland, and immortalized by his father in Ambrotype. The image is more than about Amelie's visual presence, it is the mark of a loving father's desire.

France Scully Osterman and Mark Osterman, who are both Antiquarian Avant-Garde photographers, are also the first people to start Wet Plate Collodion public workshops promoting the technique in the contemporary sense. France Scully Osterman's photograph from the series entitled Sleep (see Figure 8), is an albumen print made from Wet Plate Collodion negative. She describes the idea of the series as the search for a perfect portrait. She chose to make portraits of sleeping people because she believes in this way no one is acting to the camera, the photographer is non-intrusive. She also states that the sleep like breathing is a universal experience for all human, but remains a mystery since it is rarely observed.

Figure 8 - France Scully Ostermann, *The Embrace*, 2002 - Gold toned Albumen from Collodion negative

(Ostermann, 2002)

Being aware of the red insensitivity of the emulsion, Osterman choses the materials used in the scene accordingly. Her choice of materials and their color effect tonality of the scenes and the results are quite rich (see Figure 9). The poses are crucial in her work, rather their nature of being non-posed-ness. Unlike pictorialist photographs, and most of contemporary portraiture they are not idealized poses. They are unpretentious and intimate, plain humane. Even its resemblance to 19th century photographs in terms of the technique used, because of their non-posed-ness they are not from the era.

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Even though, Osterman is one of the most competent practitioners of the technique, there are visible irregularities on the emulsion by its nature. However, these imperfections are the vital elements of the dream like state of her portraits. I feel that they signify the state of dreaming not being sharp and vivid compared to awakened state. Her portraits give the feeling of remembering the memory of a dream. A dream which is realized in the presence of light is a metaphor for the act of photographing itself.

Ostermans chose to name their approach to photography as "photo-humanism". James (2009: 543) in support to their statement and to his belief, that the future of photography is in its past, clarifies how Antiquarian Avant-Garde and alternative processes share a human centered vision and states that:

> It is all about the human reference in both *vision* and *crafting* of photographic imagery. The light-marking art they produce, and how they define their creative processes, is flourishing as language without compromise, or conditions…one that is not tied to a syntax-dependent feast (as perfect as it is) of 1's and 0's that is only a solar flare away from erasing its history.

The human reference in both *vision* and *crafting* is in harmony with the idea of introducing the human intention into the blind computing of apparatus that Flusser (1984) proposed. Human factor in the process of making photographs might not be as precise as the computed collections of 1's and 0's, but it certainly is personal and humane in its imperfect way. The statement of Gerlach on the photograph of Amelie that the image is perfect in its imperfect way accurately overlaps with the idea and this statement is embraced by this thesis project.

Although, the anti-digital sentiment is one of the forces that kindles the Antiquarian Avant-Garde that does not necessarily mean antiquarian methods of making photographs are exclusive to photography's analog/chemical domain. There is an undeniable degree of mastery required to practice techniques like Daguerrotype, Wet Plate Collodion and Tintypes, but there are other techniques in the arsenal of alternative photographic practices relatively easy to start experimenting and becoming competent. The processes like Daguerreotype, Wet Plate Collodion may evade the union of both domains, as they are conventionally exposed in camera, but there are possibilities for the union and reconciliation of digital and analogue techniques in Antiquarian Avant-Garde.

The necessity to formulate such a union is based on the idea of integration of innovations and inclusion of the human factor in the process of making photographs that benefit from the technology of photography today. It provides an opportunity to reimagine the possibility of the photographic object that benefits from the digital technologies. An alternate means of photography from the union of optics, electronics, and chemistry that could show the rich repertoire of the medium's past can envision today.

CHAPTER 3

ALBINISM AND PHOTOGRAPHY

3.1 Albinism: Stereotypes and Earlier Photographic Representations

Albinism is a genetic condition of inheriting altered genes that cause lack of melanin pigmentation. People with albinism have little or no pigment in their eyes, skin or hair. Albinism affects people of all races, and all forms of albinism are associated with vision problems (NOAH[12], 2010). It is necessary to state that even though the term albino is sometimes claimed to be politically incorrect, there are people who strongly claim that this term is part of their identity, thus opposing to be named differently. For the purposes of thesis both terms albino and person with albinism are used without favoring one or the other.

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[12] National Organization of Albinism and Hypopigmentation

Suitable to the purposes of this thesis, I must remark certain photos of albinism in the 19th century and the representation of people with albinism briefly in popular culture. It appears that there is a considerable archive of albino photos from the 19th century. The portrayal of people in these photographs is comparable to the photographs used by eugenic discourse, or similar pseudo-sciences.

These images basically portray albinos as curiosities of the world. These photographs were often in the popular commercial formats of their time; *carte de visite* and *cabinet cards.* These formats being smaller in size and produced in large quantities, they were easy to sell and distribute. In other words, they were produced in order to be collectibles.

I have greatly benefited from the collection of photos on the Internet by a photographic historian and collector Marcel Safier (Safier n.d.). The photographs presented in this section have a common denominator. The photographed albinos have all been employed by P.T. Barnum at some stage of their life. Although, there are other photographs, I choose to include the people working for Barnum's Museum because their case is the most negative representation for albinism.

Figure 10 –The Lucasie Family Carte de Visite and Barnaum's Museum Exhibition Poster (Safier, n.d.)

An albino family, the Lucasies (see Figure 10) comes to America as a side-show in the employment of Phineas Taylor Barnum. They were presented as black Madagascar lineage and according to rumor their pink eyes stayed opened while they slept. The writing on the poster of Barnum's Museum says:

> The wonderful albino family, Rudolph Lucasie, Wife & Children, from Madagascar. They have pure white skin, silken white hair and pink eyes!! Have been exhibited at Barnum's Museum, N.Y. for three years.

It is very likely that the little girl in the poster was not part of the family, but rather an addition to expand the show, because in all photographs there are only three members of the family. The Martin sisters, other albinos also in the employment of Barnum joined the show of "living curiosities". Additionally, an albino in Barnum's Museum,

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known as Miss Millie La Mar (see Figure 11), was presented as a mind reader, and alleged to have supernatural abilities.

The case of another albino called Unzie (see Figure 12), credited in the posters as the Australian marvel, the albino gentleman, the handsomest man in the world, Unzie the Albino Apollo, and is a colorful one. A research claims that the supposed Aboriginal origin of Unzie is a marketing trick to turn him into a public spectacle for Barnum's museum which he joined quite later (Hernandez 2004). The research even suggests it is possible that Unzie is platinum blonde and bleached his hair and brows, because he has no apparent eye problems[13] in his photos. Whether the claims are true or not, it is true

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[13] Often in one or another photograph of an albino, the person narrow his/her eye lids because of light sensitivity, or the case of nsytagmus or strabismus is detectable.

that the photographs of Unzie are unlike many, but the way he was represented is not different: a public spectacle, and a curiosity.

Suffice to say, the unique visual trait of these people is exploited by entertainment industry, presenting them as curiosities of the world. The pink and red eye myth is quite common, but instead most of the people with albinism have blue or gray eyes. The emphasized ethnicity in the examples of Lucasie Family and Unzie, that these people have an African or Aboriginal origin is also questionable. The fact is that albinism affects all humans regardless of their ethnicity. However, the lack of pigmentation in albinism does not affect distinct ethnical features. In other words an African albino still retains its racial distinct features of hair, facial and bodily features except the color of hair, skin and eyes due to lack of pigmentation. The reason that these people are presented to have a colored origin is a result of the belief that "babies with albinism are the result of a union between black woman and white man" (Palmer, 2007: 145). Palmer remarks on the myths woven around albinism and states that

> Myths and stereotypes have been associated with individuals with albinism from early times, and these stereotypes and myths have been promoted in books, films, documentaries and television. Myths associated with albinism range from the notion that people with albinism have magical powers to a belief that they have an intellectual disability. They are often portrayed as villains, deviants, or sadists.

Figure 12 - Unzie the Albino Apollo (Hernandez, 2004)

The research made by NOAH on the representation of albinism in popular culture via television, cinema and literature is also troubling. Even in the 21st century, the list of antagonizing representation of albinism in popular culture is quite a lengthy one. Famous sci-fi author H.G. Wells, in his book *The Invisible Man,* portrays the obsessed scientist who discovers the formula for invisibility which only works on non-pigmented tissue. The main character, the scientist, being an albino he uses the formula on himself and the albino becomes a metaphor for villainy. (NOAH 1997). *The Da Vinci Code*, in both the novel and in its famous movie adaptation, portrays an albino as the villain. The character Silas is an albino assassin monk, with pink irises and dark red pupils. NOAH claims that they made several attempts to persuade the movie producers not to include ignorance about albinism. However, the result as stated by NOAH (1997) is an "ill-

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informed and offensive stereotype". In the movie, *Me, Myself, & Irene,* the albino character teased as "whitey" or, "Casper" is openly ridiculed for his albinism and use of bioptic visual aids. In the movie *Cold Mountain,* the antagonist character named *Bosie* is a sadistic person who enjoys violence, tortures and kills people in gruesome manners. More disturbing for the albino community, rather than the actor's white make-up, bleached hair and violet contact lenses is the offensive statement made by the director in an interview. He stated that he read as much as possible on albinism, and the condition is a product of incest (NOAH 1997).

There are also examples in popular culture where albinism is not stigmatized. A fantasy author Michael Moorcock's series of novels *Elric Saga* is regarded as a neutral even to some extent a positive representation of albinism. Iain Lawrence's novel *Ghost Boy,* an albino teenager's inner quest for love, acceptance and understanding in the face of alienation, and losing his father in the Second World War, is highly praised by NOAH. However, it is not the scarcity of positive examples that is problematic, but the insistence on the negative representation.

Due to the negative representations and the myths woven around albinism, in some cultures the people are persecuted, becoming victims of public stigma. These myths and representations, in popular culture create a vicious cycle that feeds each other. Due to the rather small size of albino communities, and the lack of knowledge towards their condition, these people sometimes face difficulties for having their voices heard against misrepresentation.

The myth that photographs portray reality is employed by the entertainment industry and it is used in a discriminating way. The photographs sometimes captioned with the stereotypical traits of albinism represented them as the *other*. The visual traits of people with albinism become discriminating against them, very much like the use of photography by pseudo-scientific discourses. The use of photography in the way to categorize people as *other* was an ideological one. That is not a fault of photographic medium but rather an injustice committed during its early ages both to the people and to the photography itself.

In that respect, the subject of the photographs of this thesis project will be the people with albinism and in the photographic style of portraits. Being the photographer of this project, I intend to promote the distinction of being an albino, to remark the uniqueness of the individual and to explore this delicate subject without stigmatizing the people with albinism. The question on how not to exploit this highly visual group of people, as early photographic works did, will be explored in the contemporary photographic works on albinism.

3.2 Albinism and Photography Today

People with albinism have been the subject of a few photographic works in the last few years. This time the remark is on their visually unique condition, and they deal with the concepts of beauty in diversity and aim to promote awareness.

One of the earliest of these photographic works was produced by Rick Guidotti in 1998 under the title of "Positive Exposure" (see Figure 13), a term I will also employ as one of intentions of the photographic works of this thesis. Being a fashion photographer by trade, Guidotti's initial approach was to combine his style with albinism's unique look to promote awareness. His statement is beauty in diversity, seeing the beauty in all the differences. He later expanded his work to photographing people with various genetic conditions. He presented a speech about his work, entitled *from stigma to supermodel*, about photographing people with genetic conditions in one of TED talks in 2011. He states what gripped him initially was the visual uniqueness of the people with albinism. Later on as he made research into the subject he found out, much like what I have found, images of disease, sickness and 19th century albinos presented as freaks, and he became aware of the negative cultural perceptions promoted in movies and literature.

Figure 13 - Rick Guidotti, *Positive Exposure* (Guidotti, 1998)

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The glamour style and the strong typographic elements feel like a fashion advertisement, which was problematic for me initially, but what he photographed to show was a beauty outside the fashion parameters that he often worked with. The fact that these photographs were published in *Life* was essential because of the style of the magazine. He used a mainstream channel as a statement on beauty in diversity, unlike other mainstream use of albinism to connote tragedy and disease.

Guidotti also published a photographic book on albinism, "Real Lives: Personal and Photographic Perspectives on Albinism". In his review of the book Lynch (2008: 111-112) states that:

> This book makes an important contribution to a group of people who have remained almost invisible as a result of little interest in academic and media circles…It successfully raises the profile of a 'highly visual' people who until now have not had the opportunity to speak about their lives and portray themselves in positive ways.

For this series Guidotti took photographs of people with albinism in different places of the world, portraying their life. This time his approach was different. Rather than fashion style beauty portraits, he portrayed these people with their families, in their everyday lives, their life long dreams. The photograph of Ceara from New Zealand portrays her with the traditional dancing costume of her country. She was told she can never become a dancer because of her sight problem, but she become the New Zealand's Celtic dance champion and started a dance school for the visually impaired (TED 2012) (see Figure 14).

Figure 14 - Rick Guidotti, *Real Lives*, L to R, Siri from Mali, Mere from Fuji, Lauren from Australia, Ceara from New Zealand (Guidotti, 1998)

The photographic works of Paolo de Grenet are the first contemporary photographic works on the subject of albinism that I came across, and they are still the source of my inspiration. She photographed people with albinism in Aicuña, Argentina.

Figure 15 –Paolo de Grenet, *Albino Beauty,* L to R, Dani, Tamara, Ana and Anna (Grenet, 2005)

Her desire to photograph albinos was similar to Guidotti, to eliminate the misrepresentation in popular culture and she hoped to eliminate the stigmas associated with looking at the *other*. It is very much like the idea of celebration of diversity. I found her work almost poetic, the portraits are so natural and intimate, and the later works of Guidotti resemble her work in this aspect. It is more about *them* not the *other*, very much like the *human* at the center of Antiquarian Avant-Garde, a vision of the shared human experience.

Gustavo Lacerda's photographic series *Albinos* has similar positive representation. His aim was to put this group of people in front, who have always been outsiders (Tsjeng, 2012). His works, similar to Grenet's and Guidotti's, have a strong emphasis on the human, the diversity and beauty in diversity. The pastel colors of photographs, the way how people blend with their surroundings is like a sign of the photographer's gentle approach to the delicate subject of albinism. His attempt to make posed studio photographs was also a challenge for him. I had experienced similar challenges myself. I was very careful in terms of lighting not to turn the photo shooting into an uncomfortable experience, considering the light sensitivity of people with albinism. I used all the studio strobes at minimum power and always used bounced lighting, no direct illumination.

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The issue of how to photograph people with albinism was not solved easily. I intended to show their visual uniqueness, that was my initial fascination with the subject, and similarly in the case of Guidotti as well. There is nothing wrong with that but this approach could turn into exploitation unintentionally. Therefore more planning was required. Living with albinism was another subject that I considered to photograph. But after certain amount of research, and correspondences, I have realized that is a pretentious task. My correspondence with Amy Hildeberg changed my look on the subject drastically. She is a photographer in US and happens to have albinism; she remarked that she does not remember that she has albinism most of the time. It was actually others people's stare at her, that reminded her of her condition. I formed a firm belief that if the difficulties of living with albinism or a similar subject were to be explored, it should be left to this group of people rather than an outsider like me.

After a test shooting with Ali Şengöz, making studio portraits mostly, I realized that the visual traits of albinism are quite strong, but it was also necessary to eliminate the stigma of looking at the *other*. I did brainstorming with my advisors on how my approach to photograph the delicate subject of albinism should be like. The idea that I should let them decide how to be photographed and how to be represented suited me the most. The more I looked at the Antiquarian Avant-Garde and Ostermans' idea of photo-humanism in-depth, the more I become determined on the pertinence of this idea.

The visual uniqueness of albinism would manifest itself eventually on the photographs. Most importantly how they chose to be represented would be up to them, not to an outsider. The role I would undertake in this approach was being a mediator, a

photographer whose intention collaborates with its subject's intention. I believe through this approach I could make photographs that have parallelisms with Antiquarian Avant-Garde's "photo-humanism". Human in subject, vision and craft, so the result would be collaboration rather than a solo voyeuristic experience. This approach on the photographic cause made me feel that it no longer carried the risk of being exploitative. The 19th century photographs of albinism represented this group of people as curiosities of the world, I intended to let the people with albinism decide how they would be represented in their photographs. We shared the mutual goal, to photograph and to be photographed. In this way, I believe this group of people who are easily noticed in a crowd, but invisible to the society when it comes to their condition would be positively exposed through photography.

CHAPTER 4

ALTERNATIVE PHOTOGRAPHIC PROCESSES

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INKJET DIGITAL NEGATIVES

4.1 Alternative Photographic Processes

The processes used for this project respectively are Cyanotype, Van Dyke Brown and Salted Paper/Salt Print. These three processes fall under the category of POP[14] prints and they possess a certain fascination to many. Bill Westheimer (2011: 36) describes it stating that "the earliest photographers made prints which appeared magically without developing". The image in these type of prints are formed during exposure, unlike modern black and white papers which require a developing agent to form the latent image.

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[14] Printing-out-process

POP prints are also contact printing processes; they require a negative at the actual size of the printed area. This requirement make enlargement from smaller sized negatives impossible. POP prints have certain advantages over develop-out-prints (DOP), according to Young (2011: 6):

> The coatings are applied by hand; the prints are therefore uniquely the photographer's. The tonal range is greater than developed out photographic papers for processes such as salt, albumen and platinum/palladium.

Light sensitive emulsions required for these processes are prepared from raw chemicals, though some of them have a commercial substitute in niche markets. They are usually altered for long shelf life, but not for better image quality. The chemicals used in this thesis project are not highly toxic but working with any raw chemical requires careful handling. I do not intend to include safety precautions[15] for the chemicals used in these processes because they are explained in the guide books for alternative processes in depth. I intend to include the formulas I have used, and the steps I have taken to prepare and process the prints.

These photographic processes I used for the thesis project can be applied to a variety of surfaces, but I will limit my prints to paper. The choice of paper for printing is crucial because not every paper produces the same result. James (2009: 223) states that "papers with manufacturing controls that eliminate most of the impurities that will affect your image" are the best choice for paper for alternative processes. Most of 100% cotton rag acid free water color papers will be suitable for these processes.

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[15] MSDS (Material Safety Data Sheet) documentations for each chemical substance can be obtained from internet.

The texture of the paper must be taken into consideration as well. Heavier the texture less sharp the final print will look. There is also the matter of sizing used in the paper. "Sizing is added to increase surface strength and resists the penetration of solutions into the fibers of the paper" (E. Young 2011: 27). The sizing for watercolor papers is gelatin or starch. These additives also help paper to retain its size after wet treatment, they affect the final print's sharpness, color and tonality and not necessarily in a bad way. No matter how much sizing is used after sensitization, exposure and wet processing, the papers will shrink about half a centimeter in size.

The weight of the paper to be used for these papers must also be taken into consideration. Even though the prints can be successfully made on lighter papers, great care must be taken because after prolonged wet treatment they will become fragile. Heavier papers will withstand more washing times and chemical treatment. For this thesis project I chose to use 300gr cotton rag acid free watercolor papers of Canson Montval. Heavy weight, moderate texture, common availability and consistency of results affected my decision on the paper.

4.1.1 Ultraviolet Exposure Unit for Alternative Processes

Alternative photographic processes used in this thesis project are more sensitive to UV end of the light spectrum. The simplest effective choice for printing is to use the sunlight. However, the intensity of sunlight can vary from one day to another, from season to season, not to mention from morning to noon, so it is not possible to obtain standardized exposure by using sunlight. The sun would certainly provide the exposure

needed, but the required exact exposure times cannot be calculated. However, an advantage of POP prints is that they can be inspected during exposure; therefore sunlight can be employed as a free source of exposure if desired, but cannot be relied for consistency. In terms of light source choices Young (2011: 53) states that

> The sun or alternatives such as lamps or tubes emitting UV light can be used. The light sources essential for printing out processes are a million times stronger than those for developed-out processes. Photographic enlargers cannot produce enough light for printing-out processes.

Through my correspondence with Loris Medici, I have learned that for alternative photographic processes, the bulbs that provide peak output around 365 nanometers of the spectrum are quite suitable. These bulbs provide shorter exposure times compared to regular bulbs, and they are used in certain reprographic applications, also as insect repellent and quite easy to obtain. These bulbs fall under the category of UV-A, and labeled by various manufacturers as BL365 or BL368. These are not typical black lights (BL); these bulbs provide a blue black light and emit actinic UV rays. Unlike purple black light bulbs which are used for decorative and ambience purposes, these bulbs are not safe for common lighting solutions. It is not safe to stare at the light source with naked eye.

In order to have consistency in terms of exposure, I have decided to build a UV exposure unit. There are a considerable amount of do-it-yourself guides and tutorials on the internet about how to build an exposure unit for similar uses, and not just for photographic purposes. Hobbyists in electronics who prepare their own PCBs (printed circuit boards) also happen to use the same bulbs and similar exposure units.

I have examined various applications, and designed a box which can accommodate many UV bulbs of 60 cm in length. A cross over between the electronics hobbyists and photographers exposure unit, I managed to make an exposure unit with completely detachable board that contains all the bulbs, ballasts and electric wiring attached to it (see Figure 17 & Figure 18), which is quite useful in terms of maintenance and troubleshooting. I have acquired ten bulbs each bulb is 20W in power and tagged as BL365. 10 fluorescent bulbs are placed 2 cm apart from each other, and 12 cm high from the bottom of the construction.

The box is constructed from OSB boards of 15mm thickness. The thick boards provide a unit solid enough and yet it is lighter than it would be if any other wood material was chosen. The surface of the detachable board on which the bulbs are attached is coated with aluminum folio to form a reflective surface to ensure the homogeneity and intensity of light. The edges and corners of the box are sealed with acrylic glue to ensure no light is emitted outside the box. Using thinner OSB boards to cover the front of the box and using hinges, a shutter is built to completely seal the box. The finalized UV exposure unit's dimensions are 70 cm x 65 cm x 25cm. The usable exposure area is around 65 cm by 60 cm.
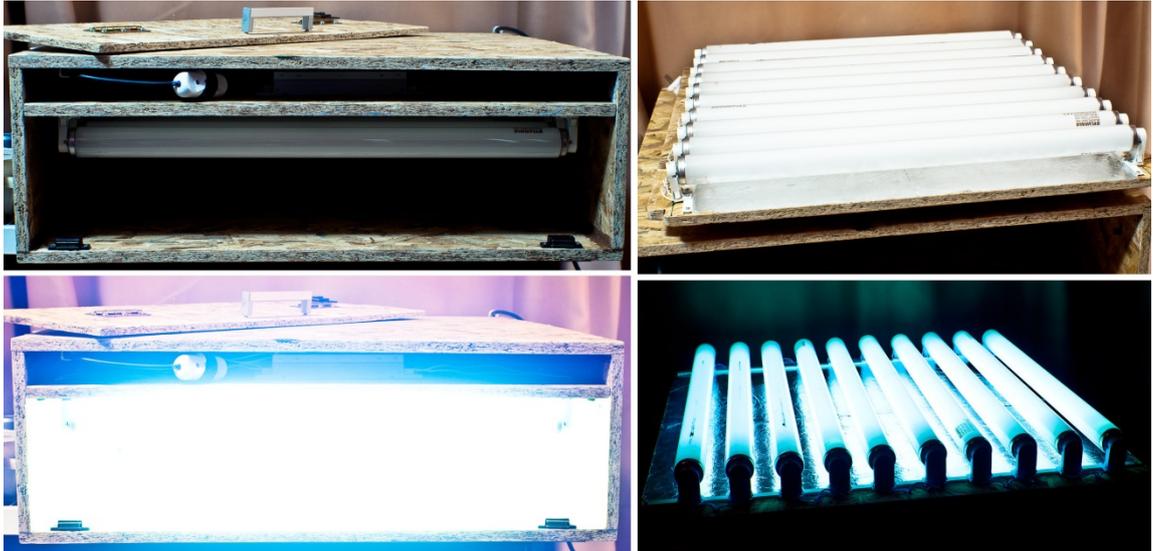
Figure 17 – Ultraviolet Exposure Unit

The exposure times required for each photo sensitive emulsion is different. The choice of paper or a different printing material would affect the exposure times. Comparing the exposure times required using this UV exposure unit to the time intervals in James (2009), and Young (2011), it is safe to say the UV unit performs well within the recommended intervals, and even better in some processes.

Figure 18 – Ultra Violet Exposure Unit Ballasts and Wiring

4.1.2 Cyanotype Process

Cyanotype process is the first invented non-silver photographic process that creates a monochromatic[16] image in the hues of blue, and it is discovered by Sir John Herschel (1792-1871) in 1842 (James, 2009: 150). It is necessary to mention Sir John Herschel's contribution to photography. Sir Herschel is the first person who had introduced the term *photography, positive, negative and snapshot* to the newly forming world of photography. Apart from dozens of photographic processes that he had discovered, he also found that exposed light sensitive silver particles can be fixed with a solution of sodium thiosulfate. This chemical fixer enabled Daguerre and Talbot to permanently fix images in their photographic processes.

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[16] In terms of the difference of the use of term monochrome in color theory and photography, a Cyanotype is a monotone image in terms of color. The reason that photographic print deals in densities (values), it is considered a monochromatic image. Therefore, to define a Cyanotype monochrome is not problematic in the photographic sense.

Figure 19 – Anna Atkins, *Photographs of British Algae – Cyanotype Impressions*, 1843

Cyanotype technique is as old as the birth of photography itself. The first photographic book, *British Algae: Cyanotype Impressions* published by Anna Atkins, who is also considered to be first woman photographer, was created using Cyanotype process (see Figure 19). Even though, it is one of the first photographic techniques, and its blue tones making it one of the most distinct looking photographic processes, its adoption for photographic use was problematic due to its intense color. Ware (1999: 14) states that "in Britain, the cyanotype has suffered an almost total aesthetic boycott by photographic artists, connoisseurs and curators until the last decade or two", and remarks that Royal Photographic Society admitted no Cyanotypes into their collection.

He also points out that The Scottish National Portrait Gallery, the Musée d'Orsay and Musée des Beaux in Paris have substantial collection of Cyanotypes (Ware, 1999: 14).

Even though, Cyanotype's popularity for photographic uses were short lived, the process was used until the 1950s adopted for technical drawings known as *blueprints*. Suffice to say, Cyanotype turned out to be a commercial success, despite the rejection of certain photographic circles.

Cyanotype is often the first process in alternative photography to be experimented because of its relatively simple chemicals, easy application and lesser toxicity. It is also often the first process in the alternative processes that picks the people's attention, and introduces them to the world of alternative photography. The reason might be that the blue pigment is a rarity in nature (Ware, 1999: 14-15).

4.1.2.1 Preparing Cyanotype Sensitizer

The Cyanotype chemistry is practically the same since its discovery; the basic two chemicals needed for this process are ferric ammonium citrate and potassium ferricyanide. There is also a variation on the Cyanotype formula referred as "The New Cyanotype" discovered by Mike Ware in 1997. The new formula uses different chemicals, produces same blue toned prints. It provides better tonality and speed, but it is slightly more toxic and does not work well with some papers (James 2009). Suffice to say The New Cyanotype is better suited to the veterans of alternative photography.

For the purposes of this thesis I will use a modified variation of classic Cyanotype formula (see Table 1) suggested to me by Loris Medici. The modified formula provides a slightly increased tonal range, deeper blue tones at the expense of exposure times. I must remark this modified formula is not suitable for every application. In order to benefit from this formula, a workflow in which the photographer has total control over the density and tonality of the negatives produced is required. For general purposes the formula that James (2009) suggests is better suited and performs equally well.

SOLUTION A	SOLUTION B
80 ml. water	80 ml. water
25 gr. Ferric ammonium citrate (green)	42 gr. Potassium Ferricyanide
Add water to make a total solution of 100ml.	Add water to make a total solution of 100ml.

Table 1 - Modified Cyanotype Formula

4.1.2.2 Sensitizing the Paper

A mixture of equal amounts of solution A and B is coated onto the paper surface with a brush. The mixed solution is photo sensitive and should be used within 24 hours. The light sensitive properties of the mixed chemicals will diminish over time.

The sensitizer is yellow-green in color so it is quite easy to observe the application. A sponge brush or any other brush without any metal parts will work fine. The metal parts that come in contact with Cyanotype might cause chemical reactions because Cyanotype sensitizer contains mostly iron. It is also possible to use glass rod to coat the paper, the

glass rod is sometimes referred to as puddle pusher. The glass rod coating requires some experience and this is not the most suitable choice for beginners. On the other hand, brushes allow more freedom on the shape and texture of the sensitized area. With glass rods the resulting sensitized area on the paper is rectangular.

4.1.2.3 Processing the Print

"The blue color of the Cyanotype print is the result of the reaction of ferrous ions to the photo reduction of ferric ammonium citrate in combination with potassium ferricyanide" (James, 2009: 152). When the paper coated with Cyanotype emulsion is exposed to UV light, the final image is formed and fixed. The ferrous ions that are not exposed to UV light are removed from the paper by washing.

It is possible to control some contrast and retain extra detail in the highlights at the stage of washing the print by including some weak acid in the washing water. The tap water is slightly alkaline and alkaline solutions are used as bleach for Cyanotypes. The simplest solution is vinegar which is a mild acetic acid in nature. Equal amounts of water and vinegar mix will greatly help control the contrast of the print, but it might dull the mid-tones of the print as well (James 2009). Another alternative is to include citric acid in the washing tray. James (2009: 114) also states that whether from underexposure or longer washing times highlights and middle tones easily wash out in the water.

The prints should be washed until there is no sign of yellow chemicals and the whites are completely cleared. The required time might differ, but too long or too short washing has detrimental effects, James (2009: 115) states that:

> You should no longer see any yellow-green coloration in the water. Shorter washing times may leave ferric salts in the paper. Too long a washing time will cause both fading, through a pigmentation loss, and a decrease of highlight details in the print.

At this stage a Cyanotype print does not show deep Prussian blue tones, but rather light cyan tones. The blue tones get darker as the print dries, as the iron in the print is oxidized with air. It is also possible to speed up this process with no adverse effect on the final print. A second water wash is used with a small amount of hydrogen peroxide added. The required hydrogen peroxide can be obtained from any pharmacy. A cap full of peroxide per few liters of water is enough. When the wet print is immersed in the tray with peroxide and water, the cyan tones of the print will instantaneously get darker. James clarifies the process stating that "really, though, all that is happening is that you are accelerating the oxidization of the iron in the print that would happen naturally in a few days without this step" (2009: 115). The dried print will show no change in tones if peroxide wash is used, otherwise it might take a few days for the print to attain its final tonality.

4.1.2.4 Thoughts and Observations on Cyanotype Process

Cyanotype prints benefit from a slightly acidic wash. The reason is that highlights of a Cyanotype print can be easily washed away especially with tap water. I chose to add half

tea spoon of citric acid per 5 liters of tap water. Too much acidified water or straight vinegar wash reduces apparent contrast and leave slightly blue stained highlights.

For the purposes of this thesis I choose to create 20cm by 25cm printable surfaces and use sponge brushes and glass rods for coating. The sensitized surface does not have to be paper or it does not have to be rectangular in shape. Depending on the desired results, Cyanotype proves to be the most flexible emulsion in all of the alternative processes. It can easily be applied to most fabrics, wood and glass (with a binding agent like gelatin or gum Arabic). I cannot claim the same for the other processes used in this thesis, although their application to different surfaces is possible, it might get too labor intensive, the results would be unpredictable and inconsistent.

4.1.3 Salted Paper/Salt Print Process

The underlying reason how salted paper process came to be, according various accounts, is the frustration of Henry Fox Talbot for not being able to make a decent drawing of landscape even with a visual aid like camera lucida. Talbot, in order to find a way to fix images onto paper, starts to experiment with silver and salt solutions. Eventually, his experiments led him to discover the process what he called *the pencil of nature*. Although, his trials were fruitful the problem of fixation was not solved until he met Sir John Herschel. These two gentlemen's collaboration probably solved the most significant puzzle of the photographic history. Talbot's vision for the photographic possibilities has to be noted as Young (2011: 2) states:

As early as 1842 Talbot proposed the telephoto lens, electronic flash and infrared photography. He set the foundation of photogravure with photoengraving, predicting photographic reproduction would follow the way of the printing press.

Talbot, a visionary photographic inventor, started experimenting salt and silver nitrate combination to produce images in early 1830s and his method was announced in the year 1839, the same time Daguerre publicized his method of photographic imaging, the Daguerreotype. Daguerre's method produced a one of a kind positive image on metal plate polished with silver, Talbot's method was reproducible and it was on paper.

In this aspect, Salted Paper process is the oldest form of photographic print on paper (see Figure 20), and its derivative Calotype is the first negative to positive photographic process. In the years to come Talbot placed a restrictive patent on his method of photography and to avoid Talbot's patent's restrictions, other enthusiasts enriched repertoire of silver photography as James (2009: 52) states:

On February 8, 1841, Talbot placed a restrictive patent on his Calotype discovery nearly putting the brakes on the new "photographic" medium. The effects of Talbot's patent were relatively short lived however, due to the enthusiasm of other scientists for making pictures and to the advent of Blanquart-Evrard's albumen technique and its integration with Frederick Scott Archer's wet collodion glass plate negative process in 1851.

Talbot's method allowed multiple copies and it was "Talbot's salted paper process that led directly to our modern silver halide based photography" (James 2009). The principle of salted paper process is the foundation of many other photographic processes such as Calotype, Albumen and light sensitive silver halides that are used in modern films and papers. Unlike modern films, salted paper process uses only one silver halide which is silver chloride. But most importantly, as Young (2011) states "the Salt Print is the foundation of photography" as we know it.
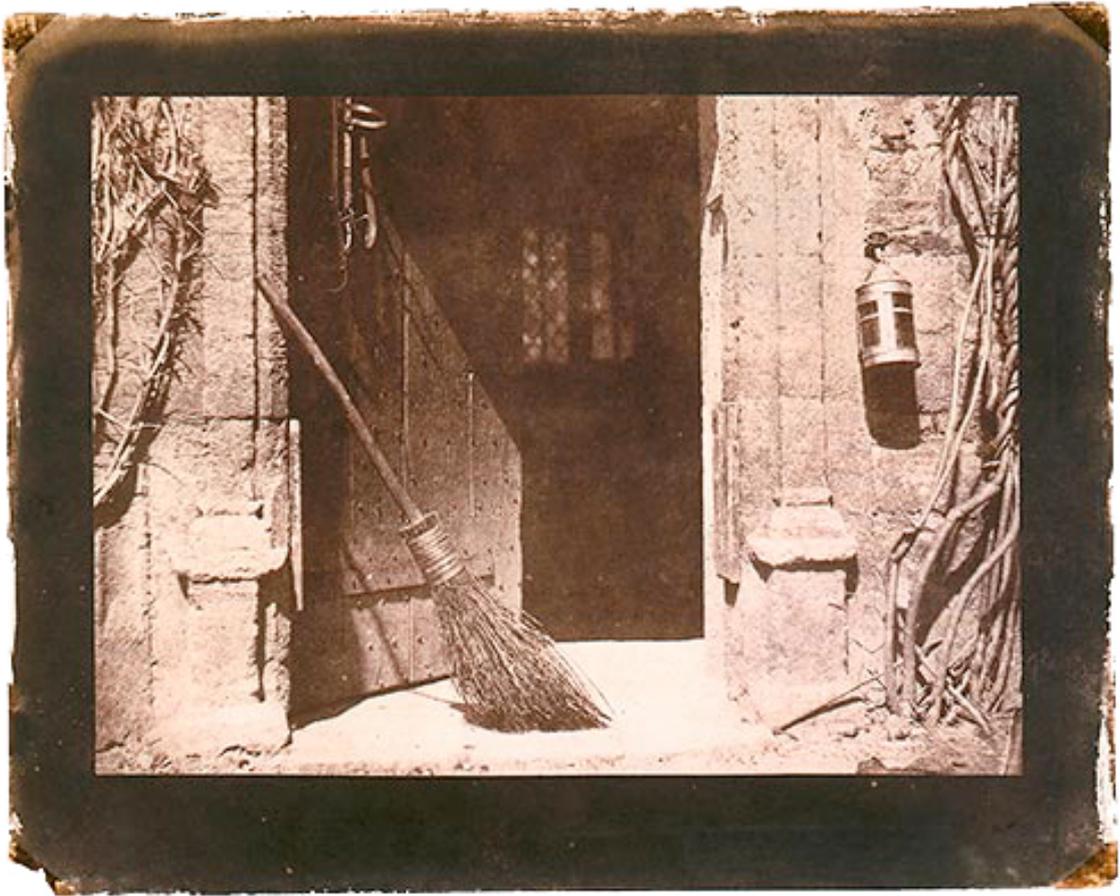
Figure 20 - William Henry Fox Talbot, *The Open Door,* **1844 - Salted paper print from paper negative**

4.1.3.1 Preparing the Salt Print/Salted Paper Sensitizer

The chemical principle of making Salt Print is quite straightforward but completed in two steps. The paper is saturated with salt (sodium chloride) then allowed to dry completely. Later the salted paper is coated with solution of silver nitrate. The silver nitrate and sodium chloride forms silver chloride on the paper and the sensitized paper becomes light sensitive. Talbot made the earliest experiments of his photogenic drawings using common table salt. (James 2009)

The ratio of salt and silver is crucial to obtain an acceptable print. An additive like gelatin prevents silver particles sinking deep into the fibers of the paper and provides a sharper image. The same principle was used in albumen prints, egg yolks mixed with salt acted as sizing agent, keeping silver particles on the paper surface, preventing them to sink deep into the fibers.

Figure 1-1 Sodium Chloride + silver nitrate

Figure 1-2 Ammonium Chloride + silver nitrate

Figure 1-3 Sodium Chloride + silver nitrate + sodium citrate.

Figure 1-4 Ammonium Chloride + silver nitrate +sodium citrate

Figure 1-5 Sodium Chloride + silver nitrate + Potassium Dichromate

Figure 1-6 Ammonium Chloride + silver nitrate + Potassium Dichromate

Figure 21 – The tonal range and color of Salt Prints by E.D. Young

The gelatin is dissolved in heated water and left to bloom in water. Sodium citrate and sodium chloride are mixed and dissolved in the solution. Young (2011) and James (2009) explain that adding sodium citrate changes the color and the contrast of the Salt Print as well as the exposure times. Young's (2008: 17) research on Salt Print process

displays the effects of various chemicals used in Salt Printing and their effects on tonality and color (see Figure 21).

For the thesis project I have used the modified formula for salt solutions as James (2009) suggested, and silver nitrate solution as Young (2008) suggested:

Salt & Gelatin Formula	Silver Nitrate
8 gr. gelatin	12 gr. Silver Nitrate
18 gr. sodium citrate	100 ml. of distilled water
20 gr. sodium chloride	
1000 ml. of distilled water	

Table 2 – Salt & Gelatin Formula for Salted Paper Process

4.1.3.2 Sensitizing the Paper

James (2009) suggests that adding citric acid to silver nitrate prevents premature darkening of the sensitized paper in humid conditions. Citric acid lowers the PH of the sensitizer and acts as a preservative prolonging the time before the paper can be exposed. Young (2008) suggests that silver nitrate solution does not benefit from the additives and adding citric acid causes silver precipitates in the solution. However I have experienced what James had suggested, the sensitized paper I prepared in autumn showed no premature fogging but in winter the sensitized papers darkened before drying. So, I have decided to include acid in the process but not into the stock of silver nitrate solution. I did not have citric acid available so I chose to mix silver nitrate

solution and Kodak stop bath (acetic acid) in equal amounts prior to sensitization. This method stopped the premature darkening of the sensitized paper and it did not affect the image tonality or color. I benefited from the yellow color of the stop bath during sensitization, because silver nitrate solution is colorless, and it was impossible to detect if there has been a coating error.

The mixture of salt, sodium citrate and gelatin should be warmed before use. The gelatin and salt mixture is not liquid when it is cool. There are a few ways for salting the paper. One of the possibilities is to completely immerse the paper in the warm gelatin and salt solution for a few minutes and then to hang the paper till dry. Another option is to use a sponge brush or glass rod to generously apply the salt solution to paper surface and hanging the paper to dry.

The important point is that the paper must be the saturated with salt solution homogenously. Hanging the paper to dry is crucial, because puddles of gelatin might occur if the paper is left flat to dry. These areas can be clearly seen in the final print because they will be denser in salt concentration than the rest and will result in different densities in the final print. However, I would not wish to discard this option, what might seem as a problem can be employed as a creative choice by someone else. One of the prints I made for the thesis project shows this problem with the gelatin (see Figure 22). The detail from the print is digitally altered to make irregularities easily observable. Even though I am partial to the result, it is not what I want to display as the final image.

Figure 22 – Salt print showing irregularities with the gelatin

When the salted paper is completely dry, the next step should be done in dimly lit place. Even though the emulsion is not as light sensitive as the conventional silver film and papers, with a fogged paper, pure whites (D-Min) in the print can never be achieved.

Equal amounts from the solution of 12% silver nitrate and acetic acid is mixed. The mixed solution is applied with glass rod on the surface of the paper. I have to state that my experience using brushes to sensitize Salt Print was never successful. Most of the troubles with Salt Prints are a result of contaminated brushes as James (2009) states. Even with new unused sponge brushes, I have experienced irregularities, black dots, visible and distracting brush strokes. I found that glass rod is the most economical and efficient way to coat Salt Prints.

The third option is to float the paper in tray filled with the solution of silver nitrate. This method requires considerable amount of silver nitrate to fill a tray. The initial investment to produce that amount of silver nitrate solution can be economically challenging, but would work as well as glass rod coating.

4.1.3.3 Processing the Print

There are various approaches to how to wash, fix and clear a Salt Print. The principle remains the same. Removing silver remains, fixing exposed silver, washing away the remaining salt and thoroughly clearing the fixer.

The exposed Salt Print is washed in salted water so that the silver that did not form silver chloride is removed from the paper. The alternative is to add salt to fixer bath so the exposed and unexposed silver chlorides are fixed, at the same time the silver chloride is formed from the excess silver on the paper. I used the second method because the prolonged exposure to light affects the prints tonality, so I wanted to fix the prints as soon as possible and to prolong the fixation to ensure that there will be no further exposure happening. There is also an approach of two separate fix baths to ensure the fixer is not exhausted, and the print is not inadequately fixed.

James (2009) suggests a weak fixer solution of 10% sodium thiosulfate. I have added extra salt to the James's formula (see Table 3). The prints should not be fixed longer than a minute or bleaching might occur. Sodium bicarbonate in James's fixer formula makes the solution alkaline and reduces the bleaching effects. After the exposure the

print will have purple red tones, as soon as it is fixed the tones will turn to chocolaty brown.

SALT PRINT FIXER
1000 ml. water
100 gr. Sodium Thiosulfate
5 gr. Sodium Bicarbonate
5 gr. Sodium Chloride

Table 3 – Salt Print Fixer Formula

It is crucial to clear a Salt Print thoroughly from fixer residue, to reduce the washing times. To ensure fixer is removed from the paper completely I use hypo clear (see Table 4). After 2-3 minutes in hypo clear bath, the Salt Print is washed with plain water for 10-20 minutes.

HYPO CLEAR
1000 ml. water
10 gr. Sodium Sulfite

Table 4 - Hypo Clear Formula

The dried Salt Print will darken slightly. Once it is dry the print will attain its final color. The brown tones after the fixing will turn to purple and maroon but not as intense as the post-exposure Salt Print. If the print is not washed properly shiny salt crystals can be observed under a strong light. If the print continues to get darker after drying, it is clear that it is not fixed enough and at this point nothing can be done to remedy the problem. Over a period of time yellowing of the highlights will occur if fixer residue remains in the paper.

4.1.3.4 Thoughts and Observations on Salt Print Process

At this point after considerable amount of printing and troubleshooting with the Salt Print process, I can say Salt Print process is probably one of the hardest processes to master. The reason is that the process is prone to too much failure; there are various things that can go wrong with Salt Print. Initially all the water must be distilled because tap water and drinking water contain chlorides, iodides and many other minerals. When mixed with silver nitrate, they instantly form silver chloride, silver iodide and some instantly precipitate in solution. Each silver halide is light sensitive and responds differently to light, which will cause irregularities in the print. The water used for gelatin and salt mixture is also prone to the same problem.

The problem of irregularities with the gelatin coating, problems using brushes for coating, adding acid to prevent premature darkening and two step preparation makes the process somewhat labor intensive. The extreme densities required for negatives, fixation problems and clearing the fixer from the print make Salt Print process trickier than others. However, I must state that the possible tonal range of a Salt Print is even wider than today's black and white films and papers, not to mention inkjet prints. As Young (2011: vi) states "due to the inherent masking ability no other photographic print process can create the tonal range of the Salt Print. The challenge is to create negatives that reach this extraordinary range."

In each step of the Salt Printing great care must be taken otherwise the problems are irreversible. Salt print process is such a rich topic, and including Albumen and Calotype as a part of it makes the depth of the topic more enormous. I only tried to outline the

steps that I employed for the thesis project. I also wanted to include some of my positive and negative experiences during learning. The failed attempts that I made at Salt Printing are countless. The purple like maroon tones of a Salt Print are quite delicate and achieving to make a good Salt Print against all odds is extremely satisfactory.

4.1.4 Van Dyke Brown Process

Initially named Brownprint, the process is developed by Arndt and Troos in 1889, which is almost the same formula used for Van Dyke Brown process today. The only difference between Van Dyke and Brownprint is the gelatin additive. As most of the contemporary papers have gelatin or similar sizing and binding agent in them, including gelatin into the formula is no longer necessary (James 2009) .

Initially named as "Arndt & Troos Brownprint", the account on how the process came to be called after a Flemish painter is not clear. James (2009: 218) suggest that someone might be impressed by the romantic sepia hues of the process and states that:

> The color characteristics are reminiscent of the paintings of Sir Anthony (Anton) van Dyck (1599-1641) a Flemish artist, known for his subjects sharp pointy beards and lush sepia tonalities, and for being the premier court painter in England. Just speculating, but someone may have been sufficiently dazzled to change the name of the process.

The VDB (Van Dyke Brown) contains identical chemicals used in Salt Print and Cyanotype. It is equally easy to apply and process like Cyanotype and it requires care like Salt Print. At first glance, in terms of chemicals VDB looks like a cross over between Herschel's Cyanotype and Talbot's Salt Print. Cyanotype and Salt Print processes are as

old as the discovery of photography and they are the earliest examples of photographic prints. The discovery of VDB is almost fifty years later than both processes which place it somewhere in the middle of the history of the photographic processes.

Although it is often underappreciated VDB is a quite straight forward process which is easy to apply, and it produces beautiful sepia hues. James (2009: 218) suggests "long history of dysfunctional processing directions passed along for decades in many alternative process text and teaching" and, left the process deemed unreliable and impermanent.

4.1.4.1 Preparing the Van Dyke Brown Sensitizer

VDB sensitizer is composed of three main chemicals. There are not many variations so I used the formula suggested by James (2009) (see Table 5).

VDB Part A	VDB Part B	VDB Part C
100 ml. distilled water	100 ml. distilled water	100 ml. distilled water
27 gr. Ferric ammonium citrate (green or brown)	4,5 gr. Tartaric Acid	12 gr. Silver Nitrate

Table 5 - Van Dyke Brown Sensitizer Formula

In order to prepare VDB sensitizer, chemicals Part A and Part B are mixed, and under dim light conditions Part C is slowly mixed and constantly stirred. The prepared sensitizer is light sensitive but it is always suggested to leave the sensitizer in a dark place

to age for at least two days. Aged sensitizer can reach higher D-Max compared to freshly mixed sensitizer.

The chemical reaction that produces the image in VDB is identical to Cyanotype, "reaction/reduction of ferric (iron) salt to a ferrous state during exposure to UV light (a Sir John Herschel Argentotype[17] technique from 1842)" (James, 2009: 218).

4.1.4.2 Sensitizing the Paper

VDB sensitizer can be applied with any type of brush or glass rod on the paper surface. As it contains silver nitrate, it is crucial to keep the brushes clean to eliminate contamination. The sensitized surface must not be touched, because silver nitrate might be contaminated from the grease and other residues on the fingers. VDB sensitizer is yellow with slight green hint in color so it is easy to observe the area of application on the paper. Sensitized paper must be stored in dark and left to dry completely, but must be used within a day. In time sensitized surface turns from yellow to brown which indicates the paper is fogged, and no longer suitable for a fine print.

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[17] Argentoype is another iron-based photographic process discovered by Sir John Herschel in 1842. A general term for iron-based photographic prints is "Siderotype, from the Greek word sideros, a word first employed by Herschel to define iron-based photographic print…Argentotype, Aurotype, Chrysotype, Cyanotype, ferro-gallic process, Kallitype, Kelanotype, Nakarah's Process, Palladiotype, Platinotype, Satista and Van Dyke" (James, 2009:202) are the well-known direct adaptations of Herschel's discovery of iron-based photography and all can be categorized as Siderotypes.

4.1.4.3 Processing the Print

Exposed VDB print is initially washed in plain water from 3 to 5 minutes. During this phase the tones of the print will considerably lighten. The principle of initial water wash is similar to Cyanotype. Washing removes unexposed iron salts from the paper.

Second step is to fix the print, because it contains silver particles exposed to light. The fixer (see Table 6) required for VDB is very weak compared to Salt Print. The fixer formula as James (2009) suggests contains sodium carbonate to make the fixer slightly alkaline and reduce bleach-back effect. "Bleach-back is a term that describes what happens to your print when it is attacked by fixer and experiences rapid image deterioration" (James, 2009: 228).

At this phase the dark tones of the print will get darker as the print is immersed in fixer, and highlights will start to clear. The apparent contrast will increase. However tones at this phase are not the final tones of a VDB print.

VAN DYKE BROWN FIXER
1000 ml. water
30 gr. Sodium Thiosulfate
5 gr. Sodium Carbonate

Table 6 - Van Dyke Brown Fixer Formula

After fixing for a minute, the print must be thoroughly washed to remove remaining iron and fixer residue. Hypo clearing chemical used in the Salt Print process can be employed at this stage to ensure fixer removal and shortening the washing times.

Only after drying final tones of VDB print is attained and the tones of the print get darker as it dries. Suffice to say, after the wet treatment the print looks lighter in tones as if it has been underexposed, but that is normal. The process of drying can be hastened by using a hair dryer or ironing the damp print from the back. I often used a hair dryer to speed up the process of drying the test strips. Making test strips initially and being sure of the final print's tonality, I leave VDB prints to dry naturally.

4.1.4.4 Thoughts and Observations on Van Dyke Brown Process

VDB process produces rich brown sepia tones, which can be considered a nostalgic look for a photograph. It is almost equally as easy as Cyanotype and results in a different look which might appeal to larger audiences.

Like Cyanotype process, VDB also benefits a slightly acidic first wash because of iron reduction/reaction. I add 1 teaspoon of citric acid per 3 liters of water in the initial wash. The highlights of the prints are not easily washed away and retain more detail.

The major problem with VDB sensitizer is that it is prone to form iron and silver precipitates. If Part C of sensitizer is mixed hastily into the combined solution of Part A and Part B, more iron and silver precipitates. When applied on the paper these black rust like particles are apparent and after exposure they resemble an extremely grainy photograph.

Some solutions are offered on the internet forums to reduce and even completely dissolve this precipitate in the sensitizer. Increasing the amount of tartaric acid in Part B appears to solve this problem, but at the expense of the highest D-Max achievable in the print, according to my tests. Filtering out the precipitate with quality paper coffee filters is also another option. But the quality of the materials used for filtration is crucial. Otherwise the sensitizer can be contaminated and becomes useless for fine printing.

4.2 Inkjet Digital Negatives

Alternative photographic processes used in this thesis are POP prints and they are contact printing processes which require a negative the same size of the print. Today it is possible to produce the required negatives digitally. Any color of ink or black can be used in negatives because these processes are sensitive to UV light, and the UV opaqueness of a specific ink is more important than its opaqueness to visible light. Other than that an inkjet printer is not an exceptionally expensive product and it can be purchased by any enthusiast. Inkjet printers make it possible for photo enthusiasts to experiment and produce negatives for alternative photographic prints at home, without the need of a conventional film, a darkroom or any specialized equipment.

There are various approaches when it comes to making inkjet digital negatives. Some of these methods require specific software to be purchased in order to be applied, some do not. The most popular digital negative systems are PDN (Precision Digital Negative), QTR (Quadtone RIP), RNP and Chartthrob. In each of these methods an initial calibration is required, some methods determine the combination of best UV blocking

colors and inks, some methods determine the minimum amount of ink required to create most UV opaque colors. Later the negative has to be linearized to suit the specific alternative process. To put it simply, linearization of negatives ensures that the photographs are translated as accurately as possible from the electronic domain to the chemical domain.

I must remark briefly that the photographers using conventional B&W negatives were not able to control the tonalities of these prints as much as it is possible with the digital negatives today. The usual approach with conventional negatives is to overexpose and overdevelop negatives, hoping that the density will match the process used. In terms of Salt Printing, my inquires lead me to find that by using conventional B&W film negatives the ideal starting point is to double the exposure and double the development for negative. Such a negative is so dense it might be almost unprintable[18] on B&W silver-gelatin paper using an enlarger, and there is no guarantee that this negative is sufficient in density for Salt Print. Photographers sometimes alter exposure by combining a brief exposure in the sun, longer exposure in shade to retain more contrast and tonality. Another approach is to add a chemical (potassium dichromate) to decrease the sensitivity of the emulsion which results considerably longer exposures[19], and increased grain like effect on the print. Suffice to say, these are some of the technical difficulties that often excluded people from practicing alternative photographic processes.

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[18] Printing a negative of such density using an enlarger is not impossible, but probably not worth the effort. It requires excellence of the darkroom craft to make the most out of it. Even doing so there is limit what can be salvaged.
[19] I found in my experience that adding one drop of %2 Potassium Dichromate to Salt Print sensitizer increases the required exposure almost twice and even slightly more. In my workflow 10 minutes is the basic exposure for Salt Prints, the altered formula would require an exposure between 20 and 25 minutes.

The reason that there is a dedicated section for digital negatives is to show how the utilization of the digital domain of photography would contribute greatly to the alternative processes and how most of the technical limitations can be overcome with ease. The appliances that are used in this aspect are a flatbed scanner (Epson V500), an inkjet printer (Epson P50 with default ink set) and an image editing software.

4.2.1 Digital Negative Advantage

A negative of any size can be made from any type of film of any size and as well as digital files. But most importantly these negatives can be modified to respond the tonal characteristics of different photo-sensitive material. The tonality of a negative has to be modified because "nearly all photo emulsions respond non-linearly to light" (Reeder, 2010: 4). The advantage of digital negatives over conventional film negatives is that they can be tailored to suit any emulsion, and attain all the tonality that can be achieved. In order to clarify, Cyanotype process requires a negative of moderate density on the other hand a Salt Print requires the densest possible negative in all of the alternative processes. A conventional film negative that can be used to produce a Cyanotype with acceptable tonality is incapable of producing an acceptable Salt Print.

The tonal distribution of a digital negative can be modified using a correction curve. The correction curve can be applied in two ways (Reeder, 2010: 4), either before the print, in an image editing software or in the ink settings of the printer driver. Each approach, if applied properly, will result in the same negative in terms of tonality. Curve correction applied in an image editing software might cause posterization, but correction

through ink settings does not cause any image degradation. Modifying ink settings is not easy as it sounds because no manufacturers of printers readily provide this option for the consumer. Third party software like QTR is required to modify ink settings, and the learning curve of this approach is steep, it requires too much trial and error. I used both approaches in my project and I will explain the basics of each process. I will explain these methods but not in a tutorial format. I will rather explain the principles and the basics of application showing the ease and flexibility, and different complexities of each approach.

4.2.2 Determining Base/Basic Exposure

In either approach the crucial first step is to determine the base exposure required for specific substrate that will be used as the base for negative. This step will determine the minimum amount of exposure required to achieve maximum density (D-Max) from the emulsion. D-Max is the darkest tone that can be achieved with the specific emulsion. "The minimum exposure time that will print maximum black" (Reeder, 2008: 5) through transparency. The right amount of exposure is determined by series of test strips. The exposure time that achieves the darkest tone in which the transparency material used as base for negative is no longer visible, is the base exposure or basic exposure for the specific emulsion and negative substrate. The exposure for maximum black (D-Max) on the print responds to minimum density on negative (D-Min). This step has to be repeated for each photo emulsion.

When correctly established the exposure time becomes a constant in this workflow. If a print turns out too dark or too light the tonality of the image is altered. This ensures that the print will always contain full tonality of the specific emulsion from the deepest shadows to faintest highlights.

4.2.3 RNP Color Array and Chartthrob Linearization Methods
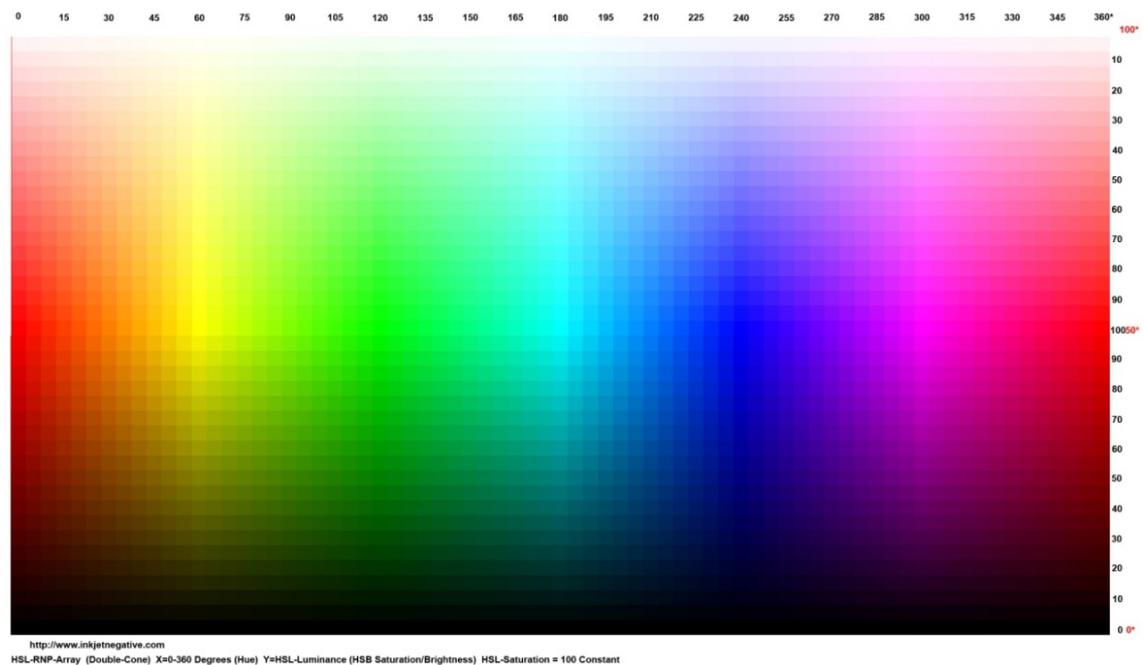
Figure 23 – AdobeRGB HSL-RNP Color Array

A combination of RNP Color Arrays[20] and Chartthrob[21] script can be considered a universal approach for creating digital negatives because they can be used with any printer using ink or toner. They can be easily used to determine most UV blocking color

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[20] http://www.inkjetdigitalnegative.com, RNP Color Arrays are developed by Michael Koch-Schulte in 2007
[21] http://www.photorant.com, Chartthrob is developed by Kevin Björke in 2006

and find the correct curve to linearize the tones of the negative. The color array is used to determine the most UV blocking color that the printer can produce.

The HSL[22] color array (see Figure 23) is printed on transparency and exposed for base exposure time required for the specific emulsion. The resulting print shows which colors block most UV light apart from the black ink. In the print (see Figure 24) the green color shows the most resistance to UV light. We can deduce that the green color (combined from different inks) and the black ink from this specific printer can be used to create the most UV opaque negative possible.
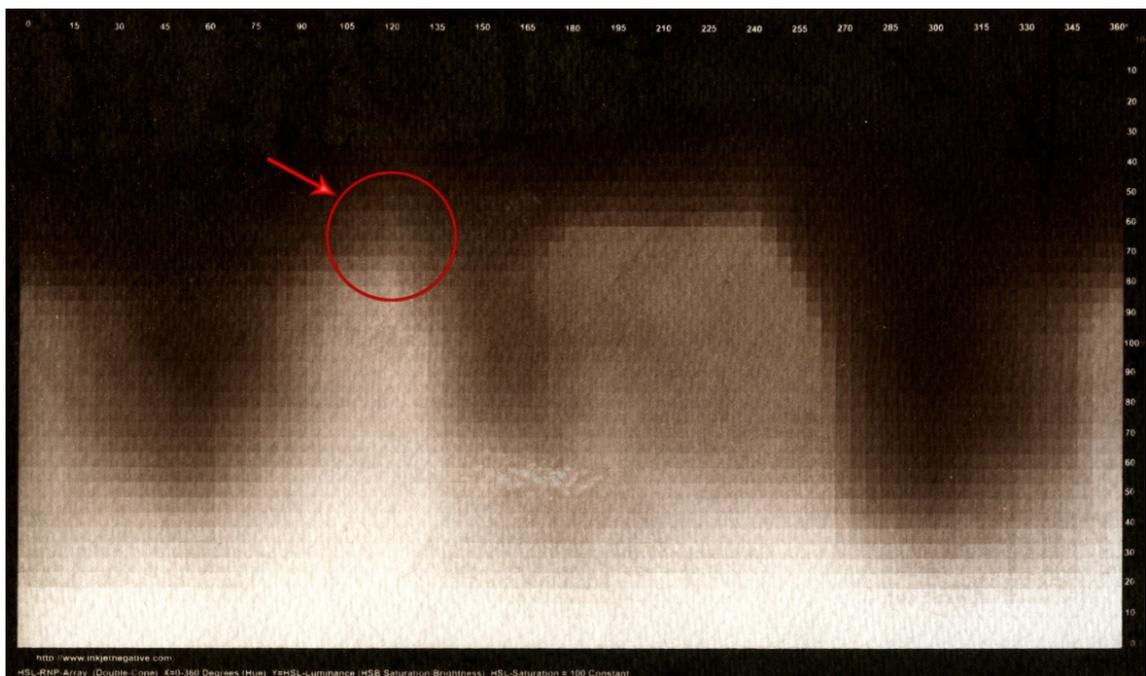

Figure 24 – AdobeRGB HSL Array printed in Van Dyke Brown

The next step would be to linearize the tonality of the negative to suit the emulsion that is to be used. Linearization adjusts the mid-tones of the negative so the tones on the

[22] Hue / Saturation / Luminance

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final print are the same values as the tones of the positive image. A linearized negative ensures a smoothly and proportionally increasing grayscale from black to white. The linearization can be done in various ways. Printing linearly increasing densities on a transparency could be used to determine the correction curve manually. There is also a script specifically designed for the process, called Chartthrob. It automatically calculates the correction curve required for the specific emulsion, and it can be saved as an external file and can be applied to any positive image. The process of linearization will be explained in detail in the QTR Method section.
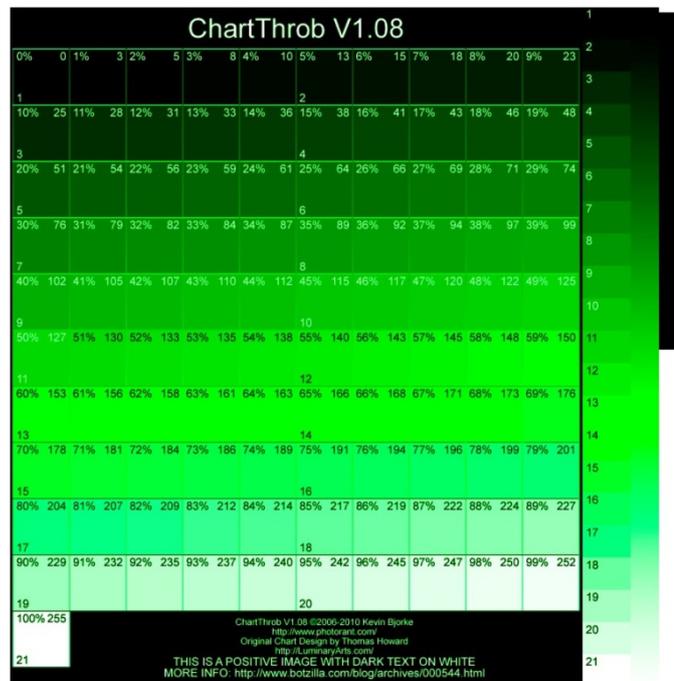
Figure 25 - Chartthrob Negative with UV Blocking Color

The chart created from the script is a positive image. The chart is converted to negative in order to have a positive print, colored with the specific UV blocking color and printed on to the transparency (see Figure 25). The chart represents a series of linearly increasing densities in each square. The resulting print from this negative will be a

positive image with non-linearly increasing densities (see Figure 26). The deviation from the expected linearity determines the correction curve required for the specific emulsion.

The printed chart (see Figure 26) displays lack of densities in highlights and has dark flat shadows. The last third rows of densities are almost equally dark and lack separation. The densities that would form the highlights of the print do not appear until the middle of the upper third row. It is right to deduce that the print from uncorrected negative will lack detail in both highlights and shadows.


Figure 26 - Chartthrob Positive Cyanotype Print

Determining the correct black and white points and scanning the resulting print from the chart can be used by the script to create the correction curve required (see Figure 27). The correction curve created from the script can be read as lightening of shadows
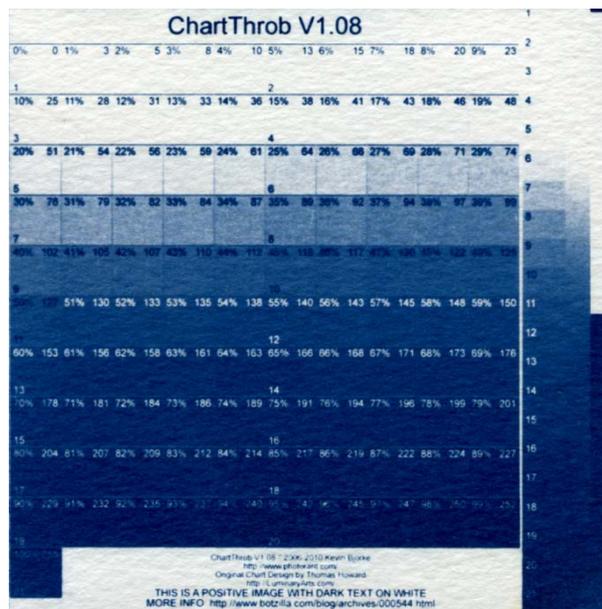
and darkening of the highlights in the print. When this correction curve is applied to the positive image the resulting print will have the correct tonality for the specific emulsion.

I have used this method for creating digital negatives in the learning process and later I used the Chartthrob script for fine tuning the tonality. In the beginning of this section I have proposed that these methods can be considered universal for every printer, however it does not guarantee a good negative can be achieved with every printer. I encountered linearization issues with the printer I later dedicated to create digital negatives. I also encountered posterization problems with low-key and high-key images where tonality is quite biased towards the far edges of the histogram. Posterization is to be expected in some images as it is the disadvantage of applying correction curve in the image editing software. The major disadvantage is that these methods do not let the user control the amount of ink laid on the transparency. Using these methods I never

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achieved a dense enough negative to make a Salt Print. That is the main reason why I have tried another method and switched my workflow accordingly.
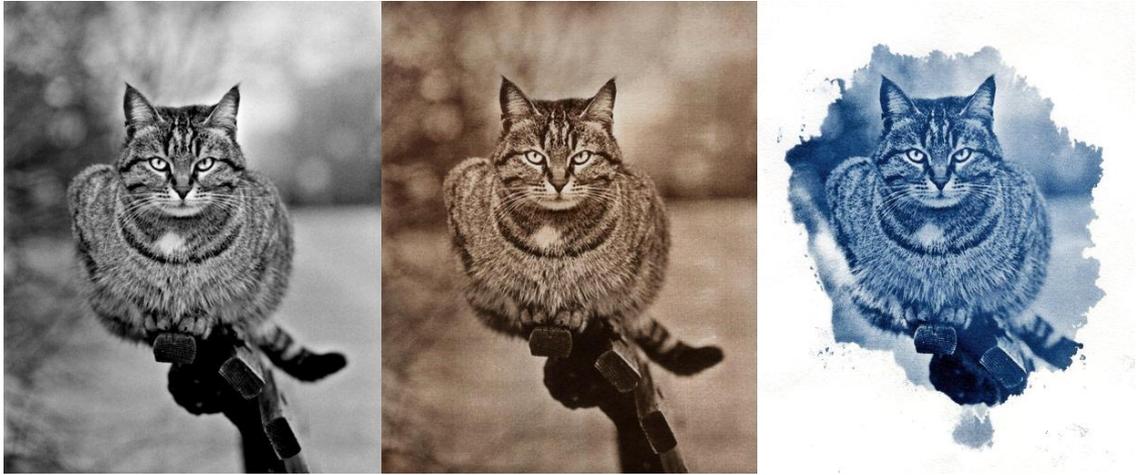
Figure 28 – Comparison of tonality, original image versus Van Dyke Brown and Cyanotype Prints created from negatives using Chartthrob and RNP Color Array Methods

However the simplicity of application makes this approach accessible to everyone. I have not used a dedicated printer to create the negatives using these methods in my earlier experiments with the alternative processes. I have used printing offices readily available, and everyone can use these offices and experiment alternative processes (see Figure 28). As I proposed earlier, the alternative photographic processes can benefit greatly from today's digital technologies. Besides the control over the tonality, and access to powerful image editing tools, I believe the simplicity of these methods shows how easy it is to access the world of alternative photographic processes and obtain decent photographic prints.

4.2.4 QTR Calibration and Linearization Method

QTR[23] is a third party shareware application that provides advanced controls for dye or pigment based Epson brand printers only. I must remark that this software is designed to create fine quality monochromatic positive inkjet prints on paper, but it is appropriated to create multi colored negatives on transparencies. There are no controls provided for creating negatives, but it provides tools to linearize tonality for fine quality prints. I believe the way people appropriated QTR software that prints monochromatic paper positives to create multi colored negatives on transparency is a fine example of outwitting the apparatus that I mentioned in the second chapter.

It is possible to decide the type and the amount of ink to be used for specific tonality. The correction curve is applied in the software which modifies the amount of ink accordingly and unlike applying the curve in image editing software; it does not cause any posterization.

The apparent setback is that the software only operates with Epson brand printers. Initially in the process of learning, considerable amount of ink is consumed for calibration purposes, learning and understanding how the controls of the software affect the positive prints takes some effort. Determining right ink combinations for fine grained prints and linearization of negatives is time consuming and considered to other methods, it is costly in terms of ink, paper, chemistry and transparency material. Once, accurately linearized and calibrated negative is obtained, the prints whether low-key or

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[23] "QTR (Quadtone RIP) is a printer driver written by Roy Harrington to improve the ability of Epson printers to print quality black and white prints. In contrast to the proprietary Epson driver, QTR gives complete control over the printer's inks." (Reeder, 2010: 18)

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high-key are always printed in the correct tonality, without the worry of posterization or inconsistencies in tonality.

In my project I have decided to employ an Epson P50 A4 sized printer. It uses Epson Claria dyes, which are infamously weak in UV blocking abilities according to posts on the internet forums. However, even the weak UV blocking inks can be combined using QTR to create a dense enough negative of a high key image to create a Salt Print without any chemical additive to increase contrast of the print.
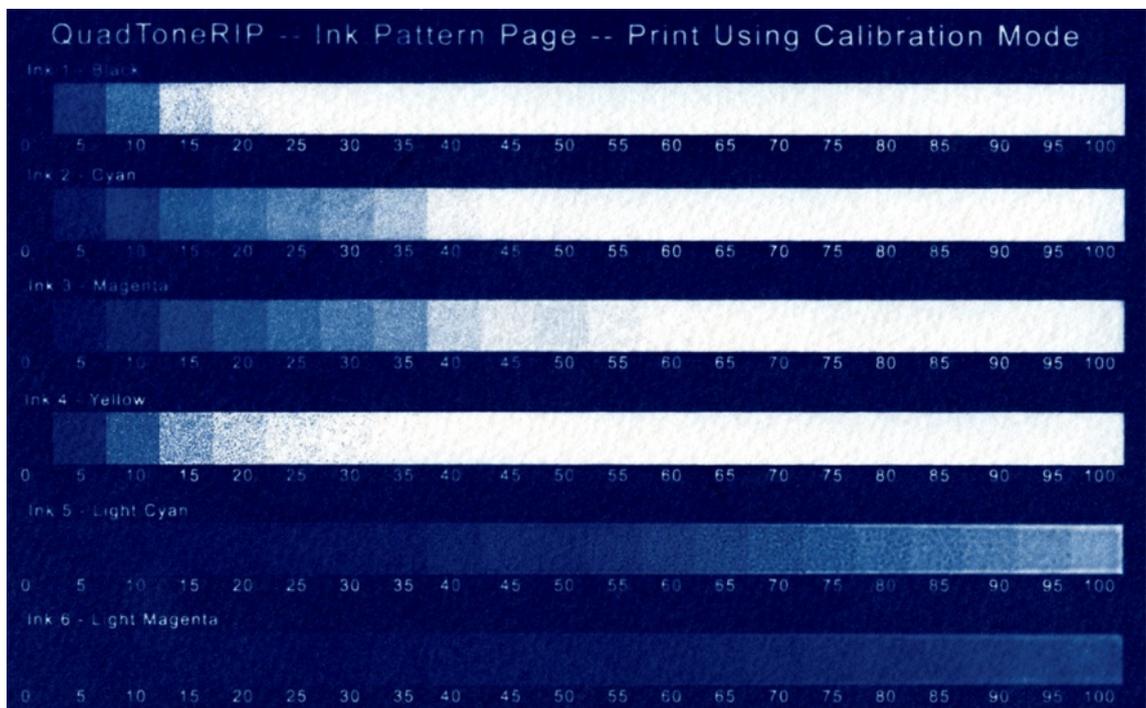

Figure 29 - QTR Ink Calibration Cyanotype Print

After determining the base exposure for the specific emulsion and transparency, an ink calibration pattern is printed through the software. It has to be allowed to dry thoroughly, because it prints from minimum to maximum ink densities possible. There might be ink puddles in higher densities. The ink puddles shows the maximum amount

of ink that the transparency material will be able to absorb of that particular ink, more is wasted. Light Cyan ink of the printer shows symptoms of ink puddles after the density of 70% (see Figure 29) on a Cyanotype print of the ink calibration page.

The ink calibration chart (see Figure 29) shows crucial information to begin creating digital negatives for Cyanotype process. Initially the black ink (K) is the strongest UV blocker and the yellow ink (Y) is the second most UV opaque color in this ink set. Cyan (C) is slightly better than Magenta (M) but both are weaker, and Light Cyan (LC) and Light Magenta (LM) inks are the weakest inks. Another information that can be deduced from this chart is that; at the density of 25% to 30% the black ink is opaque enough (D-Max on negative) to create a pure white (D-Min) on the print. In the same fashion, minimum densities that white paper base are achievable for each ink can be deduced from this chart.

This chart has a similarity with color array method which was explained in the previous section. I want to remark the similarity in the results to clarify that the principle behind the digital negatives is the same but the methods to obtain them might differ. Using the color array method, the green color proved to be the best UV blocking color for this printer and was used in combination with black ink. According to the ink calibration chart from QTR the best *colored* UV blocking inks are C and Y, and eventually combination of these inks will result in green color.

Determining the inks and densities from the ink calibration chart, an ink profile in the software has to be created for each specific process (see Figure 30). Because inkjet prints are not continuous toned prints they are made up of dots, six of the possible inks

on the printer are used, to reduce appearance of graininess. The grain structure of each ink is visible in the ink calibration chart (see Figure 29). Additionally extra inks give extra control over the tonality of the negative.
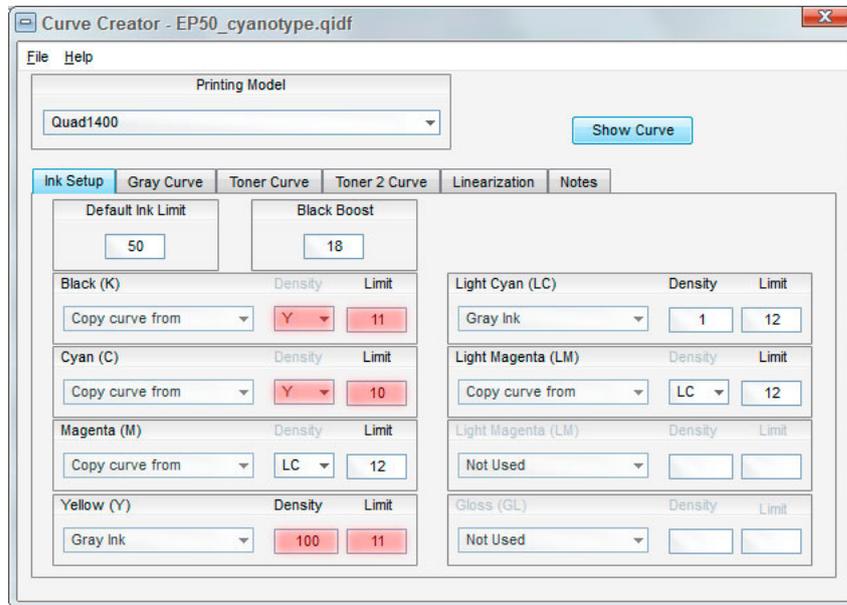
Figure 30 - QTR Ink profile for Cyanotype process

The information for a particular QTR profile to create a negative for Cyanotype (see Figure 30) can be explained as follows: where 100% density is required 11% Y ink is laid down, and respectively 11% of K and 10% C inks are laid down. The 100% being the maximum density on the negative, the blacks of the negative is derived from a mixture of Y, K and C inks. Even though the other inks proved to be weaker UV blockers they are required for highlights of the negative which corresponds to the dark values print. Even weak, they will provide enough separation. Considering that they will be used to create the dark tones of the print, they don't have to be dense and strong UV blockers. The information for highlight of the negative can be summarized as follows: where 1% density is to be printed 12% LC ink and respectively 12% LM and M inks are laid down.

These ink amounts cannot be applied to every printer it will vary with each ink set, also will vary with each photo sensitive emulsion and the paper used, but I have chosen to explain a sample profile to show how much control QTR method can exert over the inks. QTR provides a graphic display of the amount of ink laid down on the transparency which is quite informative for the calibration process (see Figure 31). The amount of LC, LM and M inks decrease and Y, K and C inks start to increase in the middle tones.
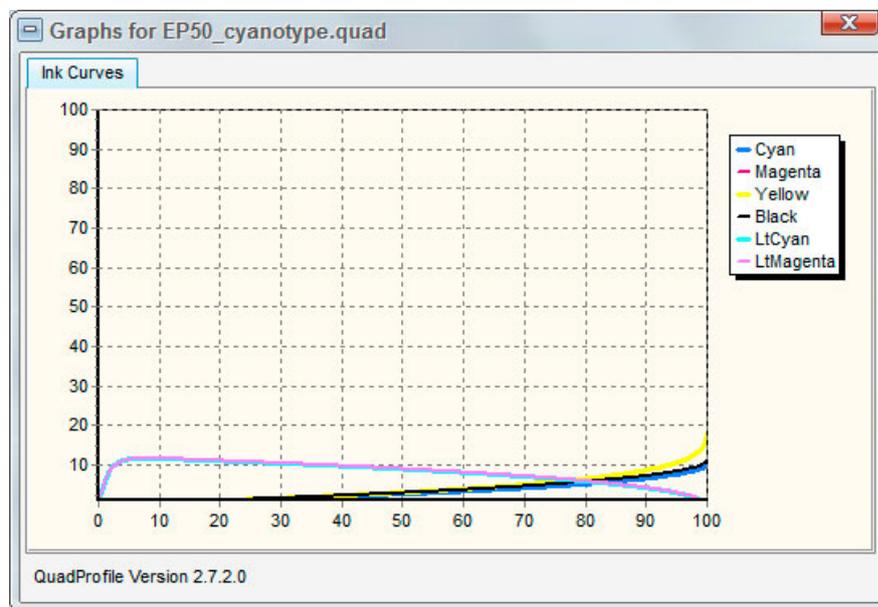
Figure 31 - OTR Ink amount graphs for Cyanotype process

It is necessary to clarify at this point that this specific amount of inks cannot be instantly deduced from the ink calibration chart by someone new or inexperienced in this digital negative method. The chart is a starting point and a guide, but to determine these ink amounts numerous Cyanotype prints are made from numerous QTR negatives. The resulting ink amounts in this particular QTR profile are good enough to print a 21 step

Cyanotype wedge with clearly discernible steps, a pure paper base (D-Min) and darkest possible tone (D-Max), but not yet linearized.
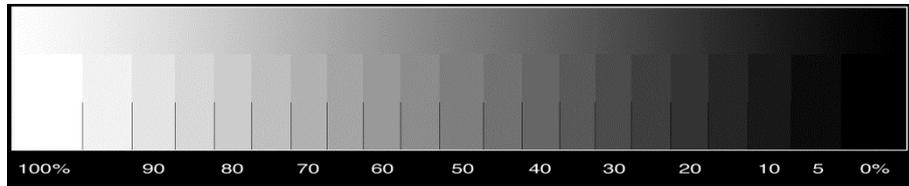
Figure 32 - 21 Step Wedge Converted Negative

The 21 step negative wedge negative (see Figure 32) is printed through QTR with the specific ink profile selected. The step wedge has a linearity of 5% density increments and correctly linearized the printed wedge would show the same 5% density increments.

In the step of linearization QTR users have also created various scripts to analyze and automatically create the correction curve. Calculating the correction curve is a simple process and can be done with pen and paper. It is necessary to scan the printed wedge correctly so it attains the maximum tonality, with the correctly set black and white points and linear gamma.

I should mention that using a densitometer to analyze the tonalities of the printed wedges is also an option and arguably the most accurate. A densitometer is such a dedicated professional tool, its use and availability excludes amateurs. A decent quality desktop scanner that provides advanced controls and an adequate image editing software will provide almost the same results with ignorable fractional deviations in values.

The readings from a satisfactory step wedge can be used to start linearization process (see Figure 33). Inside the image editing software what is often referred as eyedropper tool is used to get readings of grayscale K% values from each density region. Clearly, the printed values are not linear. The print is too dark in the highlights, there is not enough separation in some tones and the last few patches in shadows should be darker (see Table 7). I speculate that a curve similar to an "S" curve, which darkens shadows and opens up highlights, is going to be necessary.
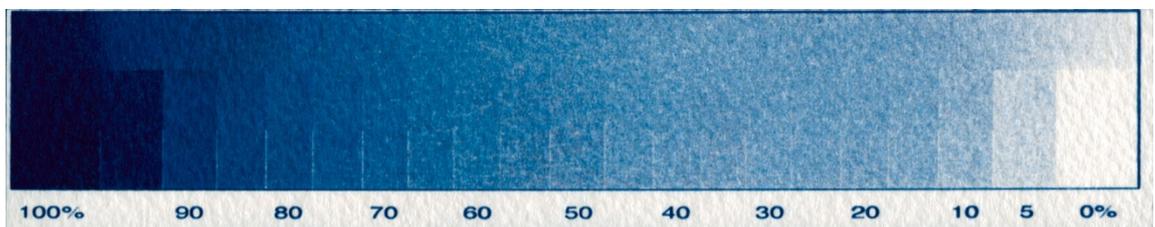
Figure 33 - Non-linearized Cyanotype print of 21 step wedge

Even though, at first glance the table of printed values and correction curve values might seem confusing, the math behind it is quite simple. Values gathered from the printed values are written side by side. Input values are densities printed on the negative that increment in 5% values. Output values are readings from the printed positive wedge. The deviation in values is obvious at this point, and they are not increasing proportionally. To linearize these values they are subtracted from the maximum possible density (100%), the reason is that the correction curve is going to be applied on a negative (the maximum density on negative will result in the minimum density on print). The same reason is why the calculated correction values from the output column of the printed values are used as the input values on the correction curve.

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PRINTED VALUES		CORRECTION CURVE VALUES	
INPUT (The values printed on negative transparency)	OUTPUT (The values printed on positive Cyanotype)	~~INPUT~~ (output value of a correction curve)	~~OUTPUT~~ (The input value of a correction curve)
0	0	(100 – 0) 100	(100 – 0) 100
5	15	(100 – 5) 95	(100 – 15) 85
10	33	90	67
15	37	85	63
20	41	80	59
25	44	75	56
30	45	70	55
35	45	65	55
40	49	60	51
45	50	55	50
50	53	50	47
55	60	45	40
60	65	40	35
65	67	35	33
70	69	30	31
75	72	25	28
80	75	20	25
85	78	15	22
90	82	10	18
95	89	5	11
100	100	0	0

Table 7 – The printed values on the step wedge and derived linearization values for a correction curve

In order to clarify, the regions on the negative that have a density 95% are to be considered 85% in density. In order to compensate the difference, more ink is laid down proportionally which would cause a denser region in the negative and would correctly correspond to 5% density on the positive print. Uncorrected negative resulted in a patch of 15% density on positive print where it should have been 5%.
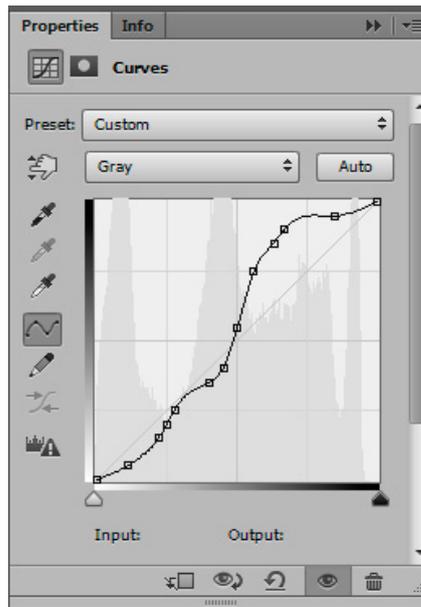
Creating a curve manually using the calculated values results in the same curve that automated scripts would analyze and generate (see Figure 34). The curve shows densities that respond to in the highlight regions in the print are going to be boosted and, densities in shadow zones are slightly decreased. My speculation on the requirement of an S shaped curve is somewhat accurate.

Even though there is a small bump on the lower end of middle tones and the lower zones do not require a drastic modification as much as the highlight zones, the correction curve is S shaped with the exception of a small region. This result suits quite fine to remedy the deviations observed in the printed step wedge initially, and it would adequately linearize the ink profile that it is attached to in QTR software.

4.2.5 Thoughts and Observations on Digital Negatives

Even though there are various approaches to create inkjet digital negatives for alternative photographic processes, the basics are similar. The principle of linearization is universal, and it is not software dependent. However, it would not be denied, the software approach provide framework for a consistent workflow, and scripted solutions unburden the photographer from the mundane task of calculating the values of densities on negative and positive. At first, calculating the values from a 21 step wedge might not look like a big deal, but calculating values derived from a 101 step (such as Chartthrob) or 255 step wedge is time consuming and leaves no room for error.

In my personal workflow for creating the required negatives, I decided to employ both QTR and Chartthrob linearization methods. Initially, I create a profile with QTR and linearized the tonalities of the negative accordingly. I print the negative chart of Chartthrob using QTR software. At this stage Chartthrob print is already linearized to a great extent in QTR profile. 101 steps of densities that Chartthrob provides compared to 21 steps of densities I used to linearize with QTR, is a great improvement to fine tune the negatives. The correction curve derived from Chartthrob script would show (or it would not, which means there is no need for fine tuning) subtle deviations in few densities, because it is already linearized with QTR. A correction curve of such subtle changes would not cause any posterization on the positive image, and it would certainly improve the tonal distribution of the negative. The reason that I employed two phases of linearization is to maximize the accuracy of translation from the digital domain into the chemical domain.

The negative printed on transparency require a considerable time to dry, depending on the amount of ink and humidity, but it is possible to speed up the process with a hair dryer. I never had the chance to experience pigment based inkjets to create negatives, but from my correspondence with Loris Medici, I learned that according to his experience, pigment based inkjet negatives take longer time to dry. The reason probably is the requirement of an oil based solvent to transfer pigment, but dyes are water soluble. My experience in this project has been limited to dye based inkjet negatives, and I must remark even the dye based negatives take considerable time to dry.

Although, earlier in this chapter I mentioned the dyes I used in this project to create negatives are considered weak in UV blocking characteristics, a good dye based inkjet to produce negatives have certain advantages according to Young (2011: 51):

> Note that pigment inks, ultrachrome inks and dye-based inks in inkjet printers make a considerable difference to the negatives' density and tonal range. Generally dye based inks produce a wider gamut of colour and a higher resolution, the ink sits in the structure of the film. The pigment ink sits on the surface of the film. Producers of these ink products acclaim an extended life. The dye-based inks' ability to block UV light is greater than the pigment based inks.

Depending on the ink profile and ink set, digital negatives created using QTR software will be extremely colorful which would be considered weird looking compared to conventional film and reprographic negatives. The inks are used according to their UV opaqueness not their opaqueness to visible light. The negatives I created using QTR in my workflow show purple to cyan variations in the light areas and greenish blacks as they get darker (see Figure 35).

Figure 35 - A negative for VanDyke Brown

Mastering the process of creating digital negatives, at first might seem a meticulous technicality, but when done properly it gets out of the way. I believe, in all creative process, true potential can only be realized when the technicality is no longer a challenge. The extent I devoted my time for creating digital negatives is based on the same reason. I wanted to get it out of the way, so I can focus on the unique subject and its unique print.

In terms of uniqueness of the each print, there are a few points that need to be clarified. "If there is an original material form that we can point to in photography, it would be the negative, which holds great value as the source of prints" (Sturken and Cartwright, 2009: 192), however the negatives used in this project are not original. Even though negatives can be created from digitized film negatives, they are not the same size of the

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original negative. They are reproduced through an inkjet printer and these negatives are not meant to last. In fact they can hardly outlast a dozen prints made from them. The UV opaque qualities of dyes and pigments quickly deteriorate as they are exposed to high UV radiation of the exposure unit. These inkjet negatives are not meant to last but rather to be utilized as long as they are useful. In this aspect, I want to remind the analogy made by Ansel Adams between the negative to a musical score and the print to its performance.

These prints are more original than the negatives themselves, even though they might convey the same image or *information*. Each print/performance is different in its own right. Their uniqueness comes from their hand made properties; the brush strokes, inconsistencies of the sensitizer and the batch of paper used. No reproduction of these prints may do justice to the originals and all their imperfections; their presence is required to be experienced.

CHAPTER 5

PERFECT PHOTOGAPHS IN AN IMPERFECT WAY

5.1 The Statement

Embracing Antiquarian Avant-Garde artists' idea of "photo-humanism", placing the *human* in both *vision* and *craft* of making photographs defines the driving force of this project. The aim is not to practice Antiquarian Avant-Garde techniques as a puritan form of photography, but rather to envision new means of photography. Re-imagining the medium itself and finding possibilities from the union of optics, electronics and chemistry of photography today is what this study strives to do. A hybrid of digital and analog ways of photography, a union from the duo in conflict, which can be used to realize new means of expression, can be used to show that the photography's future has so much in its chemical past.

As humans, the differences in the chemicals that define our bodies are also connected to our superficial differences. As the small differences in chemicals determine each

photographic process's unique appearance, unique visual traits of people with albinism are also determined by such small chemical differences in their bodies. Because of the reason that the alternative photographic processes' handmade qualities, variables such as the choice of paper, humidity, chemical variations effecting the process, each print is *de facto* unique. Like the distinct, unique and precious identities of each human being.

In this respect there is a correlation with the visual uniqueness of albinism and the visual uniqueness of alternative photographic processes. This project aims to produce unique photographs of a visually unique subject, therefore, the precise machine computations of the photographic apparatus, and its perfection are outwitted by deliberate human intervention in order to produce photographs that are handmade, personal, humane and imperfect.

5.2 Exhibition Format

First of all I had to decide on the print size. It was limited by the usable area of the exposure unit and most importantly the negative size. After learning and experimenting with the processes I realized I needed to produce the negatives personally in order to have more control over the prints. The printer I bought for digital negatives was an A4 sized printer, so I needed to limit the print size.

Initially, I planned using a medium format film camera and a digital camera to take the photographs, but later I decided to use only digital because it was more important in terms combining the old and the new of photography. I was very used to the 4x5 aspect

ratio of the medium format SLR camera (Pentax 6x7) that I used, so I decided to crop digital images to 4x5 ratio instead of 2x3 ratio of the 35mm digital SLR. That choice was entirely made on personal preference. The maximum print size I could get using 4x5 ratios from an A4 sized printer was 20cm by 25cm.

These processes could be printed on various papers of fine quality and texture, to emphasize the paper texture. I decided to use paper size bigger than the print area. The whole paper with the printed area on it would be observed as an object. The texture and the color of the paper, the print area showing the brush strokes could become observable, signifying its handmade quality. As "the fine object of photography" as Mike Ware (1990) described the alternative photographic print.

I made various print in the learning process and I considered triptych presentation (see Figure 36). Because of the reason that I used three different processes and I planned to combine three photographs of an individual in one frame in three different processes. However, this representation required a matt board to cover the edges of prints. More importantly, all photographs had to have the same orientation which would have been limiting. Also making triptych required stronger conceptual relations between the images, which was not certain by that time.
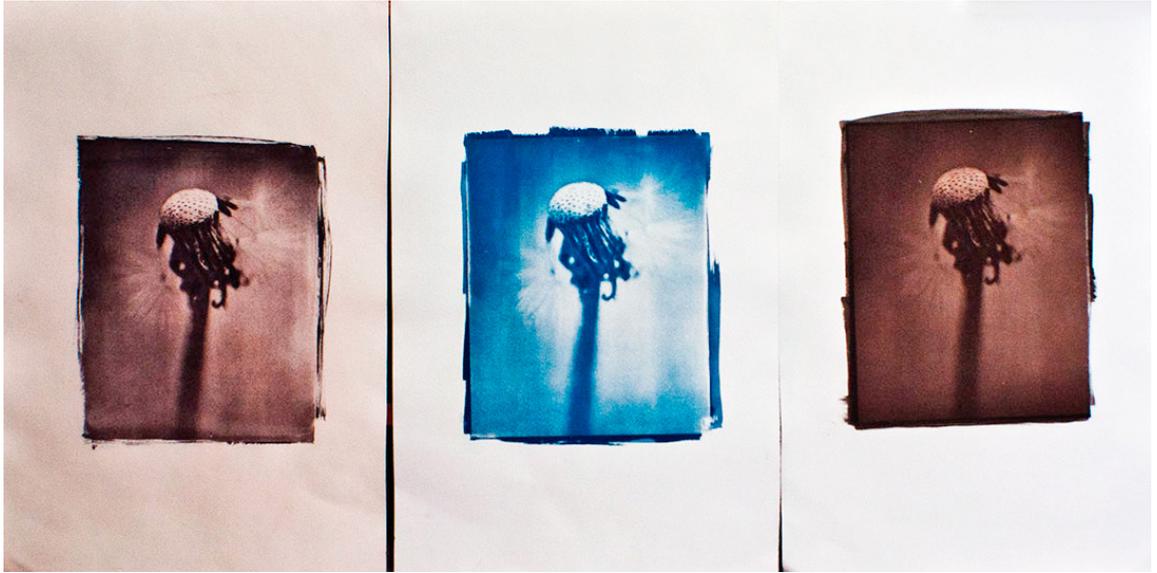
I decided to use single frame for each print and without a mat and glass to cover it. So the images would be 20x25cm prints on a paper size of 32x37cm, where the extra paper space served as the mat. I was not able to find a framing to my liking, most of the readymade frames looked too synthetic, and unpainted wooden frames proved to be slightly distracting due to varnished finish. I wanted framing not to interfere with the print but rather to be an equivalent of a pedestal carrying an object, so I found a custom solution for framing.

The plain wood framing was painted single layer white using gouache paint, so it retained some of its texture. It also had a matt finish unlike the plastic materials or varnished natural wood. The texture of the frame and its white color was blending with the paper, the organic texture of the wood and the paper was complementing each other in this type of solution (see Figure 37). At first I wanted a small space between the frame and the print so the print would pop out, but it became distracting, so I decided to eliminate the extra space (see Figure 38).

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This combination of wood and paper pleased me visually and there was a relation between these materials. However, I did not intend it consciously, I enjoyed realizing this small chemical affinity between them. They were both formed from cellulose one of the commonest organic molecule on earth, so they were chemically a kin. This common material was now housing and carrying photographic images of humans. Some of these images of people with albinism, a rare genetic condition, are formed from silver, a rare precious metal.

5.3 The Photographs and Techniques

As I have mentioned in the third chapter, I wanted the photographs for this project to be created mutually. I wanted the people with albinism to decide how they would like to be represented. So I asked the people I worked how they wanted to be photographed. I asked them to focus on something that takes an important part in their life. In order to guide them, I suggested subjects such as their hobbies, pets, favorite sports teams, activities, families and friends. As expected there were many options in the beginning. After doing some brainstorming, we narrowed it down to one for each person.

The reason I directed them to choose a topic of importance from their life was to show the audience the shared human experience. After all, the intention of this project was to emphasize the human element in many aspects of photography. People with albinism were stigmatized often from the myths woven around them and misrepresentations. This would give them the chance to show what they enjoy in their life, what they are passionate about and what they dream about, not what others see when they look at them.

Initially, I made some conventional portraits with Ali, however as the project progressed these images by themselves were not enough. Ali and I discussed the possibilities on how to photograph him with the subject he chose. Initially, Ali suggested to be photographed with his friends watching football on TV in Fenerbahçe's colors. He also suggested that he would like the idea of being photographed in his workplace, and he would arrange the radio station he works so we could take some pictures in the radio studio. I knew that he used to do radio programs as a DJ for Radio METU, and he

cannot find the time to pursue it from his current job and doctoral study. I suggested that we should pursue the radio option, because it was a passion of him and he dreamed of continuing that.

Figure 39 - Ali in Radio – Vandyke brown Print

Since the moment Ali suggested the idea of being photographed in the radio station, there was a single image stuck in my mind. It was a back lit silhouette in front of microphone, a hard light revealing the contour of the person in the studio (see Figure 39). After all, we only hear the voice of the show's host from radio, there is no visual of him. We hear his voice, we know there is a guy speaking to a microphone surrounded by mixers and other technical equipment, but he has no face we can acquaint it with.

This is somewhat universal portrait of a radio host, unless we see him in person or his picture, we have no idea of his appearance. This is the reason why I wanted to shoot this photograph first we get there. I wanted to give the voice of radio host a visage. I decided to print this image using Vandyke brown process, because the idea of giving image to a voice is a romantic notion quite suitable for the brown sepia hues of the process. Technically speaking, I also found that VDB complements high contrast images quite well.

During the process of photographing Ali seemed quite enjoying to be back in the radio cabin. We discussed what it was like to be a DJ, and he told me that he would like to continue doing it but he can't spare time for it. After a while he was at familiar grounds again playing the knobs on the mixer and humming along the songs. It seemed to me that he enjoyed doing what he was doing in the radio. He was emotionally attached to it. This type of connection was what I was looking for to photograph.

Another photograph from the radio session is showing him behind the mixer, checking broadcast status from the monitor (see Figure 40). I decided to print that image using Cyanotype process, because blue of cyanotype is quite an intense color. After all, Cyanotype's color was one of the reasons that it was boycotted in England by some photographic circles. We do not often see photographs rendered in tones similar of Cyanotype. I believe that certain subjects suit better to the Cyanotype process than other, because of its color. The blue color is often associated with calmness and serenity, in English the word blue is used many idioms related to emotions and I do believe the blue color affects people. So I thought Cyanotype process suited well to signify the life's dream of a person.

Figure 40 - Ali in Radio - Cyanotype Print

I chose to include one of the portraits we shot earlier with Ali (seze Figure 41). It is a classic close-up portrait and it renders his features very fine in a flattering way. It also displays the visual uniqueness of albinism. I find it to be a striking portrait mostly due to its close-up nature because I believe the narrower the portrait gets, deeper the meaning is. The reason is that no visual clues are given about the portrayed person's life, environment, profession or location. So the observer had to make the connections and had to discover the story behind the portrait by himself. But for such portraits to work, the model's complexion is extremely important. I believe this portrait is a fine example.

Figure 41 – Portrait Ali - Salt Print

This portrait also happened to be one of the first photographs I took of a person with albinism. The portrait's high-key nature demanded subtle rendering of highlights in the best possible way. I chose to print this photograph using Salt Print process, because of the process' superior tonal range.

Another person I worked with was Moti. We discussed some ideas over the e-mails about how to design these photographs. At first, Moti came up with the idea of his trips. I learned that he was quite an explorer and he visited many countries and collected lots of items during his journeys. We talked about how he enjoyed travelling and discovering all the places to see by himself using maps. It was his favored way to sight-seeing and

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discovering the countries he visited. However, creating a collection of trophies and photographing him with these objects later did not appeal to both of us. It would have been too didactic.

Later, Moti told me he used to play guitar, but he was not practicing for a long time. I learned he was quite actively playing, he played in few musical shows and he had been given many number of plaquets. I suggested that we shoot his photographs playing the guitar in his room surrounded by these awards. Even though we arranged these trophies in order to make them a part of the image, the plan has changed later on. When Moti started playing, he found it a bit difficult after long years of not practicing, and he was affected. The best images from this session did not include any of these trophies, but Moti's affection for playing the guitar. I changed my wide-angle lens to a short telephoto lens and focused on Moti, because I used to play guitar too and I realized the moment Moti was truly caught up in his performance (see Figure 42). The reason I chose to print one of Ali's photographs in the radio in Cyanotype was influenced by this moment. It was an emotional experience for Moti after long years playing the guitar again. I believed that Cyanotype process suits these subjects with emotional tones and complement the image.

Figure 42 - Moti Playing Guitar Cyanotype Print

I also decided to include another photograph of Moti playing the guitar. This one was showing his cheerful personality as well his concentration on playing the guitar rather than posing for the camera (see Figure 43). These images also had the connection I was looking for in Ali's photographs, the affection of an individual in his favored subject. I feel this is a part of shared human experience that could reach to every people with or without the knowledge of albinism.

Figure 43 - Moti Playing Guitar Cyanotype Print

Another photograph we tried with Moti was to be a classical flattering portrait. I tried some dramatic lighting for this picture using the available light. I decided to use Salt Printing process because it was a classic portrait to begin with. It also had subtle highlight details as well as deep shadows. Also, the Salt Print has the least saturated colors among the processes used for this project, so the native color of the process would not overwhelm the image.
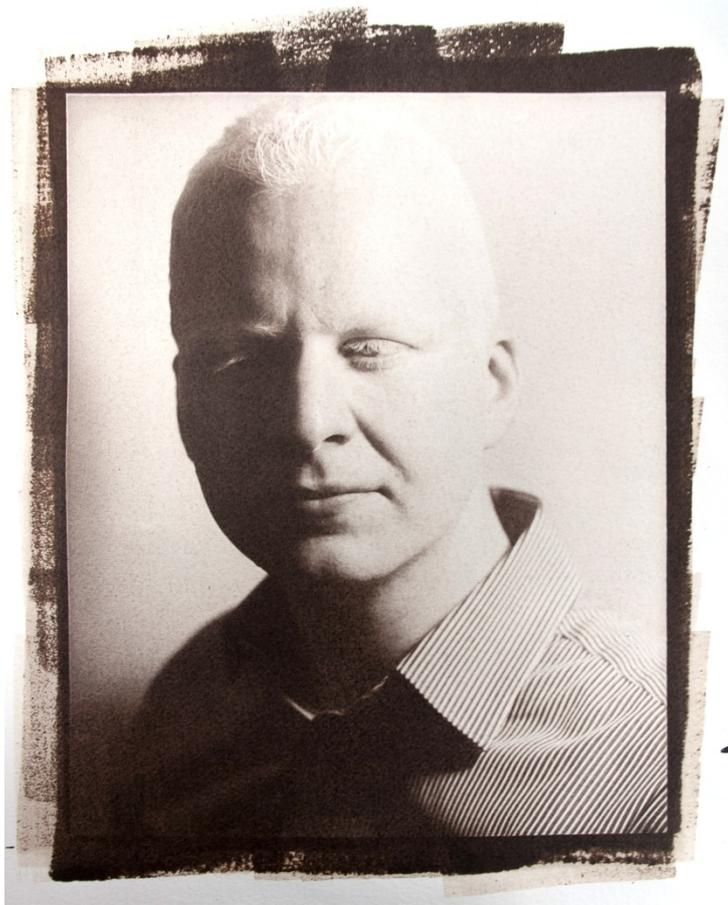
Figure 44 - Moti Portrait Salt Print

CHAPTER 6

CONCLUSION

Since its inception, photographers like Talbot aimed to do art with photography. Many amateurs in the early days of photography's invention strived to prove that their medium is capable of producing art. The camera could be used more than being just an indexical reproduction machine. But the camera is a mechanical tool and a product of science. It is technical in nature and in operation. So I have felt that I need to identify a qualitative distinction, I was able to narrow it down to the human intention against the apparatus' automation as solely relying on intention of the photographer was not enough. The historical success of photography as an artistic medium was not enough. The deliberate attempt to outwit apparatus was my starting point for finding this qualitative distinction. Even, the human factor was slightly broad; I was able to further narrow it down and find clues and inspiration in Antiquarian Avant-Garde.

As I reflect on my works and my research, I realize that this has been a search for freedom in my favorite medium, photography. This search led me to Antiquarian

Avant-Garde's methods. Although, some might argue that Antiquarian Avant-Garde is the second coming of Pictorialism, it is quite different than Pictorialism. Photo-Secessionists embraced Pictorialism for the wrong reasons, they sought acceptance from the art world which was heavily dominated by classical painting by that time, and they overlooked their medium's inner qualities. Antiquarian Avant-Garde embraces the old processes to re-discover the medium that has been overlooked in that period. The movement embraces the past of the photography to re-imagine a different future for the medium. It requires the operator's deliberate touch from beginning to end of making a photograph, the human reference in the vision and the craft of photography.

In Antiquarian Avant-Garde the human factor in all stages of production manifests itself as imperfections different from the machine precision. These so called imperfections become the part of the images themselves. These imperfections are the marks of human touch. Each mark is unique and subsequently each print is unique. Each flaw is a mark left by me, similar to a signature. Considering that there is no way to repeat the same imperfection on another print, each print is a precious photographic object. The preciousness of each print makes me treat them as delicate objects. These qualities make them perfect in their imperfect way.

After completing this project, I consider the process of photographing not just as shooting photographs, but also as making photographs. I realized this after experiencing the alternative photographic processes. Before shooting Ali's photographs in the radio station, and Moti's while he is playing the guitar, I knew that I should print them using Cyanotype. The reason was the color, the feeling that I get from Cyanotypes. In the making of a photograph the process should not only consist of taking a photograph and

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selecting a technique to print it. The final image should be whole, technique and image, which should be inseparable. Any photograph can be printed using any of the alternative processes, but it would not be significant. I realized that especially after Gerlach's portrait of his daughter Amelie, his choice of Ambrotype was not a coincidence. It was not simply a practice of the technique.

One of the questions that directed me to these processes was what would the future of photography be like, and I believe that the interest in alternative photographic processes would certainly increase. Alternative photography will certainly gain a wider recognition, especially considering the ease of using digital negatives. And I believe these processes will have a considerable number of practitioners in the future. In my research, if I take Ware's discovery of the New Cyanotype processes in 1997 as a milestone, I have come across various thesis projects using various alternative processes in increasing numbers.

The field of alternative photographic processes is quite wide and there are many more techniques that can be practiced. I have personally experimented a few more than the ones I included in this thesis project. I must remark that it have been truly a liberating experience, and working with the actual physical material have been highly informative compared to using image editing tools in computers. Realizing that there is more than the conventional darkroom practice or there is more than using computers broadens one's vision. Although, I limited myself to paper prints and rectangular frames it is possible to use amorphous photo sensitive surfaces and even three dimensional forms. If preferred, with some effort surfaces like wood, cloth, glass and metal can be used for printing. Many of the processes are quite suitable for mixed media works. More importantly they can be used in conjunction with digital workflow.

The subject of albinism has been an interest to a number of photographic projects in the last fifteen years. It is a delicate subject, requires a gentle approach. After all, some of the people with albinism at some point in their life are subjected to mistreatment due to public's illusion of knowledge or was offended from the popular culture's negative representations. In terms of photographic projects, I think the decision on how to be represented must be left to the people with albinism, because for an outsider it is problematic to decide. I always had the fear of being exploitative during the project, because there is no denying that the photographic qualities of the subject of albinism are quite intriguing. In this project I attempted to leave the decision to the people with albinism and I acted as a mediator, in hopes of eliminating the stigmas associated at the looking at *other*.

The greatest problem for me was to get in contact with the people initially, and later it was to convince people to partake in this project. I was not an established photographer and I understood their concerns about being photographed. So, I offered to sign model release contracts with them ensuring that their photographs are not going to be sold or distributed without their knowledge. Another problem was the lack of a social foundation, which impeded me to reach a wider audience to ask for participation. People had to spread the word with emails to their close acquaintances but as expected without the collaboration of foundation the number of people I could reach was limited.

However, this project has an open-ended nature. I hope to continue it, because there had been number of photo projects with the subject of albinism but none using alternative processes. The delicate nature of the alternative photographic prints and the

subject of albinism complement each other. Using these historical photographic processes for the subject of albinism is also a chance to face the discriminating use of the 19th century photographs of albinism, considering that most of the photographic prints of that era are albumen/salt prints.

I made the conceptual connection between the people with albinism and the alternative processes based on the uniqueness and the delicate nature of these photographic prints in relation the subject of albinism. But, the connections between these subjects are rich and can be explored in depth. However, I am content with this association. The reason is that these people are easily noticed in crowd because of their distinct look. Similarly, the alternative processes have their distinct looks and stand out from conventional photographic works. I believe combining these strong qualities a strong photographic case can be made for a positive exposure for people with albinism.

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APPENDIX A

Figure 45 - The Exhibition

Figure 46 - The Exhibition

Figure 47 - The Exhibition

Figure 48 - The Exhibition

Figure 49 - The Exhibition