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Photography as a Tool for Discovery and Analysis
In the Architectural Design Process

Aaron Kimberlin

-Definitions-

- 1. Structure-** the visual elements that organize a place or a composition of a photograph into an order.
 - The arrangement of visual elements and relationships of visual elements of a place or photograph.**
 - the act of arranging or composing the elements of a place or photograph.**
 - Examples-** trees, horizon line, prominent landforms, proportion, repetition, scale, and distance.
- 2. Extract-** the act of digitally selecting part of an image and isolating it as its own image. n. extraction
- 3. Abstraction-** a photograph; reducing a photograph to an element in order to emphasize qualities of that element without the distraction of others.
- 4. Diagram-** a simplified image or drawing that shows the essence, language, structure, workings, or other qualities of something.

Introduction

In the fall of 2012, I stumble across the work of Michael Najjar. I was particularly drawn to his series “Netropolis.” Each piece is several images stacked and manipulated in a way that all were visible, creating a soft, almost ephemeral, yet aggressive and chaotic image of a city. Each image in the ‘stack’ is taken from a different angle and vantage point of the same city, so the language of that particular city repeats and is exaggerated. It explores the way in which cities will develop in the future. The different angles and multiplicity of the same language displays the speed and magnitude at which cities could grow, perhaps at dizzying speeds. “Najjar demonstrates the potential of the photographic image, capable of making visible what is normally invisible to the human eye. His work visualizes what very often is beyond the limits of our perception, unveiling what is hidden under the surface...” (Anti-utopias. 2012. Pg. 1. His work changed the way I think about photography. I no longer only see the photograph as an end result but as a beginning. I believe now that a photograph doesn’t only have to come from an idea, but an idea can come from a photograph.



This change in thinking reveals a path of thoughts and explorations that I had not considered before: discovery for the sake of design is possible through photography. This thesis seeks to explore and demonstrate how an intentional use of photography can provide us with a vocabulary specific to a place that can germinate spatial or formal ideas. An intentional photograph can have embedded languages that can actually generate ideas for an architectural project. However, I am only going as far as extracting those languages as ‘diagram.’ The discoveries possible in a photograph no doubt have the ability to provide us with a visual,

formal, or spatial structure or a language from which we can develop and work with in the architectural design process.

What if we just learned how to use photography better, how to see well, and how to actually see what a site has to offer through the detail of a photograph? For an architectural project to be harmonious with its site, acute observation, inquiry, and analysis should take place in the beginning of the design process. Specificity and detail are key in accomplishing a harmonious relationship. Photography is a great tool for such a task. Information, or a language, can tell a story. A place's past, present, and future can be contained in a single photograph. An image recorded at the right time in the right place can tell much about the site that may not be obvious to a passive viewer. An intentional and meaningful photograph can be analyzed and dissected to reveal a place's story and vocabulary. This can be done visually or by means of actually dissecting the photo, a tangible way of extracting and abstracting the elements that make up the place photographed to clarify or discover vocabulary. One only needs to know how to look at and read the image. I, as a student of architecture, and the field of architecture in general, could benefit from this study. The relationship between architecture and photography has been ill considered. In fact, currently, for there to even be a relationship, there must first be architecture. Photography records idealistic images for publishing and portfolios or maybe to aid as backdrops or texture sources in renderings. It might even be used to document a site for the location of edges, landmarks, or for the sake of documenting the site. Photography has so much more power than that!

Since the invention of photography, the camera and the photograph have evolved and expanded immensely. "Photography was from its inception a medium of thought and inquiry and became an art form soon after," (Spirn 2014, pg. 38). The use of photography as expression and communication increased as faster techniques, better image quality, and higher demand emerged. "Photography began to change ... into something else... a something which had lost interest in the unique connection between the inside and outside..." (Thompson 2013, pg. 24) More profitable ways of using the camera had emerged, and the majority of the literature on photography focused on these, rather than on photography as a means of thought and inquiry. "Much has been written about photography as a means of documenting and recording events and conditions, as a medium of communication, a means of persuasion, and an instrument of deception and propaganda, and photography as a fine art. Photography as an art of *thinking* has received scant attention." (Spirn 2014, pg. 46-47) Despite the exponential growth of photography in the world of artistic expression, the potential to record accurate information for inquiry, study, and analysis is rarely written about. As an artistic medium, photography is not trusted as a source for factual or historic evidence in terms of landscape analysis. "They seem reluctant to consider the analytical potential of fine art photography in all but its most blandly descriptive forms" (Davis 1989, pg. 4).

Today, photography is ubiquitous; digital photography and the Internet have only increased the speed and convenience in which photos as a product can be produced, shared, and distributed. "Never have so many people owned cameras, and

never have their snapshots been so widely distributed and shared. The world is being recorded, but to what end?" (Spirn 2014, pg. xi). Spirn notices that quantity and convenience are replacing quality and intention. Now, "People may be surrounded by imagery, but few interpret those images deeply and critically." (Spirn 2014, pg. xi) I am in no way trying to discount the power of photography. It most certainly has evoked feelings, solidified visual memories, persuaded, and governed many. But this work is about developing a deeper understanding of photography. In response to Spirn's work, this study attempts to critically use photography as a means of discovery and understanding of site-specific ideas.

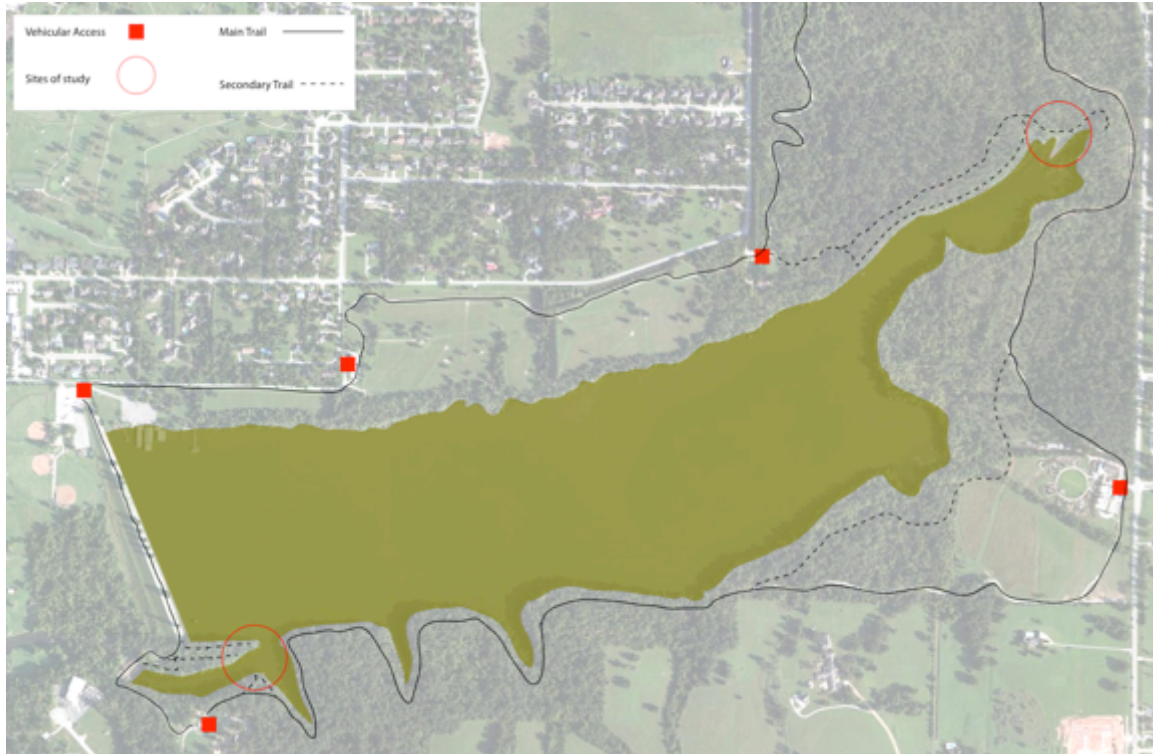
The research involved with this project serves to guide and inspire me, as well as keep me in check. I look to those who use the camera as a way to see and discover, across the disciplines of art, theory, and photography as well as architecture. These include Anne Spirn, Jerry Thompson, John Berger, Michael Najjar, and David Hockney. My ideas about photography have already evolved and expanded, even in the initial stages of research and exploring this subject. I realize it is much more useful and powerful than I imagined before, not only as a tool for recording information about the present and past, but also as a tool for designing the future. This thesis pushes the boundaries of the field of photography, and proposes its use in the architectural design process, as a way to improve my own ability to see. I strive to broaden the spectrum of tools used by architects by including the camera as a way to see and draw, not just as a promotional or postproduction tool. In this work, I use the camera to both extend seeing and help me be more acutely aware of what is in my field of vision.

Why photography? Lets get back to the toolset that I chose to lead my investigation of seeing and analyzing a place. Vision is very important and one of the ways in which we navigate this world and learn. The camera extends our vision, both in time and space. It not only prolongs the image that we can see for as long as we like, but it also has the potential to widen the angle in which we see and zoom in our out beyond the scale at which our eye can perceive. "The camera is my third eye, its sensor a third retina, its images a form of thought, speech, and memory." (Spirn 2014, pg. 49) Spirn's ways of thinking are applicable to architects. The camera has many advantages that can aid throughout the design process. Cameras are, as time and technology advances, becoming easier and easier to use. They do not require a lot of extra baggage. Although many accessories may be helpful, all you really need is a camera and perhaps a tripod. They are fast and can be very inexpensive. "A thousand paintings is an enormous oeuvre, but a thousand photographic pictures can be taken (and considered thoughtfully) within the span of a months, a few years, and on a tiny budget." (Thompson, 2013, pg. 21) Not only can you quickly record, the nature of photography that makes it beneficial to architects is the ability to record enormous amounts of detail. "The camera can show more than its operator understood he saw when he looked at the actual scene." (Thompson, 2013, pg. 10). The details recorded in a photograph of a place are what make the ideas embedded in the image very specific to that place. The very ability of the photograph to capture such specificity is why I am using it through an architectural lens. Successful architectural projects are site-specific more often than not.

Methodology

My gear is modest, consisting of a Canon T2i body for a camera, a Canon 18-55 mm f/3.5 lens, a Tokina 11-16mm f/ 2.8 lens, and a Canon 55-250mm f/4 lens. I also have an off brand tripod, a wireless remote shutter release, a wired remote shutter release, a 13 megapixel camera phone, and a GoPro.

The process in which I execute my studies is broken into 3 steps: photographing, analyzing, and processing. With a background in art and architecture, I innately pull ideas from drawing and see with the eyes of one that wants to build. It is this perspective through which I explore, read, analyze, and photograph a place. With the same vocabulary, I explore, read, and analyze the photographs. For the purpose of exploration of this topic and to reach the goals and expectations that I have set for myself, it is necessary for me to physically execute this experiment myself. To do this, I need to eliminate as many unknowns as possible. I located a specific place that would be a suitable architectural site and that allowed for me to have unlimited access. Repeated visits allow me to get to know the site in depth. I chose fairly secluded sites around Lake Fayetteville in Fayetteville, Arkansas. "Landscape is an ideal vehicle for honing the skill of visual thinking; landscape is always at hand (Spirn 2014, pg. xii). Landscapes speak. They declare origin and assert identity. They proclaim beliefs, affirm and refute ideas. They allude to art, literature, and science." (Spirn 2014, pg. 61) Landscape is where it all begins and is therefore a great place for me to start my studies. When locating this place, I kept physical access in mind. This small lake has multiple vehicular accesses, is surrounded by a hiking/biking trail, and yet still has offshoot trails into more densely wooded and secluded areas. It was beneficial to choose a place with some existing infrastructure to support my perspective as a student of architecture. The lake is also an interesting site as it includes water, vegetation of all sizes, many topographical conditions, and many material conditions. The relationships of these elements and the elements themselves are my materials to study. The following map shows the trails, accesses and key locations. The actual selection of these places is a major part of the process and I consider it part of the experience in the act of making the photographs



In search of a place to perform this study, I gave myself some criteria to narrow down the possibilities. 100% unlimited access, at least some vehicular access, and predominantly landscape. I noted earlier the reasons for a place that is mostly landscape. In the descriptions of these places, it is important to note the experiences while I am searching and looking at and shooting this place for study. Details of experience are important because even though I am predominantly using photography for the investigation, smell, touch, hearing, and even taste have influence on how the photos are made. And how they are made could, after all, affect how they are perceived and analyzed, which could have impact on design decisions.

Winter 2013-Spring 2014

It all starts with a lot of walking and a lot of looking. Given the cold season in Arkansas, vision was good. All, or most, of the leaves are on the ground. The air is crisp and I can see my breath. The forecast predicted temperatures in the teens. This is a scouting day anyway, so I leave my camera and gear at home. My goal is to narrow down some key points at which I can come back to repeatedly. This improves the ability to really get to know a place. I did not even start out on the main trail. I find a secondary trail that I know leads me closer to the water. It crosses a small open pasture and enters a forested layer between the field and the lake. As I walk across the field and into the trees, the spatial contrast was harsh. The thin threshold between the trees and the field is thick undergrowth vegetation, so space is immediately constricted. Once past that point it opens back up, just not as much as the field, as there are fairly evenly spaced trees now. The dirt trail slowly slopes toward the unseen lake, sometimes obstructed by a tree branch. As the reflections of the sun on the water begin to be visible between the tree trunks, the trail splits. One, I can see goes directly toward the water but it is very steep. The other stayed on high ground but projected a path paralleling the anticipated water's edge. I turned left and stayed on the high ground, but after a few hundred yards this path too steeply descended toward the water. I made my way down and encountered another trail merging back into the one I was on. I assumed it was the same one that I split from earlier. I am starting to gather ideas about how this particular place is laid out, both in plan and in section. I continued along the trail, noting to take the lower path on the way back. I noticed the topography flatten out here as I walk along the shallow creek that feeds the lake. Across the water the shore is less defined. The water is shallow and tall grasses are growing. And it was covered with a flock of ducks. The creek separated a steep rocky area from a low, and flat wetland. At this point in the afternoon, my position on lower ground and up the creek around the bend of the lake proper shades me from the sun. However, my view out of this deep, shaded space created by topography and treetops, displayed the contrast between the shaded space I was in and the exposed tall grasses of the wetland. (On my next visit, I record this condition)



The sunlight on the grass looks warm compared to where I was standing in the wet shade. I find some rocks and fallen trees to cross the creek on and realize that the soggy ground on this side does not allow the trail to go far. I walk as far as I could until my shoes were taking on water. I sent the flock of ducks thundering across the frigid lake. Cold and wet, I turn back, cross the creek and turn onto the trail that follows the lower water's edge. I round the bend and notice two bald eagles flying over the edge of the trees, searching for fish in the shallow water perhaps. Parts of this stretch of trail were very narrow. Very close to the water, the other side is defined by slab rock formations jutting out from the earth. As beautiful as some of the rock formations are, my view is directed outward between sparsely spaced trees across the water to the broken colonnade of trees that face me. I sit down and watch the ducks float around and catch a few more glimpses of the two eagles. I just sit and I look to absorb everything I could. The cold stone that I am sitting on heightened the feeling of the warm sun coming through the canopy in patches. I sit and observe for a few minutes and realizing it will be dark soon, I get up and continue on. I round a turn away from the water as I walk past a dilapidated dock with an old pontoon boat tied to it. The dock is crudely gated and padlocked so I keep walking. Around the corner, I climb a steep hill and at the top is where the trails come back together. I walk back through the thick undergrowth, across the pasture, and go home.

On my next visit, I have my camera on me. I walk around the entire lake, including the small portion I had discovered the first time. On the southwest end I find another area that was rich in variety. It is the threshold of the cove that leads to the spillway. Two landforms reach toward each other to separate the space of the cove from the rest of the lake. I first discover this place on a secondary trail near the bridge over the spillway. The path wiggles through some very thick undergrowth and follows the top of an increasingly narrow ridge. By narrow, I mean a couple feet wide at the top. It goes up hill, plateaus, and then descends into the water. On the south side it descends almost straight down to the water. The other side is like a large ditch, rising up on the other side for a larger flat area before dropping back off to the water. I am fascinated with so many things about this particular place. My thoughts are always directed through the lens of architecture and the camera. The dramatic topographic conditions are the first thing notice as I climb and descend as necessary. Then I start looking at views. I notice several conditions where relationships of elements across the water could attract the eye. I decide that this, along with the wetland area on the other end, would be my point of focus for this study.



The Act of Photographing

After deciding on my study sites, I begin to look a little deeper. The experience is frustrating at first. "I was in a muddle. I didn't understand what I was looking at, what the significant elements were." (Spirn 2014, p.43). Now the eye is trusted to "get the most striking images and then to see what they suggest." (Spirn 2014, p.43). So, I began looking for opportunities in this landscape. "The site itself expresses opportunities and constraints..." (Reid 1993, pg. ix) He goes on, "The designer needs to discover and define this spirit to find out what the site wants to be, sensitively to interpret it into proposed uses and design form..." (Reid 1993, pg. 1) This notion is further supported by Spirn, "I wanted to understand what makes a place particular, how it came to be and how it was changing, in order to imbue designed landscapes with a strong spirit of place and to capture this quality in photographs." (Spirn 2014, pg. 56)

The very first thing I am drawn to is the relationship between this narrow ridge trail and the water. The red dirt seems juxtaposed in the busyness of the trees and lay as a canvas for the patterns of the shadows. At first, I want to get the most information into one image so I set up for a shot of the beginning of this narrow ridge. I refrain from using the wide angle because it distorts the image around the edges, so I adjust for the correct exposure and do several shots across so that I can stitch them together later and have an image with a lot more information and immediate context. I continue to shoot the place, taking notes with my camera, focusing on anything that I feel is a major part of the essence of this place. I continue along (and off if need be) the trail until I come to the end of it. It ends at the water and I am left facing across the water to a similar broken colonnade of trees leaning towards me that I saw before on the other side of the lake. I set up my tripod and compose the shot so that the band of trees divides the sky and the water in half, cutting the image basically into horizontal thirds. "Like following the constraints of poetic meter, the discipline of the frame imposes more acute seeing," explains Spirn. (Spirn 2014, Pg. 58)

Proportion is used to create an intentional relationship, hierarchy, and a directive focus in the image, as well as strengthen an idea. The same thing may be said of architecture. Structuring a framed image can clarify ideas embedded in the image, which are embedded in the place. After taking this photograph, I turn and climb up the embankment I see to the left. I take a few more photos of topographical conditions before I go. I now have my first study 'sketches.'

Processing

With my first batch of images, I get them all onto a hard drive and organize them in files relative to date and location. Using Adobe Bridge, I go through the images, immediately deleting any that are poorly exposed, poorly focused, or extremely poorly framed. The images remaining are looked at more closely in terms of content, exposure, and composition. I choose a select few that I think are most successful and open them on the computer in Adobe Photoshop. These are my chosen sketches. They are the ones that most successfully portray what I saw in the place. In terms of this investigation, these initial images could be considered the first draft. As Spirn asserts, “For the thinking eye, the original captured image is a first draft, a sketch, a single step toward a work that is “complete.” (Spirn 2014 , Pg. 53)



Anne Spirn



Michael Najjar

David Hockney

This statement supports the theory that ideas are embedded in a place and they are to be discovered. The photograph is an initial step towards making that discovery. Anne Spirn, Michael Najjar, and David Hockney use two or more images to make their discoveries. The discovery comes from zooming out and seeing multiple images together. Spirn uses pairs of images as material for 'visual thinking.' She writes, "The photograph... may be the beginning of a train of thought." (Spirn 2014 , Pg. 37) Hockney composes many images of the same subject but of different scales and angles to "discover another world." (Hockney 2012, Pg. 12) Relationships and hierarchies are created. Najjar overlays many images of the same city from different angles and vantage point to discover a language of development and growth. I am proposing a different approach. I want to zoom in instead of out. I want to look closely at each photograph both as a set of formal and spatial conditions, as well as a description of the place.



First I really look at the photograph. I try to 'read' it and discover anything that may be discoverable. In the image above, it isn't until after I have it up on the computer that I notice that the trees and darker area at the bottom frame the view across the water. My initial intentions were aimed towards the opposite side, but I had not noticed that the landscape itself was making its own frame from this particular position. This really sparks my interest. It supports the idea that we can discover through a photograph, and that a photograph can provide us (later in time) with inherent ideas or a diagram of a language that we, as designers, can use even if we do not see them in the act of taking the photograph. Spirn's writing supports this. "Later, in the thirty successive sunset pictures, I saw much my eye had overlooked." (Spirn 2014, pg. 7) "At first I had looked, but did not see. My camera recorded a spectacle, but my mind missed the wonder." (Spirn 2014, pg. 9) Spirn looks for "anomalies – things out of place or from another time, a break in pattern, clues to a hidden order or a meaning overlooked..." and "correspondences and find new dialogues to read, narratives of paths and boundaries, anecdotes of signs, and the mysteries of anomalies." Spirn 2014, pg. 90-91) Like Spirn, I am looking for structures and patterns, either obvious or hidden. I read directionalities, contrasts in light and shadow, color and color relationships, layering and any anomalies. I also try to interpret ideas that are embedded in the image with a spatial and formal vocabulary.

After reading the image carefully I begin carefully dissecting it digitally or physically. I want to see each element pulled out on its own to see its impact on the place. What significance does it have visually? Spirn quotes Georgia O'Keefe saying, "Details are confusing... It is only by selection, by elimination, by emphasis that we get at the real meaning of things." Spirn herself adds, "Reading a landscape (or a person or society) is the art of culling the significant from a welter of the irrelevant or peripheral, some details more telling than others." But nonetheless, "Details signify." (Spirn, 2014, pg. 89-90) I am literally selecting elements from the image and eliminating everything else so that I can see it isolated. (The word *element* here could mean a range of colors, the sky, trees, or just tree trunks, water, shadows, horizon lines, trails, roads, any visual massing, recognizable pattern, or architecturally formal or spatial idea.) I can clearly see its formal and spatial implications, or language. I do this in Photoshop by using the various selection tools to select the element. When I have it all selected, I put it on its own layer. I go back to the original image and select another element, and so on until I feel I have the image dissected into its significant constituents.

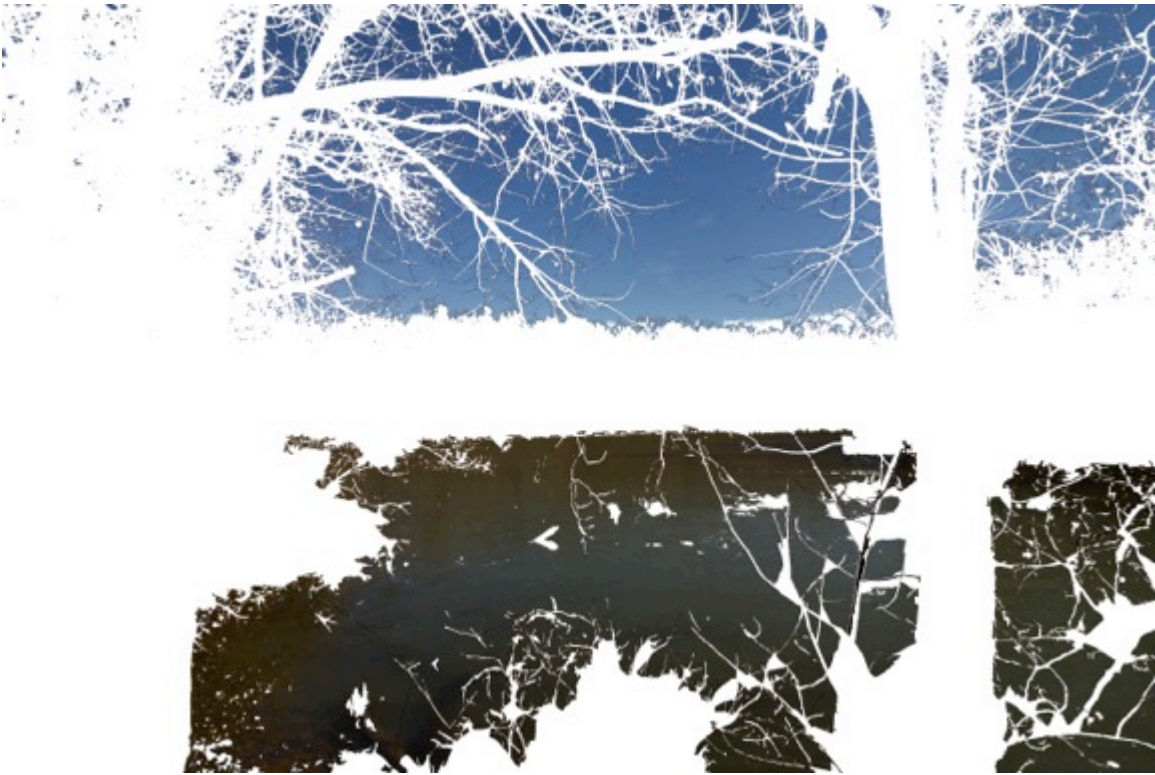
These selections are based on my own personal values and made in order to clarify or bring to sight something that has potential to suggest architectural ideas, therefore someone else may see something that I do not. "One looks at one's surroundings and one reads what is there, according to circumstances, in different ways." (Berger 1982, pg. 116) I am simply trying to visually analyze the photo by separating all its parts based on what I see with my own eyes. I have to trust my eyes to see the ideas inherent in the images. Here is one of the first investigations

that I did. I will show each layer that I extract, alone, on a separate page. A specific explanation for this particular photograph will follow the series. I am aware that some are less useful as others, but once I have them, their relationship to another one may lead to the discovery of an idea. Others may bring ideas to focus that were not noticed, or clarify those that are harder to read.















Here, I would like to explain this first pass at this technique in terms of specific steps and what I was thinking at the time. It is important to show the beginning thoughts, as they indicate significant learning curves. The first image is my 'sketch' or 'rough draft.' Opened in Photoshop, for the second and third images (sky and water), I use the color selection tool to select the colors relative to the sky first. I copy that selection onto its own layer and do the same for the water. Alone, these images not only bring forth the importance of color, but also of the patterns that are in the foreground. The silhouette of the foreground becomes abstract in the negative space. The patterns that use the sky as a background can be compared to the patterns that are using the water as a background. This brings up the point of the relationship between the field of vision of the human and that of the camera. For this study, I keep the field of vision set at the approximate height of a human.

With the sky and the water elements extracted, I go back to the original image and begin tracing out the tree trunks in the foreground. As I said before, I had discovered that these few trees provided a visual frame for what was beyond. This provided a hierarchy for the area beyond. By selecting the visually heavy parts of the trees and extracting them, the framing qualities are emphasized even more for the lack of similarly colored background.

Now, I try viewing two layers together. I make visible the sky and the water layers. The geometry of the composition is powerfully evoked by the negative space of everything earth and tree. It makes me realize just then that I might have been subliminally using the landscape elements in the foreground to structure the photograph. The vertical trees and the horizontal band of trees at the horizon in the background seem to frame the sky and water here and the frame I had discovered before is not as visible.

With these architectural ideas about a framed view emerging from this image, I choose to crop what is framed and flatten the color, as well as delete the sky and water. I thought this would diagram the proportions more clearly. It may have done that, but a serious critique revealed that the rectilinear crop was a product of my past experiences and preconceived notions based on my education and not of the image itself. To abstract the framed view this much into what I preconceive as a window is to dilute the potency and specificity of the place in the image. That said I went back and traced out the framed view as it actually is in the original image. The result is not as I would conceive normally, but I did not abstract it as much and it retains the specificity and power of that moment in time and place.

In the beginning of this study, I take these extracted photographic 'diagrams' and abstract them even further into line or tonal diagrams. I felt like this would help bridge the gap between an analytically extracted photograph and the world of the architectural design process. My preconceptions of this process involve lines and tones. That's how designers work for the most part, at least when it comes to two-dimensional process work. Abstracting these images to the point of lines and tones may be an awesome way to birth an architectural idea or language, but in the

instances that I attempt it, it suggests, too specifically, a form or space for the objectives of this thesis. They go too far in one direction. By not pushing the line and tonal diagrams, interpretation is left a little more open. This point of being too suggestive relates to the issue of language as well. My intentions were to end up with a diagram and stop there to demonstrate how information and ideas in a photograph could emerge as specific languages that could, in turn, be developed into architectural ideas and even a project. I had the string of images and a line or tonal diagram with each.

Language is very important to this process, I realize. It takes a language to understand anything, much less to organize and analyze things. To clarify the direction that I preconceive for the diagram to project, I 'title' each one to further clarify. Another critique suggests that this is problematic. It is another layer of my values applied to the image, therefore taking it farther from what someone else may see in it. It closes the doors to other possible ideas. Anne Spirn mentions this about language in relation to images. She claims this is why she only displays the images by themselves. She suggests that to see the image accompanied by words is to shut the door. She quotes Wright Morris considering "words potentially "as intrusive in their absence as in their presence." (Spirn, 2014, pg. 52) In his photographic novel, Nathan Lyons places each page of text facing opposite a photograph. Spirn found that Lyons added no captions to his images in order them to 'speak' for themselves. He allows the viewer to produce his or her own interpretation of the image. I am met with negative criticism when I try to caption these diagrams, and that leads me to question even needing the diagrams, especially if the resultant image was diagrammatic on its own. My intention with the captions is to simply give an example. I want to prove that I had indeed discovered an architectural idea and here is the diagram to show it. It turns out that the words that I choose rarely coincide with anyone else's ideas of what the diagrams are communicating. I learn that the photographs and the extracted images are able to do a lot of the talking on their own. The words are too restrictive and value-based for a process that is supposed to keep the 'door' of ideas open. If I detach myself from any outside influence and only work with the image reductively my personal values are minimized and what is shown is of the place. And its potential to be developed as an idea is maximized by not being subject to my restricting captions.

The first round of using photography this way yields an immense amount of learning on my part. After discovering the natural frame in that first image, and the linear spatial implications, radial qualities, and threshold boundaries of a few of the other images from that site visit, I understand more about how to see this place, and perhaps any place. I become more aware of the intricacies of what I am recording. I am truly surprised to find out how many different colors and nuances of color there actually are in a single image or even a portion of it. Even if it looks like a field of a single color, it's not. It is hundreds or even thousands of slightly different colors. Just a few discoveries and realizations open up my mind to see a place's structure or its language. I take mental notes on how I am to improve clarifying ideas and languages

through composition as I am analyzing the first 'sketches.' I realize that even if I see an idea while taking the photograph that more can be found long afterwards that I did not expect. Spirn experienced similar things and wrote, "I often find something I am not looking for... I find a new image on each visit to some places, like discovering nuance and new meaning on rereading a well-loved book." (Spirn 2014, pg. 65) I know that on my next visits, I will see everything differently and more acutely. Thompson describes my situation exactly when he writes, "the first picture gets made, and the photographer contemplates it. If all the right things are in place, the artist/photographer will think about this provisional agreement, and then look at the world again, this time with a perception altered by the having thought about what the first picture shows. Some random thing that appeared of no importance in the first attempt may assume a new significance now, after the photographer has seen how it takes the light, say, or how it looks next to some other thing, now that both are isolated in the frame of view." (Thompson 2013, Pg. 20.

Later Site Visits

I will use this epiphany as a transition into my later visits to the site as this development of thought greatly influenced the way I see. I experience seeing the world with an altered perception as a result of studying the structure and language of a place through a photograph. The rigorously visual investigation of a photograph literally changes the way I experience a place. To be honest the current weather conditions and circumstances also played a major role in how I experience this place. But as a unique moment in time for this place, it served as potent material to study through photography. I return to the site the day after we were hit by several days of severe freezing and a winter storm. Some of the snow is melted, but it is still almost solid white on the north sides of the hills. I carefully make my way toward the 'frame' spot so that I can re-evaluate the way I shot it before and attempt to photograph the same subject but in a vertical orientation in order to give the 'frame' a little space and experiment with other proportions. Along the way I photograph the ridge from the north in hopes that the snow can somehow be of use when analyzing it later. I gather several images in this light. As I trek and photograph, I realize I should be seeing this place differently. As the place I have chosen for a 'site,' I should photograph 'it', as well as 'from' it for a better understanding of the place as an architectural site. Understanding this, I continue making my way toward the end of the trail. When I came within sight of the end of the trail where the photo in

question was taken, what I see fills me with excitement. It is like the feeling of seeing a photo that truly moves you. It sends chills down my spine; or maybe that's just nature trying to give me frostbite. I had never seen anything like this in nature. I feel like I am seeing something that no one else had ever seen before. The lake is frozen all the way across and fairly thick from what I could tell. But from close to the point of the peninsula and running perpendicular across the narrow cove towards the dock on the other side is a line in the ice. I move close to the edge to investigate and find that it is formed by an abrupt change in the thickness of the ice. The most interesting thing to me is that it is almost in a straight line across the cove. I can only compare it to what I have heard about where the North and Baltic Seas meet but their different colors do not mix. I am completely caught off guard by this natural line in the ice and back up to set up my tripod and frame the shot. The line was so dramatic; I must use it to compose the frame. This icy line was the subject; this event that is frozen in space, I froze in time. It is a strange feeling that I have discovered and captured something rare. I adjust for the correct exposure using f/22 so everything was in focus and pulled the trigger.



This image contains so much information about that place at that time. It captures this place's potential in terms of weather and, for the sake of this study, architectural ideas. The composition formalizes geometry and proportion and clarifies the relationship of this line to its context. The ideas of separation of two sides and cutting across are strengthened by its position and direction in the frame.

As the excitement from that discovery settles, I grab my gear and head to where the line in the ice led: across the cove. I need to be on that side to photograph the site that I had found interesting to start with. This requires walking back out to the main trail, along which I photograph the sectional qualities of this topographically dramatic place, and crossing the bridge over the spillway. Veering off the edge of the cove, I walk through an opening with a play area for children and then continue on the trail, which turns back down the hill into the trees towards the water. I notice the edge of the tree line, once again, is made of thick undergrowth of briars and bushes. Watching my step on this northern, snowy slope, I make my way down the winding trail and the frozen cove comes into view. I pass a bench that faces out toward the cove. The trail curves around and parallels the water's edge at a distance as a result of the steep slope, but a small path breaks off and leads me down some wooden steps half buried in the ground and partly covered by snow. At the bottom is the dock that the line in the ice had led to. It is covered in ice, but I walk out onto it and look. From here, one has a much more useful view of this place. I could see into two coves and out into the main part of the lake. It is from here that I understand the place more. I feel I am in a defined space and a threshold is forming a framed view out of this space and into the larger space of the lake. Getting a glimpse of the main part of the lake makes me aware of being in a smaller part of a larger system.

On the dock, I decide to set up and photograph the dramatic site I had identified before. I want to capture it in different qualities of light as the day progresses. I set up the tripod on the dock and frame the slopes of the ridge so that you could see along the edge and down the cove a ways. Facing north, I notice the shadows of the trees that are on this side are casting shadows onto the solid ice. This clarity would not have been possible without the ice. It makes visible the effects and direction of light. "When you begin taking pictures you become intensely aware of light" David Hockney states in his book *"A Bigger Picture."* (Livingston, Marco, Devaney. 2012, pg. 9) He is right. When I start getting serious about this and learning how to see, light is the storyteller. The plan is to leave the tripod in the same spot all day and collect images incrementally to display the activity of the shadows. I take the first image. I pace back and forth, waiting for time to pass in order to record another image. I can tell this will be slow. I pull out my phone to use its camera and decide to explore the nearby cove.

I am looking for ideas. I want to capture the language in a place that could be used to develop an idea for something built. This idea embedded in the initial steps of a design process could be, as a result, a memory of what this place is at this moment in time. I am looking at all different scales and distances for hints of something that could be significant, something that could speak to a designer. Here are some of the images collected while passing time, waiting for the sun to move the shadows back at the tripod. They help tell about my knowing this place.















I become very aware of geometries, patterns, and formal and spatial relationships inherent in this landscape. My eye is drawn to geometries that seem to help structure its small place in the larger context. Some of the patterns that I discover recur throughout the entire experience. As I explore the cove, I physically experience the sectional qualities. I climb up and slid down steep, snow-covered embankments and walk around on the thick ice. I even use the ice as a bridge to get to the other side of the cove in a shallow part. Just walking around, I am consciously aware of my eyes seeing more acutely. I see the landscape providing me with ideas.

After some time passes, I make my way back to the dock where the tripod and camera waits for the next shot of the original site. I adjust the exposure settings and take another photograph. I notice the two bald eagles soaring over the lake and a red-tailed hawk lands in the dead tree on the point across the water. Not wanting to leave my gear again, I begin to investigate my immediate surroundings more closely. I kick some ice off the dock onto the frozen cove. It shatters and slides across the ice as if there is little or no friction. The bits finally stop out in the middle of the cove. I notice some of these are close to the shadows that I am photographing, and realize I am able to use these as a measuring device to tell how far and fast the shadows move as the sun sets. After kicking almost all the ice off the dock, I eat my lunch that I had packed and continue photographing the immediately visible with my phone.

I notice bell shaped ice formations on the piers under the dock just above the frozen cove. They do not touch the ice under them somehow. I break one off and the underside is very interesting. When I turn it over, the light passes through the chunk of ice. It is beautiful and I must to photograph it, so I place it on the dock so that the light magnified through the ice can be viewed against the wooden surface. Setting it down, there is only about three quarters of an inch of a gap between the ice and the dock. In places, the ice curves down and reaches toward the wood. It's as if it tried to melt but couldn't do so. The texture of the bottom of that ice chunk keeps me fascinated for some time while I continue capturing my incremental images with the camera. I photograph it intensively with my camera phone. Though not able to adjust many settings, the images turn out and portray something I could imagine as a life size space. I only wish I could experience a space with that type of light quality. It is truly mesmerizing.

Zooming out, I look up and a single cloud is floating over the threshold of my cove. I am just far enough away to include both landforms in either edge of the image. The result seems candid, but very clearly projected the idea of the threshold that the two points created. The trees on both points reach out over the water and suggest an attempt to cross to the other side. I must admit I wish I could have done just that earlier in the day to avoid walking all t he way around. All around me I am discovering 'suggestions' from the place I have chosen to study. Here are the images of the ice chunk and the lonely cloud.





I stay until the light disappears. I had gathered around 100 images over the half day of recording the light. The idea is to put a selection of them together and see the change in the shadow position in one viewing. I soon realize that this process was not nearly as helpful as the rest of the images I had gathered throughout the day, many of which were with my camera phone. After the learning curve of the first few visits to the site, the later visits like this one are immensely productive. It is a strange feeling being conscious of the changes in the way you see the world. But sifting through, analyzing, and pulling information out the first rounds of photos and the act of experiencing this place multiple times truly helps me to become more acutely aware of light, pattern, and the language of a place. It also helps me to read the landscape and make educated theories about why parts of the landscape are the way they are.

Processing

The later portions of my study yield a much better understanding of what I am looking at and what I am looking for. I realize this when I return to the site after several visits. I am seeing things in a different way because of my use of the camera. My photographs are noticeably more intentional and arguably better composed. I have a better understanding of how to see the potential of the landscape to generate design, as well as how to photograph a site more clearly and extract the ideas from the images in order to potentially develop an architectural project. In this section I demonstrate my image processing to clarify the ideas that I discovered.

















As I progress with this investigation, I am continuously adjusting what exactly I want to display as my final product relative to this study. For my own use I may take it much farther, but for the sake of this study, I have decided that I am using photography as a tool for analysis of a potential architectural site. I am looking acutely at the place for the deep structure and a vocabulary or language that would serve me as an idea. I am looking for ideas through the lens of architecture, and I photograph the site so that the idea is described most clearly. I then go back and analyze the selected image and dissect it in order to clarify the idea even further and to discover any other potential ideas that the landscape has to offer.

I will now describe the process of thinking and seeing relative to the previous image and its derivatives. The thought behind the original image come from what I saw as potential on site. I recognize a rhythm in tree branches, and when looking beyond realize that these specific branches spaced the way they were, have a unique and specific relationship with what was visible behind them relative to me. This is where I place myself in the best spot, moving inches one way or the other, to best show this relationship. Spirn describes her process as similar, "In any place, I stand with my camera where I can read the story most clearly, where it is strongest or most poignant... The act of selecting and framing a view can illuminate what I otherwise might miss. Moving up and down and around alters my perspective, separates things, brings them together, shifts emphasis." (Spirn 2014, Pg. 101). When in the perfect position, the series of almost evenly spaced branches frames the background. Now, here it's not so much the framing that is interesting to me. It is how it is framed. The branches are used as a structure to separate the elements in the background. The sky, soil, water and foreground shadows were all framed separately. This reveals ideas to me that could easily be developed into architectural propositions.

I go through the process of selecting the sky, water, trees, and various colors all separately and putting them on their own layers in order to see them alone or in relation to others. After breaking down the images composition and elements of place, I put only the sky and water back together leaving everything else as negative space. The fractal patterns of the trees and the linear pattern of the shadows on the ice become more visible to me and also could be the beginnings of an idea. The next image is only the foreground trees. I subtract all the background so that the essence of these trees can be the only thing visible. It resembles some of the work of painter George Dombeck with very precise edges and somewhat flattened by the lack of distant background. In any case, the respective proportions are clarified and the trees set up an order for the image. This 'order' could be applicable to a developing idea for something built in this area. The next image is an extraction of what is framed between the branches. I left it as the actual realistic view of what I saw with no other abstractions. The negative space becomes very detailed and the image takes on a figural form in four parts of slightly different proportions. The vertical quality, the four framed views, and the nature of the irregular edges all speak to me as vocabulary for an idea.

The next image is similar to the previous but abstracted to extract only the significant color ranges in each frame. "Color is key to the nature of a place." (Spirn 2014, pg. 57) Extracting the colors like this emphasizes a contrast in patterns as the

eye moves from the ground to the sky. It also puts the colors in an order that we can relate to what we know about materials' relationship to other materials. The last image shown here is an extraction of the patterns created by the shadows on the ice. The relentless parallel qualities and relatively uniform dimension could, no doubt, be applicable in an architectural idea.

Discoveries

Analysis of the results of the processes performed in this thesis brings about both discoveries and shortcomings of not only the methodology used but also the individual images that I ended up with. Looking at each individual image also brings up questions about the methodology and what could be a next step. What could the images mean or be used for. I briefly mention this in the methodology, but more attention needs to be given to what I have found and where this could go as a process.

The last image and series of extractions that I describe provides a good example of my work thus far to look at more in depth. The beginning image, or 'first draft' was composed as a result of a refinement in the way I had been looking at the place and its elements. I had begun seeing relationships between the land, trees, sky, and water (or ice) in a deeper, more connected way. My eyes started to separate things and see past things and pair elements from the foreground to the background. Although not explicitly, I notice that I looked heavily towards framing as a device for composition and idea. This image is an example of that device, as well as a categorizing of elements. For this particular shot, my attention was first drawn to the three branches that were roughly evenly spaced. Admittedly, my mind 'flattened' these with the tree on the right to form a sort of 'ladder' structure. My photographic strategy using the rule of thirds made use of the vertical tree trunks to slice the image into three background regions. The horizontality of the branches is used to visually separate the shadowed ice, the un-shadowed ice, the landmass, and the sky. The land mass cuts the image into a top and bottom half.

The next images produced in the process are selective extractions from the original image. The initial extractions are a basic separation of the elements sky, water, land, and trees. The first image, the sky extracted from the original image, is a selection of the range of the blues that make up the sky. Selecting in this manner gives an accurate visual of the relationship between the sky and the many patterns and scales that are in the foreground. The choice to select and extract the sky in this manner removes everything else from view. Doing this places everything on the same plane, reducing it to a silhouette. While this eliminates many characteristics of the trees, land and foreground, it calls attention to the intricate patterns and irregularities in line. Depth is still suggested by dramatic changes in scale. The elimination of the rest of the colors makes subtleties in the ranges of blues more noticeable as well.

The image showing only the ice was done with a wider range of color selection in order to extract the element of water or ice. The trees, once again removed, are portrayed as being coplanar. This may be seen as problematic, but it draws more attention to what is beyond. The power and significance of the trees in the composition frame the more delicate shadows of the nearby trees. The contrast in direction is made more prominent without the textures and patterns that make

up the foreground tree trunks. Ideas of anomaly and linear pattern of light and shadow can be taken from this image.

Combining the two previous images flattens the intersection of the landform and the foreground trees. Distance and scale are reduced, but still evident through scale and relative placement through the composition of the image. The patterns seen together expose a contrasting relationship that could be used as complimentary or in ideas with anomaly. The powerful trees in the foreground set up a hierarchy that frames the rest of the image. From this particular view point the trees are structuring the view beyond and dividing it into particular pieces. Using this composition and the embedded relationships as metaphor, I start to see ideas of directing particular views and organizing those views strategically with a hierarchically organized structure.

Isolating only the foreground trees now flattens all that is in the background and seems to flatten the image as whole to me. However, it directs attention straight to the characteristics of the trees themselves and in relation to one another. Several different textures and patterns make up the bark of the trees. Light and shadow give them a sense of depth and the layering reveals depth of space, even though it may be shallow in this case. The perpendicular relationship between the branches and the trunks and the spacing between each branch suggest an order, proportion, and directionality.

The next few images are attempts to extract the ideas found in the original images or during the taking of the photograph. The visual material that is beyond and between the foreground trees is isolated to bring attention to what is framed. The image is strategically composed so that the branches of this specific tree divide the background into separate parts. Eliminating the trees and the surrounding background regions focuses on the location of the divisions and the proportion and relationships of and between each structured view.

Having the framed four views isolated, a step further is taken. Here the significant color range in each framed view is extracted, omitting the rest. This reveals the change in patterns inherent in the place as the eye moves vertically. It goes from a fractal pattern of the trees to a more random and pixelated pattern of the distant dirt and leaves to a more linear and parallel pattern of the shadows at the bottom.

The last image is an extraction of the linear shadow pattern on the ice. To emphasize and clarify the language, speculation and interpolations are made in order to connect the shadows where they pass behind the trees. This strategy may clarify an idea or reveal more clearly a pattern, but it is out of line relative to the rest of the techniques. It is not true to the place. The connections are estimates of what was thought to be the path of the shadows. This image in the series is the one that fits the least. Although a reductive technique is used for much of it, an additive technique is used for the pattern.

Throughout this process much was brought to my attention. Not only did I find limits of the tools I use, but I also discovered other new possibilities and directions. Doing things and looking at them in hindsight brings my attention to things that could be bettered, done differently, and to some of the things that I didn't do at all, consider. By using a reductive strategy to isolate and emphasize other

things, abstractions are made and important information could be eliminated. While attempting to cover each aspect, element, and idea that I found in an image, other ideas may be there that I do not see. I am working in a visual format in the post process part of this methodology. This abstracts a place by reducing or omitting sound, smell, touch, temperature and many other sensory, historical, cultural, agricultural, environmental and ecological characteristics of this specific place. This could be seen as problematic, but spending large amounts of time in a place to photograph it helps me experience and understand a lot of the sensory characteristics that are not visual. These photographs are an abstraction of a place at a very particular moment in time. It may never look exactly like that again or be seen in these particular views ever again. This makes this very specific to the one holding the camera and the moment in which one is in this place. To photograph a place as I have is to record a tiny sliver of its ephemeral conditions. Spending ample time in the place helps to understand a wider range of the conditions possible.

Some of the tools or ways of seeing that I did not utilize could have helped understand a place even more. For example, all the images that I processed are more or less using the same scale. Although the distance forced upon some of the views by the expanse of the lake and the limits of my photographic gear may have had some to do with the lack of scale change, zooming in on things or out further could have serious advantages to understanding a place better. I did this marginally, but photographing upward and downward could produce fruitful results as well. Using black and white photographs could help emphasize things by elimination color. However, color is very important in this particular place. Overall this process has not only taught me about a place and helped discover ideas that could translate into an architectural platform, but it has taught me new ways to view things and different perspectives from which to approach a place. Looking at the work afterwards with a little time distancing me from it reveals the tools I did not use that I can use in the future.

Conclusion

“To see is to discover,” (Spirn 2014, pg. 9). The camera has the ability to extend our vision in terms of time and space. Therefore, photography can lead to discovery. During this investigation, my thoughts about photography in relation to the architectural design process, my ways of seeing, and my ways of thinking have been, and probably will continue to be improved significantly expanded. I use the camera as a means of inquiry, as a tool for sketching, and as a tool for analysis. I have expand my skillset as a designer by improving my ability to see and read a landscape or potential architectural site. I conclude that photographs can be analyzed through the visual vocabulary of an architectural design process. They can provide ideas that can be present at the time of making the image or discovered afterwards during contemplation. This dissecting process is a way for me to both clarify an idea that I had discovered and to visualize relationships or elements in order to discover other potential leads. I am aware of the subjectivity of photography, but one cannot deny the actuality that it is able to produce. Critics do not trust photography, but “we cannot deny the actuality presented.” (Davis 1989, pg. 5) I attempt to only work within the images and not to use additive analysis techniques in order to minimize the subjectivity of my personal values and see the image as objectively as possible beyond the act of making the photograph. However, the issue of subjectivity does not bother me; architectural site analysis and design decisions are full of subjectivity. Photography can only record what it can see, but our eyes and hands have the ability to imagine subjectively. I have discovered through, and with, photography, a way of seeing that can be used for formal and spatial analyses. This also builds on my ability to read a place and form educated theories about not only visual content, but also invisible content relative to climate, direction, culture, and landform conditions that are not visible.

To be influenced by spatial and formal ideas of a place is no new idea. Gunnar Asplund used an abstraction of a forest in his Woodland Chapel. Frank Lloyd Wright used abstractions of the formal structure of the landscape, including angles of mountains. “For many great architects, an important detail is the seed from which an entire building or landscape design germinates, first, the kernel of an idea and, then, its embodiment.” (Spirn 2014, pg. 98) Photography has the unique ability to capture immense detail, more than we can even perceive. As a result, a site-specific idea can emerge from photography. Photography’s ability to record detail and specificity make it a very useful tool. It makes sense if we are striving to make an architectural work specific to a site. It makes sense to use a tool that can capture the uniqueness of a place in order to produce analytical information that can generate ideas. Photography can “...shed new light, supply new metaphors, and suggest new

directions for the notion of places and for ways in which they may be perceived and used,” (Davis, 1989, pg. 8).

Susan Sontag, a writer and a critic, describes photography as an effortless push of a button to render a complete work. But I would argue that the photograph is merely the very beginning, the “first draft” (Spirn 2014, pg. 53). I no longer see the photograph as a complete work or end result. I see it as a world of potential. Sontag’s critique on photography is based on a totally different way of thinking. Perhaps, some images are made as quickly and effortlessly as she describes, but chances are a serious photographer or designer puts hours of work in before ever touching the button and usually hours of work afterwards. In my case, I experienced the place over long periods of time in the cold, at different times of the day, looking and understanding. After the act of photographing, a whole other world of work and possibilities opens up.

I hope to have made a contribution to the way we see in the architectural field. Photography has the ability to deliver specificity and detail, as well as expedience. I hope to expose to architects, landscape architects, and designers a tool that is not used to its potential throughout the design process as an analytical tool and means of inquiry and discovery. I have every intention to push photography beyond being used to record idealistic images for architects’ portfolios and rendering materials for representation. I hope this inspires designers to see more acutely, photograph more intentionally, and be open to discovery.



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