

Duke Morgan in Stocks

1470-1475, Netherlands



Figure 1 – The Dream of Pharaoh's Butler from Speculum Humanae Salvationis - Netherlands, 1470-1475 (Hind, 246)

Tools Used

- Wood carving gouges
- Micro carving sets
- Soft rubber brayer
- Hard rubber brayer
- Hand press

Materials Used

- Cherry Wood
- Paper:
 - Arches' Johannot 240gsm 75% cotton and 25% esparto mouldmade paper
 - Velin Arches 120gsm 100% cotton mouldmade paper
 - Antique colored heavyweight Pergamenata 230gsm vegetable parchment
 - Strathmore vellum finish bristol board
- Hanco Process Black Ink
- Gouache

Introduction

Last year, at Pennsic, I took a wonderful class on woodcut printing. I was inspired to try this here and wanted to do a fairly complex image to test whether I had the woodworking skills to complete this. I adapted an image from *Speculum Humanae Salvationis*, woodcut images from late 15th century Netherlands (Figure 1). The original image reminded me very much of my former Laurel, Duke Morgan d'Antioche (Figures 2 and 3) because of his chaperon (hat), ridiculously huge goblet and love of gin and tonic, so I added several elements and changed the image to be more delighted than dejected.

I adapted the image and transferred it to cherry wood. I used woodworking knives and gouges to carve the reverse of the image (leaving the image lines uncarved). I then inked the woodblock and tried several printing techniques on a variety of paper types. I turned several of the printed images into painting templates and used these to color several samples in the manner that was done historically for mass produced colored images.

History of Woodcut Printing

The process of woodcut printing in medieval times involves drawing an image onto a piece of wood in reverse and then carving away everything else, leaving the image lines raised. That block is then covered in ink and applied to paper.

The earliest woodcut prints appear around 1400-1440 and were hand stamped (or hammered!) rather than applied with a printing press, using a black, thick and oily ink. This resulted in some broken and irregular lines as seen in Figure 4. (Hind, 4) There were also early examples of woodcuts that were rubbed, with the block on the bottom and the paper on top. Rubbed prints tended to be slightly smeared in appearance and examples of this could still be seen late in the 15th century. Printing presses were most likely to be used from about 1450 on. (Hind, 6)

Woodcut printing was first used on images of saints and on playing cards. Block-books followed that (books where illustration and text are printed from a woodcut block.) Later, with the use of movable type in the mid 15th century, woodcut blocks were used solely for illustration, borders or capitals.

All areas of Europe eventually had some amount of woodcuts and printing, but the technique was first seen most prominently in the Netherlands and then Germany. The printing process involved several different artisans: the designer, the engraver and the printers. The designer



Figure 2 – HRM Morgan d'Antioche in chaperon with goblet by Khalja Khorkhoi



Figure 3 – HRM Morgan d'Antioche in red chaperon by Arwen Cochran



Figure 4 – Christ before Herod
France, 1400 (Christ before Herod, a woodcut)

created the image to be carved, the engraver transferred it to the wood and did the carving and the printers did the actual inking/printing. Because these different tasks fell to different guilds, there are records of disputes between guilds about which artisans belonged where. The printing industry congregated in areas where there were looser regulations.

Medieval Materials & Tools

The wood used for this process was generally pear wood, cut on the plank and then planed flat. Pear wood was good for this process as it was soft with a very even grain and did not react poorly to water or ink by warping or splitting grains. Other woods occasionally used were cherry and walnut.

The image was transferred to the wood using a variety of methods. One method was covering the back of the image with red or black chalk and then using a firm pointed tool to press on the lines to transfer them to the paper, like an uncut quill. Woodworker's tools for carving the blocks consisted of knives and gravers. The gravers, like modern gouges, came in a variety of shapes for different tasks like cutting lines and curves.



Figure 5 – *The Woodcutter* by Jost Amman Nuremberg, 1568 (Jost Amman, *The Printer's Workshop*, a woodcut)

The printers used a thick, black, oily ink to transfer to the paper using the stamping method, generally made with carbon and gum arabic. The ink was applied with a dabber, a round leather covered ball with a handle.

Linen rag paper was most often used for the printing process rather than parchment because the ink took to and soaked into the paper much better than the parchment, though vellum was still seen in the early period of printing.

My Materials and Tools

Wood

I was not able to find pear wood locally so I found a length of cherry wood with as few flaws as possible. This wood was used occasionally in period as is significantly better than the out of period linoleum that some continually recommended carving on.

Ink

The ink that I used was Hanco Process Black. It is a oil based, thick printmaking ink that certainly matches the description and results of period printmaking inks. I did not explore period ink recipes since the results of this ink were consistent with period prints and ink making would be a whole other project.

Paper

For this project, I wanted to try out a variety of papers. I could not locate any suitable linen paper for printmaking (and did not want to add papermaking to an already complicated enough project) so I selected the following papers to print on:

- Arches' Johannot is an acid free mouldmade paper comprised of 75% cotton and 25% esparto fibers. The sheets are lightly textured, have four deckle edges and a registered



Figure 6 – *The Printer with the Press* by Jost Amman. Nuremberg, 1568 (Hind, 2)

watermark. This paper is weighted at 240gsm (grams per sq. meter). This was a paper made specifically for printmaking with many similar qualities to medieval paper.

- Velin Arches is an acid free mouldmade paper comprised of 100% cotton fibers. The sheets have a soft woven textured finish, have four deckle edges and a registered watermark. This paper is weighted at 120gsm. This was a paper made specifically for printmaking with many similar qualities to medieval paper.
- Antique colored, heavyweight Pergamenata is a vegetable parchment weighted at 230gsm. This was to simulate the vellum that was used on occasion during the beginnings of printmaking.
- Strathmore vellum finish Bristol Board. This paper is often used for SCA scrolls. It is a much thicker paper than any of the others and I mainly used it just for kicks. I could not find a gsm for this paper but it is definitely the heaviest.

Paint

All of the painting is done using high quality gouache paint. Gouache is a water-soluble paint made using a pigment, gum Arabic and a whitening agent to make it more opaque. This type of paint was in use all throughout period.

Carving Tools

For carving, I used several sizes of gouges from both a basic woodcarving set and several micro carving sets. These are very much the same as the tools used by the woodcut carver in period.

Printing Tools

For the printing process, I used a soft rubber brayer to spread ink onto the block, a hard rubber brayer to rub the paper to the block for the rubbed process and a small hand press for attempting the pressed process. I used these modern equivalents as the medieval equivalents were not (easily) available for purchase and I did not want to add extra steps to the process. The end result with these modern tools is very similar to the medieval tools.

The Process

After modifying the original image is Figure 1 to be more delighted (as I'm certain Morgan would be to find himself in stocks with that much gin and tonic!), I transferred the reverse of the image to the sanded wood block using carbon paper (similar to their chalked back) and then reinforced the image with a black pen. While the text in the image in Figure 1 would have been done with movable type, I carved it directly (backwards) onto the block. I chose Morgan's household motto, "Anything that is worth doing is worth overdoing."

To carve the block, I used wood carving tools and a portable wood carving clamp board. There was much very fine carving. There were many very challenging sections of this project to carve.

For the printing process, I wanted to try a variety of techniques to see which I like best. For each of the papers, I tried both hand stamping, rubbing and using a press. For the non-vellum papers, I tried each method with both dry paper and with the paper dampened first. I used the soft rubber brayer to apply ink to the woodcut block.

Hand stamping: I put the paper on a very flat stone surface and applied the inked block to the paper. I applied my weight to the block to help transfer the image.

Rubbing: I placed the paper on top of the inked block and used the hard rubber brayer to press the paper onto the block to transform the image.

Pressed: While I don't have a real press setup, I was able to buy a small Speedball hand press. For this, I place the paper on the base of the press, place the block on the paper (as with hand stamping) and then lowered the press to the top of the block and applied weight to the handle. This is different from hand stamping both in the amount of weight applied and that there is a soft layer under the paper, allowing for the block image to transfer better to the paper.

After printing, the papers were distributed on pretty much every horizontal surface of my garage to dry. I then took several of the extra vellum prints to turn into stencils to be able to quickly paint color onto several other prints. This was tricky since the vellum took **forever** to dry!! I used gouache to color the final prints.

Observations

After all of the various trials that I did with this, here are my observations on various steps of the process:

Wood carving: This went fairly well but I should carve the open areas even deeper. Some of the open areas showed up during the rubbing process and many showed up during the pressing process. I believe that next time, I will try carving out the small detail areas after carving the neighboring large, open areas. I found that carving the large areas (using a stronger pressure than the smaller areas) tended to cause the uncarved lines to break off. Also, I would leave the edge borders that are across the grain until the very last. These areas are extremely weak and continually wore away during the rest of the carving process.

Hand stamping: I understand why this was the first process used in the middle ages as it is the obvious way to get the image onto the paper. However, it is very unsatisfactory. The center of the image is very light and details are missing. The ink also tended to be blobby.

Rubbing: This process was very simple and went very well. I used a hard rubber brayer (roller) rather than a solid rubber used in the middle ages, so I did not get the smeared images seen in period. The middle of the image showed fairly well, though occasionally still a bit faded. I had to take care not to roll all the way *off* the edge of the block as it creases the paper against the block.

Pressing: This process was very good. The spongy back of the press ensure a complete picture but also captured undesired details of the larger blank areas.

Arches' Johannot 240gsm 75% cotton and 25% esparto mouldmade paper: I liked this paper the best. It was slightly heavier than the Velin Arches 120gsm paper and I liked the feel of it. It took the ink very well and dried within one week (with no air movement on it at fairly chilly temperatures).

Velin Arches 120gsm 100% cotton mouldmade paper: This paper felt flimsy to me. I had to use a very small amount of pressure on the pressing process or I saw way too much of the background. It took the ink very well and dried within one week (with no air movement on it at fairly chilly temperatures).

Antique colored heavyweight Pergamenata 230gsm vegetable parchment: The ink does not seep into the paper at all (since it isn't a fiber paper). It took 3 weeks to dry enough to not leave ink on my hand when pressed, and that includes a fan and pressing excess ink onto other paper! I used these prints for my painting stencils since the paper is extremely tough.

Strathmore vellum finish bristol board: I did this one just for kicks. It was the heaviest of the papers. It took the ink all right but it took quite a while to dry; at least a week and a half.

Damp paper: This seemed ever so slightly better of a result, on average, than the dry paper. I'm not sure that the effects of damp paper will really be seen without a full printing press. It wasn't difficult to dampen the paper though.

Dry paper: I found the results of using dry paper to be reasonably good.

Stencil painting: Cutting the stencils was time consuming (and sticky, since the ink wasn't quite dry on the vellum!) Also, there were several elements that were fully in the middle of other elements, so leaving those in place was tricky. Painting with them was nice, but only ever so slightly easier than just painting by hand. I would not do this again unless I was doing a very large run of painted images.

Final Summary

The next time I do a woodcut printing project, I will use the Arches Johannot 240gsm paper, damp, with either rubbing or pressing and likely skip the stencils for painting.

References

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