TL;DR; Physical + digital is the new black; making a coloring book is super hard (unless someone hands you the complete files)

Last October, I started carrying a notebook with me at all times. I was trying to get better at recording my, seemingly never-ending stream of, project ideas, things that inspire me etc... I’d tried using all manner of digital notebooks but they just never stuck. I decided that maybe having something physical, something with weight... something that would constantly remind me of it’s existence would help.

I wasn’t sure why, especially since most of my time is spent in the digital realm, but that notebook was exactly what I needed. Eight months later, I’m working on filling my third one and I finally understand. Since starting that first notebook I’ve done a lot of thinking about my relationship with digital vs. physical and more and more I’ve gravitated towards making physical objects, but at the same time my love for creating digital artifacts has grown as well. So, I did the only thing I could do; I stopped thinking of them as separate worlds and instead asked:

How might I merge the digital and the physical in a creative capacity?

I made my first attempt at answering that question when, about a month before the Tableau Conference, I decided to make a ‘paint by numbers’ style coloring book out of existing representations of data. My plan was to get people to engage in scavenger hunt of sorts. The plan: I’d hide the coloring books and throughout the conference and then post photographic hints as to the location via Twitter. Since I didn’t have much time, I got to work right away.

The checklist:

1. Source a list of vizzes to include
2. Find digital copies of each one
3. Make a color key
4. Vectorize the viz
5. Replace the color elements with numbers to ‘paint by’
6. Format the pages
7. Put them together

The people on my list were a mixed bag; Some were old, some were new, some were made with physical tools and others with digital ones. From Iron Viz feeder winners to the iconic works of Nightingale, Rosling and Playfair; from the stunning work of Elizabeth Peabody (thank Lauren Klein for that one) to Stephanie of Dear Data fame and Insta-viz super star Mona Chalabi. Oh, and of course the always wonderful super talented Peter Gilks (his blog IS called Paint by Numbers, so duh). Now that I had my list I needed to get my paws on digital copies of each viz. This proved more difficult than you’d think... for some of the above.

Once I finally did find digital copies of all of ‘em I went through them all and used the ‘eyedropper’ tool to make a color key with the dominant colors in each viz, assigning a number to each one. Oh and because I’m a super nerd I added the hex codes to the keys which took FOR-EV-ER.

With the keys were complete it was time to start the vectorization/color replacement/ numbering process, which was fairly straightforward for those visualizations made using a digital tool (mostly Tableau). In those cases all I had to do was download a pdf, pull it into Illustrator, release any clipping masks, add the numbers, remove shapes’ fill colors and change the color of the strokes and lines etc… to dark-gray.

That straightforwardness did not however, translate to working with visualizations that had been made using physical tools; for these vizzes things were complicated. I’d start by using the ‘image trace’ tool to generate an outline of the image, then ‘ungroup’ and ‘expand’ it to reveal the image trace generated shapes. Since those are formed by the slightest color/tone variation found this process resulted in a whole bunch of super irregular shapes, making color removal very difficult. After adding the numbers, rather than simply being able to simply switching the fill colors to ‘none’ I had to go through and carefully remove the irregular shapes formed by those variations, eventually ending up with a bare bones outline. Sometimes shapes I needed were linked to ones I didn’t which made things even more difficult (cure the scissor tool) and with a few, it just wouldn’t work and I ended up manually outlining marks using the ‘pen’ tool.

PHEW

Then it was time for page formatting; even more work. Because each viz took up a full page I had to solve for the fact that when you have a stack of images and you fold it in half, the image on each page gets split up. Additionally, when those pages are in a coloring book the reverse side of each page comes into play. That meant I splitting each viz down the middle, figuring out the order ie which halves belonged on which page, creating a Viz-enstein hybrid of those vizzes (except the centerfold) and then deciding which ones needed to be printed on the front and the back of each page.

Then, after aaaaaall of that, I printed 25 copies of each individual page and sewed the books together by hand. In fact, if you were at Jewel’s TC talk you may have spotted me finishing up the last of them.

In the end, the scavenger hunt didn’t end up working out and instead went with the strategy of ‘find me or Peter and you can have one if there are any left’.

All in all they were a hit, and the look on people’s faces when they got their hands on ‘em made it all worthwhile.