UNIT 2 ESSAY
Esmeralda Muñoz-Torrero

MA Digital Arts
21/06/2010
From the beginning of my project my aim has been to capture some of what remains of the architecture of the industrial era in an attempt to represent this period of time through modern digital technology and in this way make a connection between our current digital revolution and the industrial revolution of the 19th & 20th century.

Coming from a photographic background I was curious to explore the particular evolution of photography as a visual document and to investigate its role nowadays. My research lead me to look into the weight of photography as a visual history, observing the very qualities that compose the traditional photograph such as its history as an indexical sign and - also thinking about my own work - how the context in which is viewed affected its meaning.

Throughout history photographers have been documenting our rapidly changing environment. Objects in the real world leave their trace on a photograph ‘by means of the optical and chemical action of light’ (Arnheim 1974: 151). Photography has offered an opportunity to arrest time and capture the visual world. The documentary work of early photographers was shown in museums, galleries and archives. Their work was perceived as visual history, an index to the real world. This indexicality defined by Barthes as the ‘photographic referent’ is what has compelled us to believe in the value of the image as a historical document.

Despite concerns about the technological and signifying differences between chemical and digital photography, contemporary responses to the reality of an image tend to be guided not by the image itself, but by assumptions derived from the context in which they are viewed. Museums, galleries and archives are not only veritable spaces; they are above all discursive spaces, which provide photography with form and meaning. Additionally the chosen approach of the photographer should provide us with the rhetoric of the document.

As a consequence of this I considered the validity of my project as a photographic documentation and the need to have a methodical and definite stylistic approach. At the beginning of my project I started researching what was going to become my methodology; a way of working that will allow my referents (what the picture represents) to stand up and talk for themselves.

Considering that my subject is dealing with functional architecture and I could be photographing interiors, I started researching long exposure photography as a way to acquire a good range of tonality in spaces with low lighting issues. This was suggested by Martin Newth, photography practitioner and lecturer at Camberwell. I learned about the use of the Zone System (it’s a method to gain a good exposure on your images) and how to apply it to analogue and digital photography.

At the beginning of the development of my methodology I started taking some photographs with a medium format Hasselblad Super Wide. I made some field trips trying to find the correct locations for my photography and I got a few good results. I used a slow speed film (Rollei Pan25), which has an extremely fine grain and a long tonal range. As the mantra for the Zone System says “expose for the shadows, develop for the highlights” I had to additionally think about how to get a maximum result out of the developing of the film. For that I used Rodinal developer (an excellent formula from 1891) that works as a compensating developer, which means that as the chemicals get exhausted they stop working on the highlights but continue working on the mid tones, thus preventing blown highlights. This process was lengthy but very rewarding and I had my first perfect negatives.
I also looked into the High Dynamic Range process (HDR), which is a technique used to render digital images with large dynamic ranges of luminances that may be present in reality. It does this by combining different exposures of the same scene into a single image. It aims to achieve a representation of the illumination of the environment as it is perceived by our visual system. The photoreceptors in the retina cope with the large luminance range by a process called ‘adaptation’ allowing us to see both dark and bright regions in the same high dynamic range environment. There are a lot of different software packages and high dynamic range devices that use different algorithms to achieve this. This technology is still in a developing stage. For my project I was recommended an application called Photomatix, it was user friendly and gave good results.

In addition, I looked into the merging of exposures after the tone mapping process. I used compensation curves, adjustment layers and masks in Photoshop to enhance the texture of the image and to lift my main referent. All these digital processes I have used in the postproduction of my images.

For Mid Point Review I was still investigating my methodologies but also still trying to focus my practice as the subject was quite broad and I needed to find a definite field of reference. Having the group critique helped me to confirm that I was developing a good methodology with my postproduction techniques but that I still needed to research and make decisions about the final output of my work. Suggestions where made such as making an animation within a photograph and experimenting with old papers. This made me reflect and see the need to consider an output
that communicated my intentions of capturing time and created a narrative, thereby making a connection between the old and the new, the analogue and the digital.

From the start of the course I researched the work of different practitioners on my field of enquiry, which has allowed me to focus my own work and to understand the value of theory behind my practice. I looked at different practitioners and art tendencies - covering the period of industrialization to contemporary art - to support the background of my practice.

From the 18th century there was a tradition of anonymous industrial photography. Companies used to commission photographers to record the current state of technology. A strict set of guidelines on how to produce a faithful representation, with no embellishment added, was followed. Also, in the 1920s, photographers such as Renger-Patzsch established their practice in Germany following an objective approach. Renger-Patzsch’s work was encompassed in the New Objectivity movement, characterised by a detached, almost scientific objectivity and precise attention to detail. The New Objectivity movement clearly established a set of artistic aesthetics as Walter Benjamin remarks on his essay ‘The Author as Producer’ (1934):

‘For the ‘new objectivity’ it is the economic function of photography to bring to the masses elements which they could not previously enjoy: spring, movie stars, foreign countries, by reworking them according to the current fashion; it is the political function of photography to renew the world as it actually is from within, in other words, according to the current fashion.’

This essay written by W. Benjamin is very relevant to debates on digital art in a contemporary context that examines the role of the ‘artist as producer’. There is a historical parallel of the introduction of new technologies. Its significance lies in the requirement of ‘the author’/artist to engage in the production process, pursuing knowledge and combining skill and technology as a
means of expression, a way of being a cultural producer. Many digital artists consider the concept of the production process as the most creative part of their work, creative skilled labour becoming a means of expression. These debates that run parallel to those in the industrial period place my practice in a contemporary context. In my own project the production process is crucial to the construction of the overall narrative of my work as the different layers of photographic processes and theories form the bases of my final output, even when the chosen output is not a straight photographic print.

Influenced by the New Objectivity and Bauhaus ethos in the 60’s we have Bernd and Hilla Becher who photographed, in a methodical and precise manner, buildings and constructions whose development followed a historical thread and also represented the various technical achievements of the industrial revolution. The photographic prints where ordered to form object families first by functionality and structural properties, then the material used and the shape, and then following different sub-types. By putting the images next to each other the rhetoric of a document was reinforced. The images were composed into typologies. Looking at documentary this way we can see the part played by the photographer whose task is to construct an archive, photography being a tool with which the significance of a place that has gone through drastic changes can be recorded and thus become a starting point for the memory to work. This has been a great influence on my project as I realised that the typology composition would be the perfect way for me to express the archival desire that lies within my project. Approaching a typology from a digital art perspective, I could see how it would fit within the concept of bringing industrialism forward as my intention is to create a parallel between the typology concept and the way that information is sought and presented in digital environments, for instance on a Google search. To contextualise this even further I intend to name my work using a tag description method.
Early in my project I decided that my aim was to gain permission to photograph Joseph Bazalgette’s pumping stations. In the mid nineteenth century Bazalgette was the chief engineer to London’s Metropolitan Board of Works. He designed a sewer system for London in response to the cholera crisis in 1858 and this system involved three major pumping stations at Abbey Mills (in the Lea Valley), at Deptford Creek, and at Crossness on the Erith marshes. These buildings are outstanding works of Victorian engineering. My visualization of the project was to document functional architecture from the inside out; documenting the machines and the spaces where the machines are housed, as well as making a connection not only to the outside but also to an element with which all these inventions/technological advances depended upon: water.

I have documented machinery, water and some industrial interiors, but unfortunately I haven’t been able to gain permission to access the interiors of Bazalgette’s pumping stations. I have written numerous letters but I haven’t had any positive feedback. Most of the buildings I was hoping to gain access to belong to Thames Water and they are very difficult to reach.

Visiting different industrial locations I observed that a key component to machinery of the time was their valves, they were an essential artefact for the machine to function as well as being a direct allusion to the human/machine relationship and dependency. The valves from these obsolete machines are a strong reference to the whole era of industrialization, a time of technical advances and innovations that changed society.
I photographed the valves methodically and I am presenting them forming a typology of twelve that depicts the archival desire invested in the capturing of these images. As I mentioned previously, I worked these images on postproduction using HDR and synthesising exposures in Photoshop. Subsequently they were taken through a process of photo intaglio. When I researched this process, I identified a method of printing called ‘stochastic’ that allowed me to get a fine photographic image by creating a fine random dot on the printed image positives. These positives were then exposed on a UV light unit to a Toyobo Printight Solar Plate (KM73), which allows high-resolution positives to be transferred to it. The fine stochastic screens I used created a very delicate aquatint, especially in the soft highlights. The plates were inked and then printed onto archival paper. The decision of creating a typology meant that I printed a series of valves in one sheet of paper. My initial intention was to print twelve plates on one sheet of paper but practicalities meant that I could only print six at a time. Still, this was a real challenge. Printing six plates at the same time on a single sheet of paper puts six different pressure points on the single sheet, the tension applied to the paper when it goes through the printing press is irregular and to achieve uniformity is very difficult. Also the inking of each plate took about forty minutes, so overall it was a very involved process.
By following this process, I am merging modern digital techniques with a manual printing technique that has its origins at the birth of photography in the 1890s when Niepce invented a photomechanical process using a sensitized pewter plate. The images produced in this manner were called heliographs. A few years later Daguerre and Talbot made their contributions towards Photogravure, another form of photo intaglio that became a commercial process for reproduction in the late 19th century. Because of the nature of my image referent I find it appropriate to reproduce it in archival paper that has been made using a traditional cylinder mould machine from 1907. The surface of this paper has a gentle texture made out of cotton and that offers a long life and durability, so in some way this paper has been infused with similar craftsmanship as that of the valves.

As suggested by Martin Newth, I think that my images would look good as a digital print on matte laminate. The thought invested in the capturing and postproduction of the valves could be sufficient for the images to talk about parallels between the old and the new and yes they already tell a story. A digital image is not only a flat surface, it also involves all the layers of work that remain in the computer.

But I found that I really wanted to take it further. I wanted to invest time exploring a different output for a digital composition; a surface that invites us into the object, accepting the tactility of the represented subject (my referent) and the tactility of the traditionally printed surface.

For hundreds of years artist have thought about the surface and our reaction to it has evolved as time passes. For example, with the invention of photography, engraving, which at the time was tainted by its application in reproduction, acquired a higher status and it became ‘fine art’. In 1928 hand-engravers were accepted into the Academy on an equal basis to painters and sculptors. Photographic processes were relegated to a second-class status; they were viewed as a commercial process. It took a long time for photography to be accepted as fine art. Similar differences have occurred more recently between hand printed photography and digital prints as the latter still holds quite a commercial status. However, it is true to say that things are changing, and therefore mimicking past history, as commercial techniques are being appropriated by fine art.
By selecting a traditional method of printing I am putting emphasis on the materiality of the artistic surface; the chosen paper gives the images a ‘haptic quality’ that complements the craftsmanship of my image referents and directly connects with the time when they were created. It is also a printing method where the artist’s touch is implied, furthermore maintaining a direct relation with the craftsmanship of the valves. American critic Laura U. Marks describes haptic visuality as follows:

‘(haptic visuality) sees the world as though it were touching it: close, unknowable, appearing to exist on the surface of the image’. Haptic images(…) help us feel the connectivity between ourselves, the image and its material support, and the world to which the image connects us.’

Using this traditional printing method allowed my work to express my intention of connecting the industrial revolution with our current digital revolution by creating a parallel between them and making a reference to the encapsulation of time through the application of traditional and digital techniques.

An artist that is likewise interested in the industrial revolution is Hiroshi Sugimoto. In his series Conceptual Forms (2004), he removed his referents from their functional context and, by photographing them, he captured the beauty of objects and transformed them into an artistic expression – although the objects themselves might not have been thought or designed to be beautiful in the first place.

My valves, like with Sugimoto’s objects, have been transformed into an artistic expression but furthermore, as a result of a combination of process, printing surface and presentation, my images have been imbued with a strong reference to the time of production. In this way their narrative is expanded and creates a proposition of a documented series of objects that respond to an archival desire. Jacques Derrida wrote ‘There would indeed be no archive desire without the radical finitude, without the possibility of a forgetfulness which does not limit itself to repression.’ (Derrida 1995: 19).

The second piece of my project is based on water. Water was also a very important element, not only was it the vital force that made steam engines possible - and with them the creation of numerous kinds of revolutionary machinery - but also it was vital as a means of transport, the canal system being used as the main artery for commerce and industrial expansion.

I have chosen to represent this second aspect as a piece of moving image made out of chronophotography (or time lapse photography). If we look at film in the traditional sense, we see that it was composed out of still images that would go one on top of another constructing continuity and creating movement. Chronophotography allows the subversion of real time to a different pace, it creates a juxtaposition of technologies, photography representing a pensive moment and film representing the present. Photographs when showed one after the other give us the illusion of motion whilst presenting individually captured moments. These static images allow us to contemplate the subtleties of an element in motion, which was the initial impulse of chronophotography; to capture a body in motion and construct a scientific and quantitative knowledge of movement in space.
Étienne-Jules Marey’s work (1890s) was developed out of methodological and precise experiments and follows a positivist attitude with its coherence, logic and attention to detail. Marey used the term ‘Chronophotography’ to describe a set of photographs of a moving image taken from the same viewpoint at equal intervals. He has had a great influence on artistic practice; although the initial intention of his work was scientific his work has been considered not only an influence but art itself.

To represent the water I photographed in a methodical manner the same spot of Regents Canal in North London on different days. I took a total of 6,681 photographs that compose five different captures. The images where taken at regular intervals of 5 seconds from a fixed point of view. To mirror the process used on the valve images where I merged two different exposures I decided to merge two different footages into one. This presents to the viewer a double set of information of exactly the same location captured at different times, thereby bringing the concept of time capture closer to mind.
As a more contemporary contextualization of my chronophotography piece, I should mention Roni Horn. The theme of water is recurrent in her work. One of her most recent works is an installation in Iceland (2007). As part of the installation the sculpture *Water, Selected* is an archive of water from 24 glacial sources across Iceland. An additional piece of her work that is also aesthetically connected with mine is *Still Water (1999)*. This is a series of fifteen large photographs of water with tiny numbers that refer to footnotes presenting a series of quotations on the moods and narratives that the river evokes. The archiving purpose of Horn’s work resonates with my own project as both my pieces have a documenting and archival desire expressed in their chosen output form of typology and chronophotography. Chronophotography allows for a metaphorical archival sense, an accumulation of visual representations of water that remind us of the influence that the still image has on moving image documentary; the use of freeze frame emphasizes the ‘pastness’ of the ‘still’ and creates a signifier of the memorable.

I am presenting my water piece as a sequence on three different screens which will run in a consecutive order allowing the viewer to read the time sequence progression sideways as well as being able to follow it on one screen. The pace of the sequence will slow down at random intervals reminding us of the static nature of the footage and bringing back the pensive quality of photography, thereby allowing the flat screen to become a possible memory location and at the same time offering a kind of journey in time.

Journey….the last two years have been an extraordinary journey for me, they have opened my mind to a world of different ways of applying myself to my art. The structure of the MA digital arts has provided me with a much needed support to develop my practice and research. As well as developing my confidence as an artist, it has allowed me to evolve from a practice informed by visual and technical concerns to a grounded practice that I can now contextualise and justify within an established field of enquiry. Writing the research paper was especially useful. It was a task I really enjoyed and one that allowed me not only to focus the whole project but also to learn about the value of having a methodical approach. These are skills that I can clearly transfer to my future practice and also my future work experience.

Through practical research I have developed a visual style that I am happy with, although I feel that these explorations are only the beginning of a much longer project. From the start of the course I have pushed my methods. I have tried new approaches to achieve my ideas. As an outcome, I feel that now I have the tools to continue in a line of work that I am passionate about. I am quite interested in exploring different surfaces that digital imaging can be output to and I intend to continue documenting functional architecture. A lot of the skills I have acquired have been very useful in my current teaching job, and I hope that they will also help me to expand upon it and take it to a different level. Besides this I am planning to approach museums such as the V&A and the Science Museum to make speculative applications with regards towards a possible residency.

After July I am going to keep looking for new opportunities to exhibit my work and expand my practice, using services such as Art Quest. I have also been invited to submit some work for an online art magazine called Drain (http://www.dRAINmag.com). For me, this journey is just starting and I feel both highly excited with regard to what the future holds and empowered by the knowledge, confidence and creative expression that taking my MA in Digital Art has instilled within me.
Bibliography


