PICTURE/PERFECT:

On Tourism, Digital Photography and the Death of the Negative

Mark Kasumovic

I

In 2005, Robert Burley began a project documenting the death of traditional photography. The project titled "Disappearance of Darkness" lead Burley across Canada, Europe and the United States in search signs of this demise, usually in the form of facility closures and well attended building demolitions. Factories that had been in operation since the beginning of the production of film were closing at an alarming rate. Photographic film was becoming redundant, its function usurped by the efficiency and popularity of the digital sensor. The act of dissolving blocks of silver into ditric acid, mixing it with the tissue of animals and coating it onto film and paper – all so the world could partake in one of our most fascinating and important inventions – was coming to a rapid halt.

Photographic film as we know it has been around for over one hundred and fifty years; it's near disappearance, in contrast, has only taken a fraction of this time. Burley's fascination with this demise was spurred by reflecting on his reliance on these traditional materials over his entire photographic career, and the inevitable questions about what would happen next. Within his body of work we find images of demolition, abandoned buildings and stripped interiors. "Implosion-3, Buildings 65 and 69, Kodak Park, Rochester, 2007" is perhaps the most iconic of them all. Burley directed his camera at the media as they attempted to capture the moments during and after the demolition of a Kodak building. The photograph, however, is lit by a strange and eerie glow. The dust and debris, reflecting and obscuring the light from above, seemed to make taking any kind of photograph of the building's implosion impossible.

In its final moments, the Kodak building escaped any form of representation, its remnants instead creating a great, blinding veil that almost begged the question: with the death of analogue photography, what will happen next?

II

I first met Robert Burley in the fall of 2008, in the final year of my undergraduate studies at Ryerson University. Although we never formally discussed his new body of work, it had always fascinated me for reasons that I, at the time, did not fully understand. While the digital camera was a new and exciting tool, its similarities to the analogue processes that had proceeded it seemed to make the transition of the photograph into digital form inconsequential. Both analogue and digital cameras

created images that would, after all, look quite similar on paper. Both technologies, for the most part, bore a similar optical design and camera body, and shared many other physical characteristics.

It was only later and upon much reflection that I realized that the significance of this new technology was greater than I had first thought. It was not the image produced by the camera that was fundamentally different. It certainly was not the idea that one could view their images immediately on the back of the camera that was significant. Even the qualities of the image produced by digital cameras, in many cases, are still inferior to those produced by film-based cameras. Rather, it was the digitization of the image and its continuing integration within our vast array of technologies, networks and digital devices that truly separates it from its analogue brother. No longer is the image indexically fixed upon a physical surface. Is free to travel, at any given moment, halfway across the world and back in the blink of an eye.

In 2012, Burley will exhibit his work within the Image Arts Gallery at Ryerson University and publish a monograph regarding the death of traditional photography. With Kodak in the midst of uncertainty and factory closures, Burley comments to the Wall Street Journal regarding the legacy of the analogue: "It's yellow boxes of film, point and shoot Brownie and Instamatic cameras, and those hand sized prints that made it possible for countless millions to freeze-frame their world. [They] were the products used to remember – and really define – what that entire century looked like."[i]

It took more than four years, but realizing the importance of this project, along with my own questioning about the effects of digital technology, have lead me to explore some of the world's most photographed places. I wanted to at least try and understand the full ramifications of this transition. In hindsight, I asked myself, what would *this* century look like?

III

At the very dawn of the 20th century, the foundation of the photography world was about to change. In February of 1900, Eastman Kodak announced The Brownie Camera, allowing just about anyone to use a camera for the first time. In its first iteration, the Brownie cost one dollar and consisted of a very basic cardboard box as a body, a simple lens and a cartridge of 2 ¼ inch square roll film already installed upon purchase.

Prior to its invention, photography was relegated to professionals and wealthy amateurs; the average person was not about to start fiddling with chemicals and investing in very expensive equipment to take a photograph. Kodak capitalized on this idea by offering a no maintenance camera that took the guesswork out of photography – their slogan: "You push the button, we do the rest." Customers would use up the roll of film built into the camera and then send it in to Kodak,

which would then develop and print the negatives, load the camera with unexposed film, and send it back to the customer. Along with a new an easy way for people to take photographs, the Kodak Brownie also helped coin the term 'snapshot', a new phrase within the lexicon of photography still with us today. Ingrained as a particular style of photography, it implies a carefree attitude and simplicity towards the operation of the camera. One can not help but draw parallels with the last decade of camera design.

The dawn of the 21st century certainly offered similarities to this historic introduction to snapshot photography – ones that are proving to be just as significant. While the Brownie camera exploded photographic activity throughout the world in the early 1900's, digital photography has done the very same thing today, removing the cameras reliance on a third party such as Kodak, and replacing it with a nearly unlimited digital memory slot managed by its user. Just as Kodak removed the need for users to trouble themselves with the photographic process, the digital camera took it even one step further.

The irony, of course, lies in Kodak's own efforts in its own demise. In the 1990's, Kodak spent millions developing some of the world's first digital imaging technology. Its early discoveries are still being used in many cell phone cameras, with income from those early patents being Kodak's last foray into the digital market. In the winter of 2012, it was announced that their production of digital cameras would cease as further restructuring of the corporation continued. Film, for the time being, remains a profitable market for Kodak as amateurs and artists continue to enjoy the way it renders the world around them.

Everyone else, however, just couldn't be bothered.

IV – Rome, Italy – May 5th, 2011

After three days in Rome, an interesting thought occurred to me. I'm suspicious that within these tourist areas, I am actually in more photographs than I myself am taking. It bothers me that perhaps I may be represented more often than I am representing.

It is almost impossible to avoid being in a photograph at a tourist site, cameras seem to be pointed in every direction and the sound of electronic blips can be heard from every direction. I can't help but wonder just how many more photographs people are taking with their digital cameras then they used to take with their film cameras. I wonder how many rolls of film it would take to contain that many pictures, and know that no one would bother if they had to carry all of those rolls with them for the rest of the trip.

It makes me think about the value of the photograph and how it may have changed so quickly.

V

In early May of 1732, a twenty-five year old Swedish botanist by the name of Carl Linnaeus rode out from the university town of Uppsala on a journey northbound to Lapland, the largest province in Sweden. Countless observations filled his travel journal – changing soil conditions, vegetation in the ditches and meadows, descriptions of song birds and proportions of fir trees – amongst other details within the landscape. It was not a poetic text and thus far different from the travel writings of Carl Jonas Linnerhielm, in his account of a voyage through the same landscape a half of a century later. Linnerhielm was not out to collect minerals or flowers; instead, he collected views and moods, and his descriptions of the landscape included a constant ranking of aesthetic values.

Linnaeus and Linnerhielm were traveling through the same landscape, in 1732 and 1787, yet their motivations and observations were extremely different. Linnerhielm would continue to travel, which resulted in published books filled with sketches and descriptions of his travel. In the foreword of his books he would publish the text, "I travel to see, not to study." Both of these Swedish figures have long lasting legacies, with Carl Linnaeus continuing his collection of data for many years and inspiring many like minded 'apostles' to do the same, and Jonas Linnerhielm being touted as the first proper tourist in Sweden, publishing creative travel writings and traveling for pleasure and nothing else.

It is no surprise that tourism and photography both came into popular culture at around the same time. With the rise of the middle class and an increase in expendable income, many people began to discover the joys of travel and photography and the two have become nearly inseparable since.

But photography and travel share an even more important link within the history of photography – particularly during the time before either was truly an accessible activity for the general public. Early photographic pioneers would journey to far away places with slow cameras, requiring light-tight tents to be erected at the scenes they wished to photograph. The photographer would then have to paint the emulsion onto glass plates and develop the image immediately with a variety of chemicals (hoping that nothing went wrong during this complicated process). The images they took, often of places inaccessible to the masses, would later be sold as exciting and exotic locations that most people would never get the chance to see for themselves.

This practice would continue to expand as travel became more affordable. When sightseeing in wheeled vehicles became possible at Yosemite in 1874, views of the most exciting features of the park were already on sale.[ii] In Scotland from the 1860's, a man by the name of James Valentine began purveying views of tourist sites to the British middle and upper classes, and would soon become one of the world's largest manufacturers of postcards. In Italy, the Alinari brothers in Florence and Naya in Venice distinguished themselves amongst the country's countless 19th century view specialists. [iii] Sights and views became a big business. Not only would

postcards serve as a convenient knick-knacks for tourists to either collect or send away to family and friends, but they would also work to inspire desire to visit these places by representing them in their idealized forms.

Although some amateurs traveled with cameras long before photography was easy, the advent of roll-film made it much simpler, cheaper and more commonplace. It also came just in time for the bicycle boom of the 1890s, and by *c.*1900, bicycle (and, more gradually, automobile) tours were featured in many a snapshot album. [iv] Hotels also responded to the surge of self-propelled amateurs by offering darkroom facilities as part of their amenities.

Early tourist snapshots often resembled the professional compositions long available for sale, but the shift from buying photographs to making them gradually made photography a major component of the tourist day, both as a pastime and a means to infiltrate, occupy, understand, and control the unfamiliar place. In the early 21st century, against the background of mass tourism's vast expansion since 1945, photographers were often given signposts to the best vantage point for a successful picture; events and performances were structured for photography (and may have even been sponsored by camera manufacturers); film cartons littered popular sites; and organizers of 'camera safaris' and photographic workshops in scenic locations advertised photograph taking as the rationale for the trip.[v]

Today, photographs still promote tourism when they appear in newspaper and magazine advertisements, in brochures, on billboards, railway stations, websites, and in television commercials. They often serve the same purpose in feature stories, informational travelogues, calendars, coffee-table books, museum exhibitions, and the like. They are usually idealized, and reduced to a few widely recognized signifiers, such as a palm-fringed beach, Big Ben, the Taj Mahal, a gondola, or perhaps a sombrero.

Much has changed technologically since Jonas Linnerhielm traversed the Swedish countryside in search of collecting idealized views, however, the modern day tourist has carried on his intentions and motivations quite faithfully and the goal of the tourist has remained essentially unchanged. When tourists return home, their photographs become complex mementoes, evidence of a journey that condenses a multifaceted experience into sets of discrete rectangles to be sorted, shared, and organized into an idealized narrative. As in the 19th century, some narratives may take the form of carefully edited and captioned holiday albums. Many more pictures will remain structure less and loose in shoeboxes or envelopes or, unprinted, on CD-Rs, doomed to be forgotten or discarded.

Other photographs, however, in one of the most radical changes within the very nature of the photographic image, will take on a life of their own.

VI

Venice, Italy - May 15th

Within each individual photograph of a place lies an ideal representation that is meaning to be represented. This representation consists of a mix of ones own expectations and their desire to recreate the space, buffered by a barrier of reality that exists that places pressure upon the ideal. Each individual seeks to remove this barrier, only including his or her own ideals within the frame. This, however, is somewhat impossible, and the absurdity of representations becomes apparent: the place is not perfect – something, whatever it might be, is not as it should be.

The tourist place is in state of constant transformation, to which I refer to the momentary changes in a place from the point in which one person photographs it to when the next person takes a similar photograph. The place is essentially the same, but the photograph is still slightly different. If we had the ability to view these photographs in a linear fashion, from several photographers, as time progressed, it would become clear that there is no way to represent place in a definitive fashion.

No single frame, nor a multitude of frames, could wholly represent the changes that occur within place. For me the importance lies in capturing these places in a way that more closely resembles how they actually exist. This of course, I realize, is quite impossible.

VII

One of the most fascinating and recent discoveries in the field of genetics was that DNA, the very building block of life, essentially mimics what we understand as digital data. Upon unraveling the genetic code of thousands of species, it became clear to geneticists that each strand of DNA offered a combination of digits, similar to that of the one's and zero's our computers use to process large amounts of data. Since DNA relies on self-replication to construct its eventual forms, the idea that it far more resembles a digital copy than an analogue one starts to make sense: analogue copies have a tendency to alter slightly from generation to generation (and eventually become un-recognizable from the original), while uncompressed digital copies remain unaltered regardless of generation.

When pondering the transition of photography from an analogue to a digital medium, it could only be concluded that at its core, the digital photograph has the ability to remain true to its original form, whereas the analogue image is bound to change. Immediately after capture and development, the negative begins the process of degradation that will continue throughout its life as an image. From its development to its printing, to its presentation and conservation, the analogue media must be protected from the harmful elements that will eventually contribute to its demise. The digital image, however, in its uncompressed form has the potential to remain as an exact copy; its form consisting of a set of fixed and

unchanging values. A pixel is a particular colour, represented by an exact number on a given scale – regardless of how many times it is copied, this will never change.

It becomes clear that one of the most significant differences between the analogue photograph and the digital image is the matter of its permanency in its original form. This permanency allows the digital image to exist in infinite places, simultaneously, as an exact copy.

I download a photograph from the Internet, and like DNA, an exact copy replicates itself onto my hard drive. A decade ago the very same photograph may have made its home in a tacky photo album or buried shoebox, the latent image slowly fading away into obscurity. Even worse, perhaps it would have been left undeveloped: forgotten and neglected, like a memory not quite worth remembering.

VIII

Madrid, Spain – May 25th, 2011

So many photographs, so many representations: the tourist site is a replication machine it seems. Within a minute, thousands of digital copies are being made.

Inherently, the photograph is a representation – a depiction of the world on a flat plane - two dimensional though accurate enough to satisfy our basest construction of reality. When we look at a photograph, it allows us to at least imagine the possibility of ourselves witnessing what is being represented ourselves. It is safe to say that what we see in the form of a photograph can usually be imagined to have taken place somewhere in the world at a given moment in time.

It is this type of photograph, the 'believable' photograph that is most effective in exposing our ignorance of the way that a camera represents. None of these many photographs being taken could possibly be entirely true. An educated viewer can and will often read a photograph without noticing its inherent flaws: it is simple to read a photograph incorrectly and out of context. Some part of us wants to believe that we are seeing the 'whole' picture; that what we are looking at is all there was to see.

With this in mind, a cleverly arranged and seamlessly constructed photograph can become a record of truth, if the viewer is unaware of the manipulation. Seeing is believing; especially when we are given no reason to question what we see.

IX

"In principle a work of art has always been reproducible."

-Walter Benjamin (The Work of Art In the Age of Mechanical Reproducibility, 1936)

Walter Benjamin speaks of the original work of art as holding an indescribable aura that sets itself apart from its representations and reproductions.[vi] As such, I began to view the tourist site (whether the Colosseum, Eiffel Tower, or Acropolis) as a similar physical entity; its many individual elements combining to become reminiscent of an original work of art. Using this metaphor, the photograph then becomes a reproduction of the original tourist site. Benjamin continues: "[e]ven the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be." While the photograph is certainly a representation within time and space, it is far removed from the unique existence of the space itself. How could a single photograph ever represent the extreme complexity of the history and culture of the Colosseum? This idea resonated with me as I witnessed the re-recording en masse at the tourist site. Each image taken carrying the possibility of remaining unchanged, capturing a single moment in time, from a single perspective.

While already endlessly represented through photography, film and literature, it is obviously clear that there still remains a similar and endless desire to witness these sites and record them for oneself. One could only describe this motivation through considering the tourist place as exuding a particular and undeniable aura, one that places the original far above hundreds of thousands of fragmented reproductions.

So why the need to create yet another?

X

Paris, France – June 8th, 2011

My luck of bright sunny days seems to have come to an end. The consistently overcast skies are much too bright, and have made my series of 'camera portraits' nearly impossible to photograph.

XI

"Representations do not imitate reality but are practices through which things take on meaning and value; to the extent that a representation is regarded as realistic, it is because it is so familiar it operates transparently…photography is one of the representational practices that has become so naturalized."

-Michael J. Shapiro (The Politics of Representation, 1988)

Before computers, photographic manipulation was achieved by retouching with ink or paint, or by using a technique that incorporated multiple exposures on either the negative or the print. The 1980's, however, saw the advent of digital retouching with Quantel computers running a program called Paintbox.[vii] In 1982, National Geographic Magazine featured a cover photograph of the Egyptian periods, now

famously known as one of the first and most historic cases of digital manipulation. In the photograph, the pyramids were placed closer together to create a more pleasing composition for their front cover, and it wasn't until one viewer calculated that such a view of the Egyptian Pyramids was in fact impossible that the public began to realize that photographs could be easily and effectively modified in a nearly imperceptible fashion (raising questions about journalistic integrity along the way).

Today the legitimacy of imagery is often in question. From beauty magazines and celebrity tabloids, to Time magazine and various other well-respected news sources, there has since been many questions of authenticity raised over the past several decades. The ease at which a photograph can be believably manipulated, often within hours of being shot and passed along the news wire[viii], has lead to many false claims to reality. Although photography's claim to truth has been questioned prior to the advent of digital manipulation, the addition of simple tools has unquestionably lead to an increase in such cases.

The shift of the photograph from its physical form into digital data points to lost referents and a loss of the symbiotic relationship it shared with the material world. Fred Richtin, author of "After Photography", acknowledges the transition as a problem due to the surface similarities between the images captured by both digital and analogue cameras. In an interview with Wired Magazine, he summarizes: "[w]e've handed digital photographs the aura of analogue photography and it's camouflaged."[ix] This new technology has effectively increased the gap between reality and fiction.

If we explore the history of the photograph and its reception amongst the public, a seemingly complete reversal of opinion has occurred. In its early stages the camera was considered a mechanical tool devoid of its operators mark, and often referred to as a scientific tool, thus assigned nearly the full status of objectivity. Questioned by cultural critics and art curators, this opinion began to change by the mid-twentieth century. A well written essay titled "The Photographer's Eye (1966)" by John Szarkowski, then director of New York's Museum of Modern Art, outlined the many ways in which the photographer influenced the reading of a photograph and lead to the eventual acceptance that the camera was not as innocent of a tool as it had been thought to be. Many other important figures such as Susan Sontag and John Gossage would further the argument in coming years, stating that rather than providing a glimpse of reality, it was photography's similarities to how we see that allowed it to become a most dangerous and subtle tool of manipulation.

XII

Amongst the many characteristics of the photographic medium, it is perhaps the introduction of the flash bulb that has separated it entirely from any other similar medium, including the continuous frame film and video camera. In 1814, Niepce

took the world's first photograph and due to the extremely slow emulsion surface at the time, the exposure took eight hours to leave an impression of light strong enough to produce an image on his glass plate. In 1851, Frederick Scott Archer would go on to create the Collodian Process, requiring only two to three seconds of exposure to daylight to produce an equal image on paper. It wasn't until 1927, however, that General Electric produced the first modern flash bulb (a few less effective, though important chemical-based alternatives had proceeded it), and time behind the lens of the camera began to slow to unparalleled speeds. With the instantaneous bursts of bright light, it was found that the camera could stop time almost entirely - the ability to record even the fastest bullet as it traveled through the air was possible, and the world began to be photographed in an exciting new way.

For many years, even before the electronic variant was popularized, flash photography had played an important role in revealing the unseen world around us. In perhaps the earliest and most illuminating example, writer and photographer Jacob Riis acquired a job as a police reporter in the Lower East Side of Manhattan, publishing the book, "Flashes from the Slum: Pictures Taken in Dark Places by the Lightning Process," in 1888[x]. He photographed what he called 'the other half', in other words, the less fortunate during the depression of the 1870's.

Using magnesium flash powder, an immense white light illuminated the darkness and surprised his subjects – the shock that registered on their faces would come to stand, at least at the time, as candid and objective photography[xi].

XIII

Paris, France – June 10th, 2011

Visiting a shop in the camera district in Paris, I purchased an old manual flash for twenty-six Euros. I have never used a manual flash before, but after taking my first photograph, it became clear that I should have been using it since the very beginning of my trip. Upon arriving in Rome, both the crowds and the way in which people take photographs had fascinated me. The gestures associated with the digital camera were so different than those of the analogue camera, that I could not resist photographing the act.

This camera I am using does not look through the lens, but rather through a separate viewfinder. I always found the paradox of most other cameras intriguing: the moment of the photograph is the only moment invisible to the photographer, the shutter closing just long enough to transfer the image to the negative. The photographer would see the moments leading up to and after the photograph, but never the actual moment in time.

Though I will not see the negatives for quite some time, I can vividly imagine the effect that the flash is producing on my 'camera portraits'. My own camera in one hand, my

new flash in the other. Through the viewfinder I see the flash of light gently sculpting; I see the moment, the exact *moment, which the shutter is released for the first time. I imagine capturing them as if they are being bathed in the light of their digital screens and lost in the fantasy world of the photographic image.*

I imagine what these places would look like in complete darkness, illuminated only by the backs of everyone's digital cameras.

XIV

"The Photographic falsifier holds up not a mirror to the world but a looking glass through which the observing subject is slyly invited to step, like Alice, into a place where things are different--where facts seem indistinguishable from falsehoods and fictions and where immanent paradox continually threatens to undermine established certainties."

– William J. Mitchell (The Reconfigured Eye, 1992)

To suggest the camera flash as objective would be a difficult position to defend. Its very nature is temporary and altering: the production of light that is ultimately too short to comprehend and only truly exists within the world captured by the camera. The moments it allows the camera to capture are mere fractions of a second, moments that cannot be recorded by any other means or understood within our own understanding of time.

It is, however, this very same phenomenon that makes the photograph illuminated by flash so very intriguing to scrutinize. Moments that were only a mere fraction of continuous time become significant for no other reason than the fact that they were captured by a camera (it could have very well been slightly before or slightly after).

One could suggest that each such photograph, illuminated by the bright light of the flash, is in effect the construction of a virtual world; one that never would have existed where it not for the camera that had created it.

XV

In the spring of 2009, researchers from Cornell University presented their findings at the World Wide Web annual conference in Madrid. For the first time in the history of photography, there was an attempt at quantifying the number of photographs being taken at the world's most popular tourist destinations. Cornell scientists downloaded and analyzed nearly thirty-five million Flickr photographs taken by more than 300,000 photographers from around the world, using a supercomputer at the Cornell Center for Advanced Computing. Within their data,

they found that the Eiffel Tower, according to Flickr at least, was the most photographed landmark in the world, followed by many other popular tourist destinations.

Just two years prior in the spring of 2007, Microsoft launched a software program called Photosynth at the annual TED Conference. Within the demo, speaker Blaise Aguere y Arcas demonstrated the ability of the program to construct a pixel based 3D environment out of user uploaded photographed. Using the tags associated with photographs and a complex mathematical rendering engine, the software analyzes the point in space where the photograph was taken and attempts to stitch it with a similar photograph taken nearby. Arcas showed one of these very constructions of the Notre Dame Cathedral in Paris, dazzling the audience in the process as he panned through space and time within a virtual world.[xii]

While Photosynth was and still is at the cutting edge of image stitching, other practical applications of their approach are appearing over the Internet. Google maps, for example, uses similar software to enhance their Street View option, allowing users to break away from the usual routes and explore space by clicking on user uploaded photographs instead.

The very idea of recreating space and time through images mapped through three-dimensional space is an intriguing one. It is surely only a matter of time that our most heavily populated areas, with the rise of digital devices and electronics with embedded cameras, could potentially be mapped in extreme detail within the next decade. The software effectively creates a digital copy of the visible physical world: a virtual world of unparalleled detail.

The implications of this software as a starting point to future technology is truly astounding, and will surely raise many questions about its best uses, along with its problems and various privacy concerns. It is not inconceivable to imagine the world fully spatially mapped in the near future – but what would it be a map of exactly?

What if our photographs, immediately after being taken (if we allowed it of course), were instantly uploaded to such an environment, effectively creating a constantly updated virtual map of the world in three-dimensional space? Could we watch as environments changed in real time, witnessing photographed moments as they happened?

For over one hundred and fifty years, photographs have had a clearly defined space to exist within. The future of the photograph remains much less predictable. One thing, however, is becoming increasingly clear: the authoritative, singular photograph that was once associated with analogue photography is rapidly reaching its end. Digital technology is providing a new role for the photograph, one that places it as just a small piece of a much more complex, connected and networked picture.

XIV

June 28th – London, England

The morning is a wonderful thing. Not too early of course, we are on vacation after all. As the tourist's day begins, there is energy in the air: we smile broadly, enjoy our experiences and put on our finest airs for the camera. It is all new, all different, and an experience worthy of a photograph!

The enthusiasm, however, can only last so long and the tedium of the adventure becomes apparent. Our legs hurt (we usually don't walk this much), our eyes are tired (we usually don't look this much) and we are mentally exhausted (we usually don't think this much). Soon our energy begins to wane. We smile less and droop our shoulders.

We will still take our picture, but we won't necessarily be happy about it.

---

[i] "Former trailblazer Kodak files for Chapter 11", Wall Street Journal 2012, Feb. 2 2012 <http://online.wsj.com/article/APe438a5e836ac4412a6eb7e6ec2fd522b.html>

[ii] Lofgren, Orvar, On Holiday: A History of Vacationing (Berkeley: University of California, 1999) 12-20

[iii] Lofgren, 25-26

[iv] Lenman, Robin, The Oxford Companion to the Photograph (Oxford: Oxford UP, 2008) 75-76

[v] Lofgren, 25-27

[vi] Benjamin, Walter, Art in the Age of Mechanical Reproduction (*Marxists Internet Archive*. 2005. Web)

[vii] Pank, Bob, The Digital Factbook (Quantel, 1996)

[viii] Rutten, Tim. "Lebanon Photos: Take a Closer Look*."Los Angeles Times [Los Angelas]* 12 Aug. 2006.

[ix] Brook, Pete, "Raw Meet: Fred Ritchin Redefines Digital Photography," Wired Magazine. 2 Sept. 2011, Web. 4 Feb. 2011. <http://www.wired.com/rawfile/2011/09/fred-ritchin/all/1>.

[x] Marien, Mary Warner, Photography: A Cultural History (Upper River Saddle, NJ: Prentice Hall, 2002) 205

[xi] Marien, 205

[xii] "Blaise Aguera Y Arcas Demos Photosynth | Video on TED.com." *TED: Ideas worth Spreading*. TED Conference, May 2007. Web. 13 Feb. 2012. <http://www.ted.com/talks/blaise_aguera_y_arcas_demos_photosynth.html>.

Bibliography

Benjamin, Walter. "Walter Benjamin: Art in the Age of Mechanical

Reproduction." *Marxists Internet Archive*. 2005. Web. 9 Feb. 2012. <http://www.marxists.org/reference/subject/philosophy/works/ge/benjamin.htm>.

"Blaise Aguera Y Arcas Demos Photosynth | Video on TED.com." *TED: Ideas worth Spreading*. TED Conference, May 2007. Web. 13 Feb. 2012. <http://www.ted.com/talks/blaise_aguera_y_arcas_demos_photosynth.html>.

Brook, Pete. "Raw Meet: Fred Ritchin Redefines Digital Photography." *Www.wired.com*. 2 Sept. 2011. Web. 4 Feb. 2011. <http://www.wired.com/rawfile/2011/09/fred-ritchin/all/1>.

Crandall, David, Lars Backstom, Daniel Huttenlocher, and Jon Kleinbeg. "Mapping the World's Photos." Diss. Cornell University, 2006. Print.

Lenman, Robin. *The Oxford Companion to the Photograph*. Oxford: Oxford UP, 2008. Print.

Löfgren, Orvar. *On Holiday: A History of Vacationing*. Berkeley: University of California, 1999. Print.

Marien, Mary Warner. *Photography: A Cultural History*. Upper River Saddle, NJ: Prentice Hall, 2002. Print.

Mitchell, William John. *The Reconfigured Eye: Visual Truth in the Post-photographic Era*. Cambridge, MA. ; London: MIT, 1994. Print.

Pank, Bob. *The Digital Factbook*. Quantel, 1996. Print.

Ritchin, Fred. *After Photography*. New York: W.W. Norton, 2009. Print.

Rutten, Tim. "Lebanon Photos: Take a Closer Look." *Los Angeles Times* [Los Angelas] 12 Aug. 2006. Print.

Wells, Liz. *Photography: A Critical Introduction*. London: Routledge, 2000. Print.