The Graphic Art Process

Creating a Print with an Intaglio and Letter Press

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THE GRAPHIC ART PROCESS
- Creating a print with an intaglio and letter press.
“Creativity can solve almost any problem – the creative act, the defeat of habit by originality, overcomes everything.”
– George Lois
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1. INTRODUCTION

My thesis explores the methods of Graphic Design applied to Graphic Art. Graphic Art is the root to all print, which in turn means that one has to have learnt from the other. By debuting my interest in Graphic Art and later studying Graphic Design, I wanted to take what had learnt from my studies and apply it to the art form. Exploring the idea that art is an inherit part of Graphic Design without the use of digital print.
2. BACKGROUND

2.1 A LITTLE HISTORY OF SWEDISH PRINT

The history of Graphic Arts in Sweden takes a proper debut in the beginning of the 18th century. Before then, professional engravers had to be called in from other parts of Europe. The first Swede to receive a proper graphic training was Jean Erik Rehn (1717-1773) who studied in Paris. Per Floding created the first national school of engraving in Sweden in 1764. He was a designer and engraver, appointed Garde d’ Estampes of Crown Prince Gustav in 1763.

In the 19th century there was a breakthrough of monochrome lithography in Paris. The wood-engraving technique for illustration was to present a serious challenge to lithography, while the copper engraving was completely rejected.

By the end of the 19th century, etching also lapsed into near-oblivion. It came to a point where a Dutchman, by the name of Leopold Loewenstam was called in to train illustrators in the techniques of graphic art. This was a start for Swedish artist to produce black-and-white studies of Swedish landscape, inspired by the French plein-air painting. The development of this form of printing technology resulted in the proliferation of sophisticated reproductive methods, threatening to undermine the practice of original print.

At this time, artistic printmaking was a closely kept secret. However a Swedish architect Axel Herman Hägg, used etching as a means to reproduce his grand conceived architectural pictures. Chose to share his knowledge with both Anders Zorn and Axel Tallberg. At the time, Zorn was an artist of world reputation and was able before long to present graphic interpretations of his work. Graphic art was growing strong, and with some delay spread to Sweden. The Association for Graphic Art was formed in 1887, by 1910 the Association of Printmakers was established and later in 1912 the Association for Original Woodcuts was created with a great number of trained artist from Germany. Axel Tallberg who was a member of the Royal Society of Painter-Etchers and Engravers, returned to Sweden where he started a school of etching in the Acedemy building in Stockholm in 1895. The course was popular and even included Prince Eugen, from the Royal family. Which to this day is a tradition in the Swedish Royal family. It wasn’t until the beginning of the 20th century etching and engraving was almost given the same status as the other Academy schools.

It was not until the mid.1950s when graphic art in Sweden started to introduce color to their productions. This set the foundation for The Society of Art Promotion, which encouraged painters to produce colored lithography. This quickly caught on, and two years later Folket i Bild Art Club began its publications of high-quality black-and-white prints. By doing so, they were able to preserve the exclusiveness of reproductions for collectors, and became art for the people.

By 1955 the first Graphic Art biennial was established in Ljubljana and the surge of artists started exploring larger formats, drilling and sawing the plates and even mixing techniques. With the popularity and growth of the Graphic Art, it was not until 1987 the first professors of Graphic Art were established in Umeå University by Jordi Arkö and Staffan Kihlgren.
2.2 AN OPINION ON THE CRAFT

From its history we can deduce that Graphic Art has had a progressive growth in Sweden, with an enormous weight on its craft. The development of technique later changed to the computerization of the form. Yet the thought process and understanding of visual communication go hand in hand with today’s methods of composing print. To my understanding, design in its commercial sense is very calculated and a defined process; discussing layout with peers and taking careful steps towards the objectives of the project (i.e. the focus on hierarchy and vital information). A designer in the commercial sense needs to coordinate the very function of color and information, whilst creating a harmony of information for another person. The designer is often driven by ideas, typically about ways to make something better in a large or small way. In print, the designers’ focus is on how to present information in the most convenient and understandable way possible.

2.3 WHERE IS THIS GOING?

I like to look at the approach that we have towards the subject of Graphic Art and Graphic Design. Design implies that there is a trail of thought that can be followed. An understanding of the principles used to maximize and optimize the message (in a commercial sense). Whilst Art suggests that there is no right and there is no wrong, the thought trail and work method is often spontaneous and adheres to the individual and not the predetermined rules of “design”.

So with this in mind, when I was going through some of my art books (i.e. Alphons Mucha, Roy Lichtenstein, Andy Warhol, Salvador) something dawned on me, I noticed that many of the artists that I was fascinated with, are not creating unique works of art. Where many of the pieces were throwbacks of previous work by artist styles and color, made for public consumption. This perception signified that the artists I admire have a method, a pattern or a standard to which they have established, therefore they are not creating something new rather following laid down rules which to me implies that their pieces are more design than art. This methodology and art form differs greatly from Pablo Picasso, Jackson Pollok and Willem de Kooning for example, who created works of art that had similarities, but the patterns did not seem to follow specific methodology. Rather a similar way of expressing one self.

Therefore I strongly believe that today’s graphic designers, have a role as an artist and not only a commercial designer (with that I mean the specific role of a graphic designer). Not only to create work that has some significance to themselves, but also to others.
3. CONTEMPLATION

From the history of design and my personal reflections on art vs. design I wanted to create a print that would follow the rules of Design, but contain a little “soul” of art. This idea set in motion my path to make this graphic design in a way that an artist would work, eliminating the computer from the equation. The merits of how Graphic Art evolved, contained strenuous thought processes to achieve certain results. Compared to the workflow of digital print, where there is a lot more choice involved (not only due to access to the Internet). But because of how you interact with the medium, certain time consuming methods change the way you think about the design.

By setting this standard, I wanted to create an invitation that appeals to the artistic presentation, yet holds value in the commercial sense of Graphic Design. This way the print can hold a similar value in terms of content, design rules and aesthetic. At the same time differentiate in the method the information is presented at a graphic level.

The difference in my opinion is that they are two different purports with a purpose. The digital print conveys the information, but may appeal to the person tendencies that the invitation is just a flyer or bulletin. Even with an individual numeration, each print can still be considered a mass production due to the patterns people are subjected to by flyer in the mail. Which would mean it informs of the event, so they can decide if it is interesting and probably the thought stops there. In its contrast, a hand printed invitation with the letterpress and its presentation may convey more curiosity than its counterpart. The numeration and sensation of the material may be enough to create curiosity in the individual, feeling selected and targeted. This method is used today by large advertising mail, but fail at feeling exclusive.
4. PERCEPTION

4.1 STYLE NEEDED FOR THE RESULTS WANTED

I chose to do an Edingburgh Etch as it is a non-toxic form of etching. It is easier to clean and less invasive. The design follows the rule of thirds, so that the print follows the design rules and a color hierarchy. The indication of the clear letters in the same contrast as the picture is to indicate that the name (Beimark) has to do with the artistic design of the print, and therefore creates a connection between the identity and the art. This was done in a soft Carbon Black on recycled paper does not overpower the strong red that stands out from the rest of the design. I needed to use Crimson Red as it is a saturated color with strong color, which means neither the paper or Carbon Black ink bleeds through. The information was to be set in solid typeface to contrast the information from the art. The asymmetry of the lettering changes the pace of the information and makes the information more dynamic (some soul as used in an artistic argument). By choosing Futura that has a great condensed set, made the narrow space easy to work with, as it also has a very clear readability in all sizes. As the print was in a large format, the type needed to be big and stand out. Futura Condensed has a great advantage of being more compact than many other Letterpress Types that were available. Garamond and Helvetica would have had to be in a much smaller weight and size to fit the same amount of information.

Recycled 100g/m^2 paper
Printing Ink – Carbon Black
Printing Ink – Crimson Red
Letterpress Type – Futura Condensed

4.2 WHY REFERENCE THE WEBSITE?

The invitations contained a website address with a presentation of how their invitation was made. The idea was to make a small interaction where the subjects needed to go onto the computer and see for themselves, this would create an active choice to do so. This would make an event easier to register and remember. By doing so, I could awaken some curiosity within the invited and give them the nudge needed to come to the gallery opening.
5. METHODOLOGY

5.1 CHOOSING THE METHOD
Narrowing down the printing process to the Edinburgh Etch, intaglio printing method and letter press, we can create a comparable range of tools used in digital print. These methods simulate the tools available in software used by graphic designers (i.e. illustrations and typography), removing the computer out of the equation. Resulting in a none digital printing procedure to evaluate the principles of digital Graphic Design, forcing reflections on how we work with digital print today.

5.2 HOW IS THE EDINBURGH ETCH PROCESS DONE
First we need to lay down the design. It has to be horizontally flipped (backwards) so that once the etch is printed, the letters can be read from left to right. (As seen in the pictures underneath)

A copper plate is taken and cut out with metal cutting machine, then all sides need to be beveled with a file so that the pressure of the plate on the printing paper does cut the paper, which in turn can damage the intaglio printing press blanket. The beveling of the plate gives a distinct look when printed. The edges of the plate will indent the paper surface, as the plate is pushed into the paper. This is how you can tell an etching from a reproduction. (As seen in the pictures underneath)
The design is carefully applied to the copper plate by first sketching out the design, and then filling the lightest parts of the print with a solution called Stop out. Stop out is a tar-like solution that is used as an acid resist, stopping the corrosion of the Edinburgh etch-solution. This process of coating is done several times after the plate has been dipped in the Edinburgh Etch solution, depending on the amount of time the copper is exposed, different depths and darkness can be created. (As seen in the pictures underneath)

The Stop out is dried, an Aquatint is applied and then dried again. (As seen in the pictures underneath)
To create a surface the etch can “bite” into, an enamel is applied to the copper plate. This process is called an Aquatint, the droplets create a rougher surface on which the ink can be applied. The rougher the surface, the darker gradient can be achieved.

The copper plate is dipped into a tub containing Citric Acid (anhydrous) and a portion Ferric Chloride dissolves the exposed copper and does not effect the Stop-Out. The aquatint now gives a light rough surface depending on the exposure time. So by taking out the copper plate, cleaning it, and restarting the procedure, we can create different shades on the copper plate with the help of Stop-out. (As seen in the pictures above)

The copper plate is taken out of the tub, rinsed and cleaned so that all the Stop-Out and Aquatint residue is stripped away. This leaves a clean copper plate with grooves and rough surfaces for the print ink to fill. (As seen in the pictures above)
By using muslin to remove the thick layer of ink the copper plate is not cleaned in depth, and then with a light paper (preferably newspaper or phonebook paper) we gently rub off the excess ink that the muslin left behind. This process cleans the blank spaced and softer areas of the copper plate. The end result is a copper plate, ready for the intaglio printing press. (As seen in the pictures above)

Placing the copper plate on a scrap piece of paper with the etching facing up stops ink from smudging onto the machine. The paper used is normally bathed in water so that we can open the papers fibers, but in this case they were hung over a humidifier as it is recycled paper. This makes the paper softer, and lets the paper press into the grooves and rough surface of the copper plate to take up the ink. (As seen in the pictures above)
The result is never the same due to removing ink with muslin and then paper. This none mechanical procedure leaves the human element mark. By this I mean that the ink is never applied and removed in the same manor, which can result in different shades and esthetic. (As seen in the pictures above)

The print is carefully cut out so that each print have the same dimensions for the letter press.
The letter press is prepared with Futura condensed type set and cut out wood pieces to position the letters and hold them in place. This assures that every print will have the same layout. In this case each print had a unique numeral notation. The color is applied with a rubber roller. Then the paper is placed at the bottom pinch and the letterpress applies pressure to the print onto the letters. The papers are placed for 24 hour drying.

(As seen in the pictures above)

Each print was then folded and ready.
5.3 THE SCHEDULE

Sketching and tests. 8 hours

Clearing and preparing copper plate including cleaning and masking the back of the copper plate 1 hour

Transfer the design to the copper plate 2 hours

First Stop-Out painting and varnish 34 hours

Aquatint (air brush applied) and drying 30min
Edinburgh Etch 1 min
Cleaning the copper plate 20 minutes

Second Stop-Out painting and varnish 8 hours

Aquatint (air brush applied) and drying 30min
Edinburgh Etch 1 min
Cleaning the copper plate 20 minutes

Third Stop-Out painting and varnish 3 hours

Aquatint (air brush applied) and drying 30min
Edinburgh Etch 1 min
Cleaning the copper plate 20 minutes

Forth Stop-Out painting and varnish 4 hours

Aquatint (air brush applied) and drying 30min
Edinburgh Etch 6 min
Cleaning the copper plate 20 minutes

Needlepoint for finer details 2 hours

Printing in Intaglio printing press to create 110 prints 9 hours

Setting the Letterpress 2 hours

Printing with the letterpress on 100 prints 7 hours

Folding and sealing 5 hours
5.4 COSTS

Copper plate  260 kr
Paper    74 kr
Sealing wax   29 kr
2 Letterpress Ink  100 kr

Total:     463 kr
6. DISCUSSION

6.1 MY POINT OF VIEW

To produce the design in the method of Graphic Art has been inspiring. I believe I managed to create something in an artistic manner with the elements of design that I have learnt in my past years of study. There are many elements of design involved in the process, and especially in the planning stages. A notable difference when working with physical material compared to designing through a computer. The decision process is more fluent when working by hand and becomes less structured, yet focused. There is a flow involved, thanks to the direct decision making when scribbling down design ideas, sketches with the pen and paper. The computer software tends to get in the way of jotting down ideas, slowing down the idea burst that usually comes at the beginning of a project. To me it is often due to changing the tools from the brush tool and go over to a text field and then back again. I am not trying to convince that the computer is a bad way to brainstorm ideas, rather a less fluent method.

When finalising the design and converting it onto the medium for print, Edinburgh etch is a long process where methodical choices need to be made. Planning the steps becomes a crucial part of what was to come. So by thinking backwards and planning which steps to take for the end results, I needed to think critically about what I was doing and how I was to create each component of the print. Mistakes or changes are hard to apply further down the road and the closer I got to the end, the more nervous I became. I strongly believe that the end result would lure more interest compared to a digital printed invitation. Even without context there is a level of intrigue for the material and the print.

6.2 SO WHAT HAVE I LEARNT?

Placement and order in Graphic Art becomes a natural part of the process, layout of drawings, typography and color choices become natural elements to think of. Unlike designing on a computer where changes can be made at any given time, creating unforeseen layout disruptions for better or worse. In digital print we have come to think of colour as a tool, a simple choice where the printer lays out the correct mix of cadmium, magenta, yellow and black. It’s predecessor in Graphic Art separates the colours of the design into the hierarchy of the layers (i.e. red is the last colour printed on my prints so that it is on top of everything else). Digital print has automated the process by software, so that we do not need to think about which colour to apply last. The software in which we design have presets for perspective and proportion guides (i.e. Golden ratio, Febunacci sequence and Rule of thirds) to facilitate our aesthetic choices. Within digital print there are books with the different paper material and how colours will eventually look on the different material. Knowing these methods from graphic art, I have a greater understanding for the tools that are used within our software used in design today.

From this thesis I have concluded that Graphic Design would not exist if Graphic Art had not paved the way. Not only do all typographic systems and typography itself stem from the artform, but print at its core as well. From this experience I have come to see the computer less as a work station, but rather as a tool to finalise a process in the way I choose to work.
7. REFERENCES


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