Grappling with Technology: the post digital printmaker

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INTRODUCTION

Technology has provided unprecedented opportunities for me to expand my artistic practice and share my work globally, but in doing so it has evolved from a set of purpose-built tools to an all-encompassing environment in which I exist both creatively and socially. Technology no longer simply assists, it mediates every aspect of my practice. I spoke about how new and developing technologies transform the way I create, show and sell my prints at the Southern Graphics International (SGCI) conference in Dallas 2019, on a panel entitled The Ghost in the Machine, co-chaired by Brendan Baylor, Assistant Professor, Old Dominion University and Sarah Pike, Artist and Owner, FreeFall Laser. At the conference, I also curated an exchange portfolio, Beyond 72 dpi: thepostdigitalprintmaker, that examined how the need to show images on a smartphone screen, where most people view images, affects the type of work that can be effectively displayed. In my presentation and portfolio, I posed the question:

How is our work affected by these new technologies?

The artists' submissions to the portfolio and the comments that followed the panel discussion reinforced my feeling that I was not alone grappling with technology, and its reach into my process. This article is intended to extend the conversation that began at the conference to a wider audience by putting the ideas presented in a historical context and describing the concerns expressed by those present.

EMBRACING THE NEW

We as printmakers have long embraced new creative technologies to expand and refresh our practices. Historically, industrial processes were a prime source of these opportunities but increasingly computation has become a dominant source of innovation. (1) The exhibition Cybernetic Serendipity curated by Jasia Reichardt, shown at the Center for Contemporary Arts in London in 1968, was a watershed event in the history of art and technology. At that early point most artists did not have ready access to computers, so much of the art displayed was produced by technologists and were what Reichardt described as "happy accidents" (2). An example of this was the Henry Drawing Computer designed by D. P. Henry. His machine produced a drawing by creating ellipses of varying dimensions while simultaneously introducing random distortions at specific points in the process. His machine, as he described it, could either be used as an 'aid in producing drawings or as a producer of completed drawings' (3). Since

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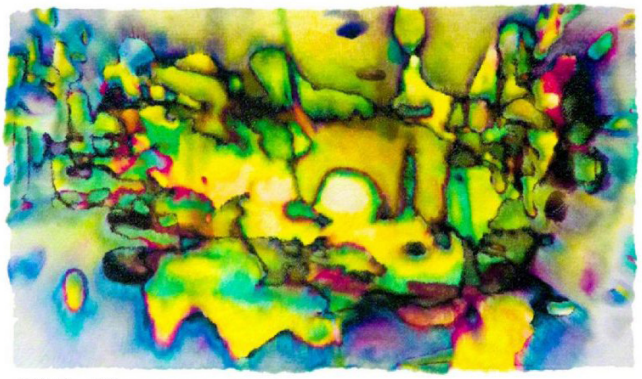
Figure 1



34th Street II (2015) by Phyllis and Victor Merriam, Archival Pigment Offset, 6.5"x10.5" (165mm x 267mm)

Figure 2

that time, computer driven algorithmic art has become mainstream as data processing technologies has become widely accessible, but artists' creative inputs remain distinct from the algorithms that produce them. In the example of the Henry Drawing Computer, the machine that produced the drawing was distinct from artist who initially programed it and later altered the output.

BUILT-IN BIAS

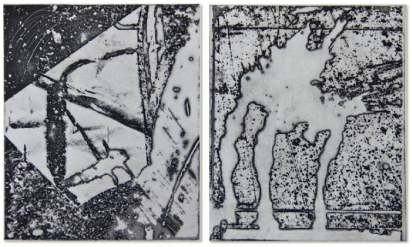
There is a fundamental difference in the technologies employed today both in their scope and implications to us as artists. The distinction between using applications as tools to help in artmaking and employing technology to directly generate artwork is beginning to blur. It is no longer the case that the computer is a distinct entity from which we can separate ourselves; it exists within our workflows. Although we would not necessarily identify ourselves with artificial intelligence computing, the fact remains that generative algorithms are built into many of the common applications that we use. These technologies are not passive, not simply providing new possibilities, they come with built in biases which must be understood (4). Unlike an etching plate that looks back at me and says: 'Show me what you got!', my image editing application provides me with filters and other algorithms that instantly serve up pleasing results, distracting me from whether that was what I was really looking for. I can easily become a lazy curator, accepting the application's 'submission' if I am not careful.

Another concern for me is that digital processes eliminate risk. For me, risk creates immediacy. When it is possible to go back and fix the work pixel by pixel, how long does it take for a piece to be overworked? If I am not careful, neurotic attention to detail can get out of control and sometimes my projects have to be left to be rethought.

That is not to say that work created using these tools is in any way inferior to work created through more traditional methods. As part of my process, I use image editing, vector drawing and 3D modelling applications coupled with computer aided fabrication (both additive and subtractive) to create printing matrices that I ink and print in traditional ways. I also combine these techniques with etching and photopolymer. I teach these techniques at printshops and universities, write about them and collaborate with other printmakers and letterpress artists interested in using technology to extend their practices or solve specific problems. (5, 6)

BENEFITS OF TECHNOLOGY

Technology allows me greater freedom to experiment and expand my practice by reducing costs and streamlining my workflow. The ideas proposed by these algorithms can inform and take my work in unexpected directions, although I need a way to manage them. I control the technological inputs to my artmaking by using a process, structured along the lines of a digital printing workflow, that creates a separation between the digital and traditional. I specify the tasks that



Open Bite Photopolymer Plates from *Manhattan Landscape I* (2015) by Phyllis and Victor Merriam each 5"x4" (152mm x 102mm)

Figure 3

Long Beach (2015) by Phyllis and Victor Merriam, Pigment Print on Prepared Surface, 9.5"x12.5" (241mm x 318mm)

Figure 4

Untitled (2018) by Phyllis and Victor Merriam, 3D Printed Plate, 22"x30" (559mm x 762mm)

Figure 5

Phil Chung Karin Bruckner Edgar Hartley Jordan Devito

Prints made by students during our 3D Printed Plate classes

Figure 6

my digital applications will complete, including the filters I use; the settings within those filters; and their order of application to produce consistent outputs. I collaborate with my husband Victor to create re-imagined landscapes. We choose a site and take photographs at all times of the day and in different seasons to capture its vitality and visual vocabulary. We select the images that we want to develop into finished pieces. We take these images and combine, alter and strip away information layer by layer until we develop essential forms, free of context. We present these forms as a grid with each image taking up the same physical space regardless of their original size. We use image processing software and an inkjet printer for the initial editing and layout of our grids. We can quickly make changes and redo the grid using these applications, which allows us to be more spontaneous at this stage. Once the grid is finalized, we work with each image to choose the printmaking method that we feel is best able to allow the viewer to experience it as we did. The digital stage results in producing the appropriate output (a transparency, image or fabricated plate) and allows us to then move to traditional printmaking.

Technology also mediates how I show and sell my prints. If I want to share my work, I use social media, now the predominant method of online sharing. Social media, in particular Instagram – the preferred platform for the sharing and discovery of art – has displaced online artist communities and personal artists' web pages (7, 8). This makes the algorithmically mediated smartphone-feed the primary vehicle for presenting art, limiting the content that I can present to what conforms to the norms and constraints of the platform. On the other hand, the idea of what makes a good post is not necessarily related to what makes a good print. The algorithms used to present work in a feed are designed to maximize platform engagement and associated ad revenue, not in-depth observation and discussion.

ALTERED PRACTICE

I make work with the knowledge that most people will only see low resolution digital reproductions on a smartphone. The idea that my work can be fully represented – with all its nuances – in this environment is not tenable. How can I show my choice of paper, the subtleties of plate tone and all the other rigorous decisions that turn a proof into a finished piece at a low resolution screen image? I know that the social media feed will only express the simplest of ideas and that the rest will be scarcely seen.

When I post work on social media, I know it will have a short lifespan. The image will quickly disappear as the feed relentlessly progresses forward. I know that it will live on only if people share it. I know that a "successful" post expresses a simple visual idea that can be quickly comprehended and fully represented on a small screen at low resolution. If my post does not call for immediate action, if it requires reflection or thought, it will die.

I would like to think that my work is a conversation between the

viewer and me. That my work in some way confronts the viewer with an unexpected idea that causes, even in a small way a shift in perspective. However, the constraints of social media upend this relationship, demanding "relatability" – that my work must reflect the preexisting beliefs of the viewer – that the viewer is a passive consumer of my work rather than an active partner – that the viewer either "gets" it and shares it or not– that this cycle of "getting" and sharing must repeat over and over (9). Unrelatable content simply disappears.

I am also a blogger. As thepostdigitalprintmaker, I share the work of printmakers who have taken up the challenge of incorporating emerging technologies into their practices. We have created a vibrant online community of over 7,000 followers throughout the world – but to do this I need to review and share low resolution images and post on social media. When I started thepostdigitalprintmaker.tumblr I wrote lengthy articles with numerous images and an artist's statement. Over the years the responses dwindled and the one image post on Instagram became my primary platform as it did for my own artistic practice.

It is also hard for me to distance myself from the feedback that these sites give me. A 2016 UCLA study showed that the number of likes that posted images receive is directly linked to a physical response in the brain's reward centers, suggesting that I value my own and others' work based in a significant way on that number (10). Facebook has begun testing hiding likes in response to some of these issues, but their underlying algorithmic structure has not changed (11)

This puts me in a predicament. My work and my blog are seen based on how good a post they make. The feedback that I get suggests to me that I should make and post more of the work that is liked best. I can't help but be changed – in a fundamental way – each time I post an image. How does this affect my work, can I continue to be self-censoring? One study reported that simply posting a cooler tone image rather than a warmer tone will increase likes by twenty four percent (12). As artist Andrea Crespo said: 'Reward systems in social media were influencing my decisions while art making. I would think about what people would think based off of likes and comments.' (13)

PORTFOLIO

To address some of these issues, we asked printmakers in our exchange portfolio, Beyond 72 dpi: thepostdigitalprintmaker, how the need to post work online either for sharing or submitting was altering their practices. Prints for this portfolio had an element that could not be reproduced as a digital image. In order to experience the print, the viewer needed to see it in person. We also displayed a small low-resolution image of the print for comparison. Each artist wrote a statement detailing the aspect of their print that could not be reproduced and their experience in attempting to share their work online or submitting to an open call.

Our piece for the portfolio was done in two layers, with laser cut openings in the top layer that reveal what was beneath, but not completely. The viewer needed to change position in order to be able to see the full

extent of the image. This call for interactivity cannot happen in a straightforward digital photograph of the piece. There is also deep debossing from a 3D printed plate on the second layer that is not well translated in a low-resolution image.

The participating artists presented a broad range of issues, many of which, like ours, represented the subtle choices that they made when executing their work. Others were concerned with issues of authorship, context and control. Below are some comments:

As artists we cannot control our images in the digital world: they can be shared, copied, enlarged, reduced or cropped removing the narrative and distorting the meaning.

Leonie Bradley

The slight shimmer of the metallic [ink] is only visible when viewing the print close up in person under direct lighting. The embossed texture of the print is lost when viewing as a 72-dpi image on a monitor.

Susan Rostow

This actually is impossible to photograph without a polarizing filter on the lens. The ink has too much of a glare. … Even with a high-res scan, this image on a monitor is never going to look like the original. … This difference is amplified with a super-layered print like this. All the nuances of semi-transparent layers are lost in the translation.

Rob Swainston

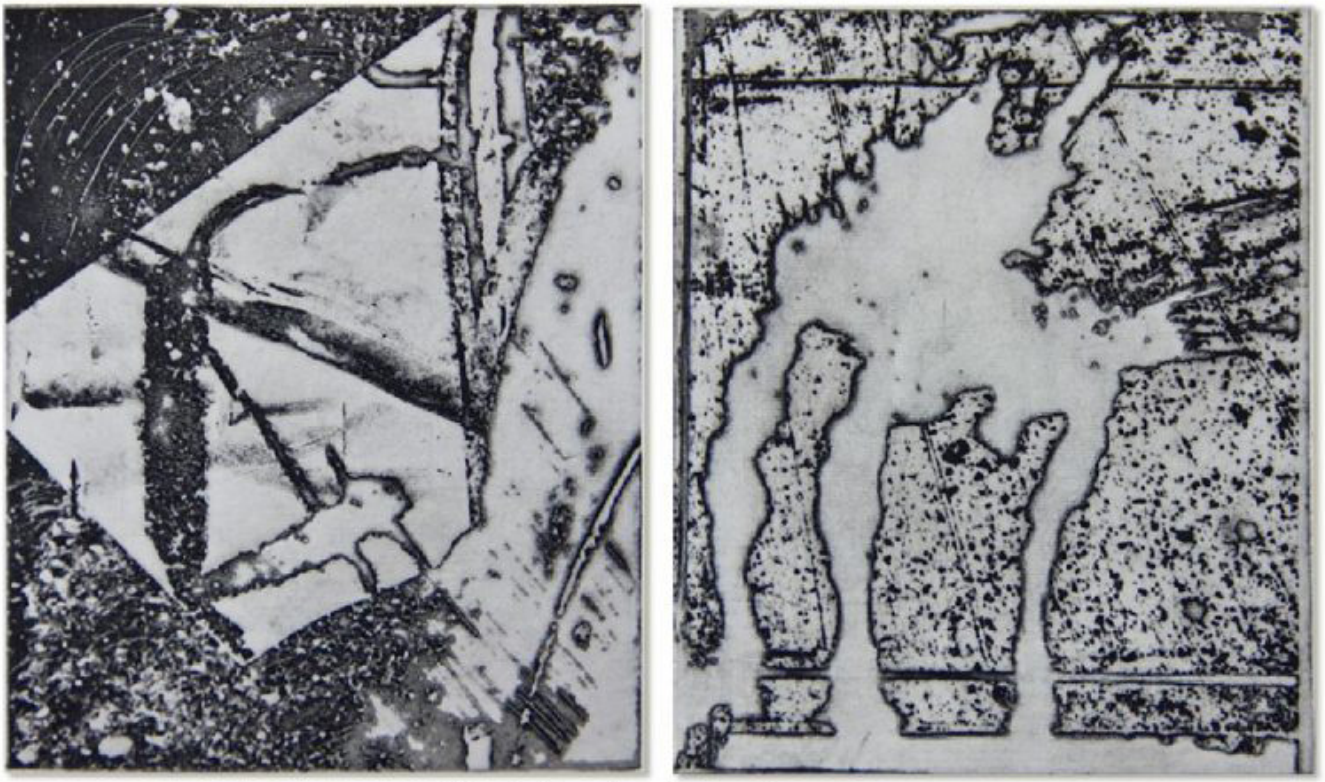
The subtle color changes and the details of the scientific data included in this print are difficult to discern in a small 72dpi image of the print. The letterpress printing is not easily seen in a small low-resolution photo, whether on the chine collé or the white paper.

Beth Fein

The portfolio and the presentation created a lively discussion. Many of the printmakers I spoke with at the conference could see their own work reflected in one aspect or another of the prints. All of them were grappling with the questions that I raised in my talk. It was apparent that we were all faced with the same issues: that while technology expands possibilities for creation, it blurs the notion of authorship; and while it expands the potential audience, it limits what can be shown and discussed. What was not obvious was the way forward, but we all agreed the time is now for discussion.

Technology inevitably leaves its pentimenti in my work. I really can't understand the full impact of things like digital image production or social media, because these technologies are so inescapable that my printmaking practice is continually being redefined by them in a recursive circle. I have come to realize that I can never escape these influences. All I can do is be mindful of them and try as best I can to understand how they are at work in my practice.

IMAGE GALLERY



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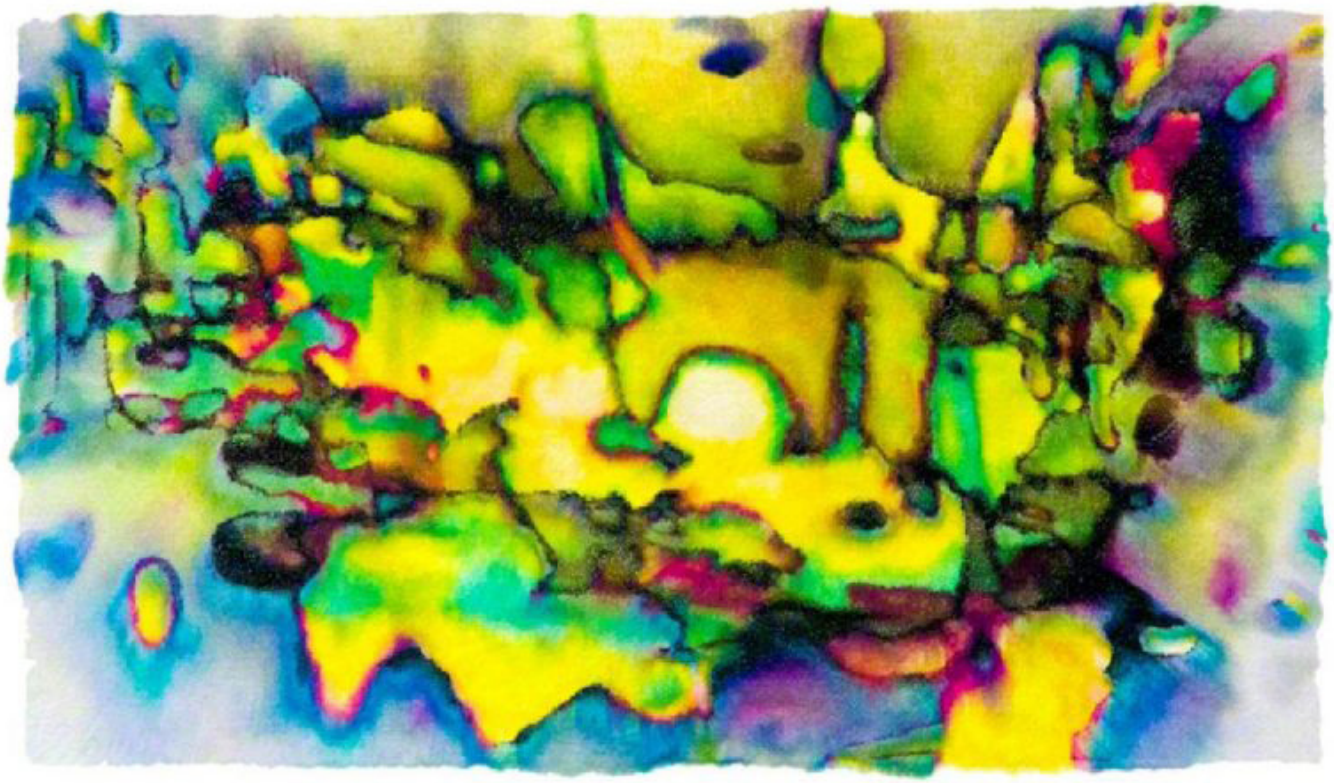

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Prints made by students during our 3D Printed Plate classes

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