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A Maker's Reflection

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Résumé de l'article

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COLOUR WORDS (HAND-MADE VISUALISATIONS OF LITERATURE): A MAKER'S REFLECTION

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Abstract: In her making practice, *Colour Words,* Thompson represents the words used to describe colour in novels as embroidered squares on paper. In doing so, she creates alternate visualisations of literature, which has led to more questions, discoveries of patterns, and a new way of thinking about and relating to narratives and text/s. In this article, Thompson describes her making practice/process as an example of small data methodology and reflects on the experience to draw out meaning.

Keywords: making; small data methodology; reflective practice; embroidery

Think of your favourite novel. Does it have a colour? Do you have a feel, or sense, of colour for the whole book, or perhaps only for some segments of the book, or a character, or a place?

In my making practice/process,[1] titled *Colour Words,* I represented the words used to describe colour in novels I have read as embroidered squares on paper. In doing so, I created alternate visualisations of literature, which led to more questions, discoveries of patterns, and a new way of thinking about and relating to narratives and text/s. In this article I describe my making practice/process as an example of small and slow data methodology.[2]

My making was undertaken experimentally, experientially, intuitively; it was approached as play, without the need to know where the work may go. Thinking critically about the work came much later, two years after the making commenced. This was a deliberate change in pace, shifting my relation to the made pieces by delaying this interrogation until I was content for the work to stand still for some time. I anticipated that reflection would draw out insights into what actually mattered to me during the practice/process, the *why*, and hoped this would guide future direction/s.

If my actions were to be loosely described as a methodology, it would look like: follow the thoughts that tug at your mind; make without expectations; keep making until the form and practice/process feels stable; then reflect, think, and research for context; write, as though for an audience, without knowing exactly why or what the written form will tell or mean; critique, refine, and share.

This article is primarily a self-study and is structured in three parts: introducing the maker and explaining the idea; detailing the practice/process; reflecting on selected aspects of the work and practice.

The Maker and the Idea

I am a maker. I make with my hands. I have done so since I was a small child, usually with textiles, thread and yarn, or pencil and paper. I do not yet feel comfortable claiming the label of artist. By academic training I am a mathematician, and by profession an actuary and research data specialist—data and numbers matter to me, especially the patterns therein. I also have a Fine Art degree (in gold and silversmithing) and a Masters of Cultural Material Conservation (regarding care for the condition of objects in museums and galleries). I love the process of making, and paying attention to what has been made matters to me. Words matter to me—especially how they mean

something different to each of us. Colour matters to me—do you see blue the same way I see blue? We both point at a thing and call it blue, but do you see the same blue I do?

I spent more than two years exploring a process and body of work I have named *Colour Words*—I represent the words used to describe colour in novels as embroidered squares on paper. This project, and/or practice, began when I read William Gibson's *Neuromancer* (1984) and was excited by his unusual phrasing to describe colours. Gibson is particularly creative when describing greys:

The sky above the port was the colour of television, tuned to a dead channel (p. 1).
By day, the bars down Ninsei were shuttered and featureless, the neon dead, the holograms inert, waiting, under the poisoned silver sky (p. 7).
Beyond the neon shudder of Ninsei, the sky was that mean shade of grey (p. 18).
The sand was the shade of tarnished silver that hadn't gone entirely grey. The sky was a different silver (p. 258).

And then there is this*:*

His mouth filled with an aching taste of blue (p. 283).

I asked another person, who treasured the book too, "What colour do you think of when you read 'aching taste of blue'? No really, what specific colour do you see, or sense, or feel, or know?" And then, "What about 'mean grey'? Or 'poisoned silver'?" And it went on. I wondered: "How can I show you what colours I see when I read this book? How can I show *myself* what the colours mean to me?"

The Three Key Choices

When I wondered "How can I show you the colours I see?" the idea popped into my mind wholly resolved—small squares of coloured thread embroidered on paper. In retrospect, I recognise these choices were undoubtedly influenced by embroidered postcards I had seen online in the preceding year (Bagnall, 2019).

Paper

Books are printed on paper, and, for me, there was never a question of any other material. Transferring words printed on paper to thread on paper, in my mind, was made more easily understood by holding paper as a constant element. Further, I have a long-standing practice of weaving fine strips of paper with flat fine silver cloisonné wire (begun in 2004); paper is a familiar material. To decrease the risk of breaking the paper during stitching, and to enable the paper pieces to be leant on a shelf for display without slumping, I chose thicker paper than that used for printing books.

Squares

I initially wanted each colour to be equally represented, and squares felt right. Rectangles would require a choice about the second dimension, direction, and whether or how these aspects might change for different words. It would not be easy to make circles of the scale I wanted without over-perforating the paper, and I have an aversion to triangles. The squares needed space between them: to abut them would imply a direct contact relationship that did not exist in the novel, and which would have been particularly problematic between rows. After all, each colour word is separated by spaces and other words in the novel.

The final pieces would look pixelated, surprisingly echoing my woven silver-paper pieces, and, more importantly, giving an appearance akin to 8-bit graphics. This seemed pleasingly appropriate for *Neuromancer* as this kind of cultural artefact was contemporary with the book's publication (1984). At the time, I was only working on this book and did not anticipate the experimentation would evolve into a broader practice.

Upon further research, I encountered a study which determined that squares were "judged to be masculine, were associated with male terms, were perceived as agentic, and signaled [sic] belonging to men" (Stroessner et al., 2020, p. 10). I had initially put this to the side as a curiosity, but, as I further read about the history of embroidery, I wondered if there may be a subversive undertone at play that I did not at first notice.

Embroidery and Cross-stitch

I have a long history of making with thread. I trace my ancestry to Western and Central Europe and live in Australia—a land brutally colonised by England over two centuries ago, with a social identity torn between there and America. As a young (cisgender girl) child, I was taught to stitch, knit, and crochet by my mother and grandmother. I was knitting by age four, and finished my first hand-pieced quilt at ten. Almost all my fine art degree works had either textile techniques or references. I claim these crafts as my inheritance, and feel that I belong to the deep tradition of craft I associate with women.

The specific embroidery stitch used in this practice—cross-stitch—is formed with one stitch made at a 45-degree slant, and another stitch made over it in the other direction, to form an "x". When cross-stitch is used, it is commonly the only stitch type on a piece; all stitches are the same dimension, and all are worked with the over-stitch in one direction to give a sense of visual harmony. In terms of the practicality of this body of work—for the form of the stitch not to detract from the colour of the thread and

the colour to be read well without too many perforations in the paper—cross-stitch appeared logical. I find it intriguing that I chose a stitch I had previously maligned as being boring, rigid, and personality-free.

The Process/Practice

In this section I describe the process/practice without much interrogation, to mirror the experience of the making: this is the doing, the reflection followed.

Data

Gathering the data for making the stitched works was slow and small-scale. For some, using the word *data* here may feel foreign or inappropriate. For me, there is no dissonance. If it is something that gets in the way, however, what I call data could be recast as design elements, project components, or an archive perhaps.

The data collection was manual, close, attentive, intimate, personal, entirely subjective, and embodied. I think of this practice as *small data*. As I began the project, I thought of small data in opposition to *big data* (as did Pollock, 2013). Defined by contrast, I view small data as datasets in which each element is individuated, carefully looked at, considered, comprehended, and put into its right place. As such, it takes time, and so I also think of it as slow.

The colour words in the novel were collected over repeated, iterative, careful readings. The data could not be collected otherwise—for example, by using online reading tools, or natural language processing—for it relied on contextual reading, and specifically allowed for non-traditional colour descriptions.

To begin the process, I first typed the sentences as a list, retaining the order of their appearance in the novel. The list became a simple table (see Table 1) when I added the chapter and page number, so I could locate later and re-read for context. Then the colour word/s were picked out for easier reference, and each colour word given a unique identifying number. Additional information was then added (i.e., what was being described with the colour words and the character this related to, if any). Table 1 shows the first fifteen colour words collected, as well as the last two.

Table 1
Selected columns in the data table

#	Sentence (fragment shown, full retained)	Colour	Who?	Type
1	The sky above the port was the colour of television, tuned to a dead channel.	television	--	sky
2	… webwork of … and brown decay.	brown	Ratz	person
3	… the unlikely tan on one of …	tan	<unnamed>	person
4	… cased in grubby pink plastic.	grubby pink	Ratz	person
5	He scratched his overhang of white-shirted	white	Ratz	clothes
6	belly with the pink claw.	pink	Ratz	person
7	... unfolding across that colourless void …	colourless	matrix	matrix
8	The bartender's small brown eyes were …	brown	Ratz	eyes
9	… rain-stained khaki nylon … windbreaker.	khaki	Case	clothes
10	… for the glare of the television sky …	television	--	sky
11	… Tokyo Bay was a black expanse where …	black	--	environ.
12	above drifting shoals of white styrofoam.	white	--	thing
13	… under the poisoned silver sky.	poisoned silver	--	sky
14	It was a flat pink octagon …	pink	Case	thing
15	… each panel framed in red neon …	red	--	environ.
..				
893	… his pink gums, the glitter of the long grey	pink	Neuromancer	person
894	eyes that had been Riviera's.	grey	Neuromancer	eyes

Colours

While assigning the thread colours to each colour word, it became clear that how and where I had chosen to hold my gathered sentences and associated data mattered. I had chosen Microsoft Excel—after decades of working in mathematical modelling, it was familiar. And it was simple; this work did not require anything fancier. I also anticipated using its functionality—reordering and inserting rows, linking between rows, summarising the data (for example, easily finding out how many times black was used), and filtering.

I approached the significant task of assigning coloured threads to the 894 colour words in *Neuromancer* by starting small—I chose a character who I knew only had a few colour word entries and looked at their colour words. Table 2 is an example of this, for which sentences relating to the character Ratz were selected.

Table 2

Determining colours – Ratz example

#	Prv.	Colour		Who?	Type	Where?	Sentence (fragment shown)
2		782	brown	Ratz	person	Tokyo	… steel and brown decay …
4		224	pink	Ratz	person	Tokyo	... military prosthesis … grubby pink plastic.
5		01	white	Ratz	clothes	Tokyo	… overhang of white-shirted belly
6	4	224	pink	Ratz	person	Tokyo	with the pink claw.
8		300	brown	Ratz	eyes	Tokyo	… small brown eyes …
85	4	224	pink	Ratz	person	Tokyo	… his pink manipulator …
90	4	224	pink	Ratz	person	Tokyo	… with his pink plastic claw.
91		701	green	Ratz	thing	Tokyo	… shards of green plastic …
93	4	224	pink	Ratz	person	Tokyo	Ratz pink claw closed …
791	4	224	pink	Ratz	person	Straylight	… pink manipulator swinging …
792		3031	blackened	Ratz	person	Straylight	… blackened teeth …
887	4	224	pink	Ratz	person	Tokyo	… pink manipulator …

It is noticeable that Ratz's pink prosthetic arm is mentioned seven times. As each occurrence of the colour word related to the same object, and there was no indication of degradation or change of colouring, it made sense that the same colour be assigned to each mention. So, I introduced the "Previous" column, which refers to the unique identifier of the colour word when it was first mentioned in the text. In this example, each subsequent colour word use (id #6, 85, 90, 93, 791, 887) was linked back to the first time it was used (id #4). This meant that, out of the twelve colour words for Ratz, I only needed to choose six different coloured threads. This ensured consistency and made the task of choosing colours less onerous. I worked through each character, then worked through non-character colours, such as environments, buildings, et cetera. This exercise took months and was a satisfying process in itself.

Using commercially available embroidery threads for colours meant I was constrained to a limited colour palette—I could not just mix up colours to find the exact one I wanted, as I might were I using paint or other blending media. In a way, I was quite glad for the limitation, as it potentially saved me from going on an infinite quest for the very exact blue. Also, I could combine more than one thread colour in a square and the colours would remain separately readable.

Scale and Overall Shape

The scale of each square, and its relationship to the others, was intuitive. I wanted the colours to be easily read, and, therefore, more than one stitch was required. I wanted the scale to remain small, to retain a sense of being able to hold it in your hand. I worked up the proportions by hand, on paper, with small scale experiments, and then transferred that scale to the electronic version, simply colouring the squares with the relevant hex-colour code from a thread inventory spreadsheet (sourced via Lord Libidan, n.d.a). As I worked through each character, I developed rules to govern the proportions of the works, such as the number of rows and columns, and when to add a column instead of a row.

Each work is read like a book written in English: left-to-right, row-by-row, from the top of the page down. The coloured squares are in the exact order the words appeared in the book. I did not rearrange the colours according to aesthetic preferences or by any other construct. This ordering was critically important to me, for otherwise I would have simply collected colours without any underlying structure, and the worked pieces would lose all intended meaning. Figures 1 and 2 show the digital workups for Ratz (you can see how the list of coloured squares in Table 2 are ordered into these blocks of coloured squares) and Armitage.
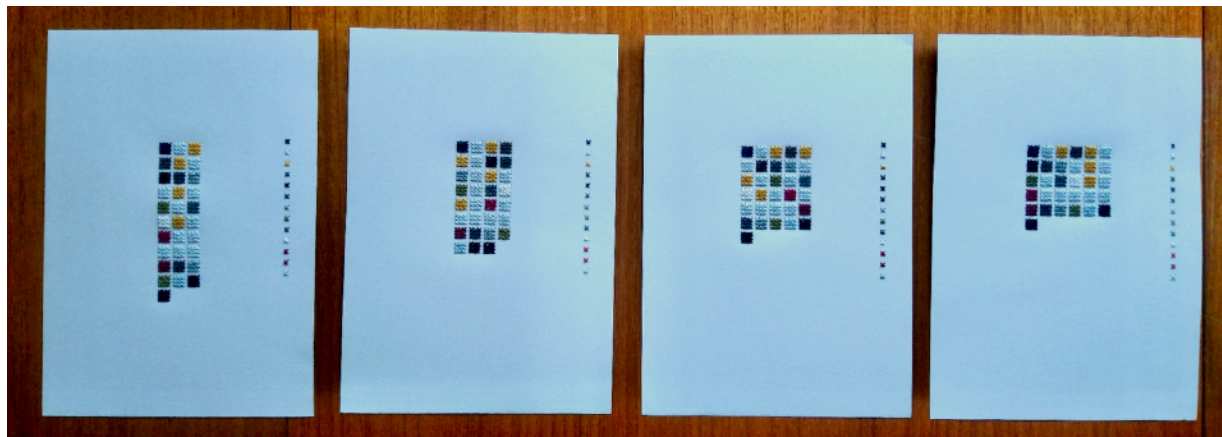
Figure 1

Colour Words / Neuromancer / Ratz / digital workups

Figure 2

Colour Words / Neuromancer / Armitage / digital workups

Figure 3

Colour Words / Neuromancer / Armitage studies(2020/2021)

While all character studies have same size squares (Figure 3), the triptych (Figure 4) and full (Figure 5) *Neuromancer* pieces have two larger squares. The digital workup for the full representation of the 894 colour words did not please me; I wanted symmetry, a full square. So, I made two of the squares double the size of the others. I chose the two descriptions most significant to me—"television tuned to a dead channel" and "aching taste of blue." This approach of doubling significant colour squares was used in other book representations as well.

To transfer the digital workup to begin a piece, I manually mapped the information (e.g., from Figures 1 and 2) onto thin graph paper with pencil, and then laid this paper over the thicker work paper. I pricked the corners of the selected graph squares with a pin to mark the underlying paper and removed the thin graph paper template. The sound of this was wonderful, and I could not help running my fingertips repeatedly over the pricked paper. I then secured the paper into a frame of my own making, to hold it rigid for working and prevent damage from handling, and used a needle to perforate the paper at each pin-mark from the front. Pre-puncturing the holes minimised the rupture that occurs when the needle is pushed through the paper from the back. Then I could begin the stitching.

The stitching came to feel akin to movement meditation, for each single-colour square was made with the same series of ordered stitches: 16 holes punctured at the pin-mark; nine cross-stitches, each 2 mm square; 18 stitches on the top surface of the paper; the threaded needle passing through the paper 36 times, always in the same order. It was repetitive and yet demanded attention (to avoid mistakes as much as to enjoy the sensations) such that the movement could never become unthinking. A rhythm, both physical and sonic, developed when I was in the flow of stitching.

The Objects

Colour Words / Neuromancer / character studies are A5 size (185gsm cold-pressed paper); small and hand-held. When I still felt unready to approach the whole piece, I split it into a trilogy on A4 paper: *Colour words / Neuromancer / Triptych* (detail in Figure 4). The full piece, *Colour Words / Neuromancer*, is 50cm x 50cm (Figure 5) (300gsm for added rigidity). I also played with representing the full set using a single cross-stitch, in *Colour Words / Neuromancer / mini* (Figure 6; 15x15cm).

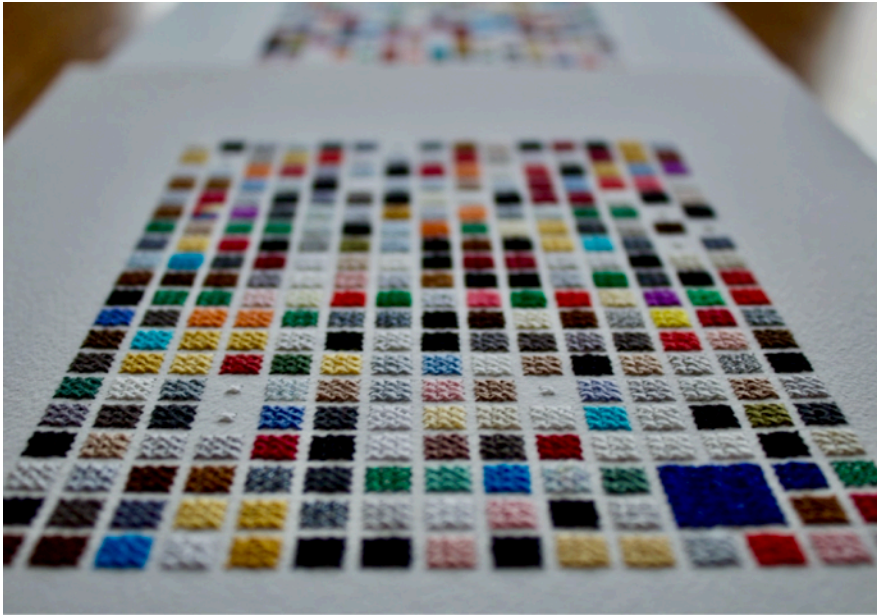**Figure 4**
Colour Words / Neuromancer / Triptych 3 (2021; detail)

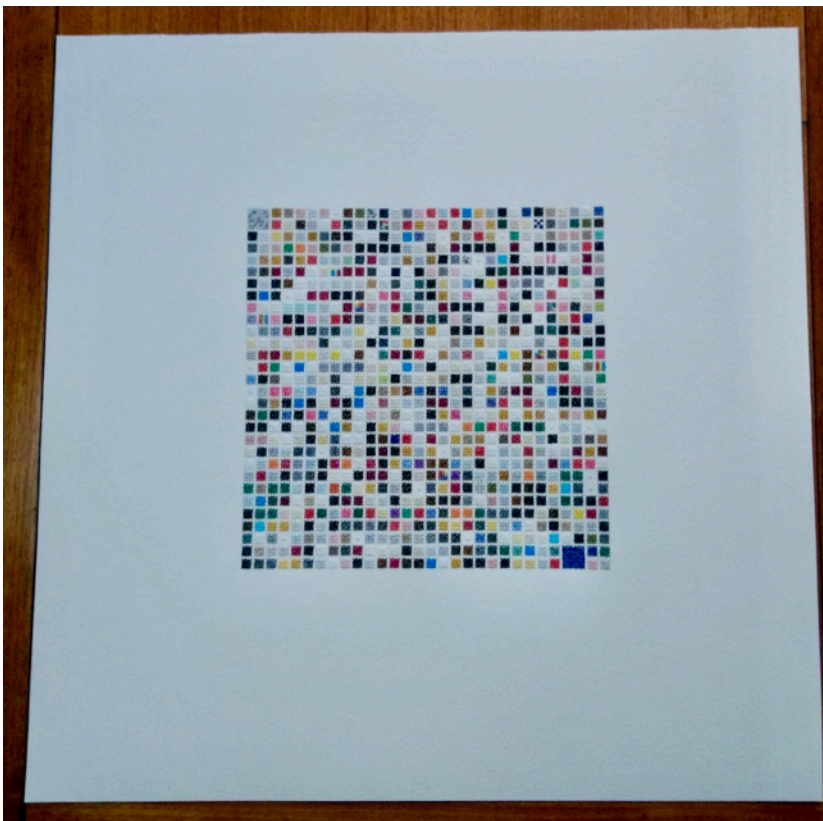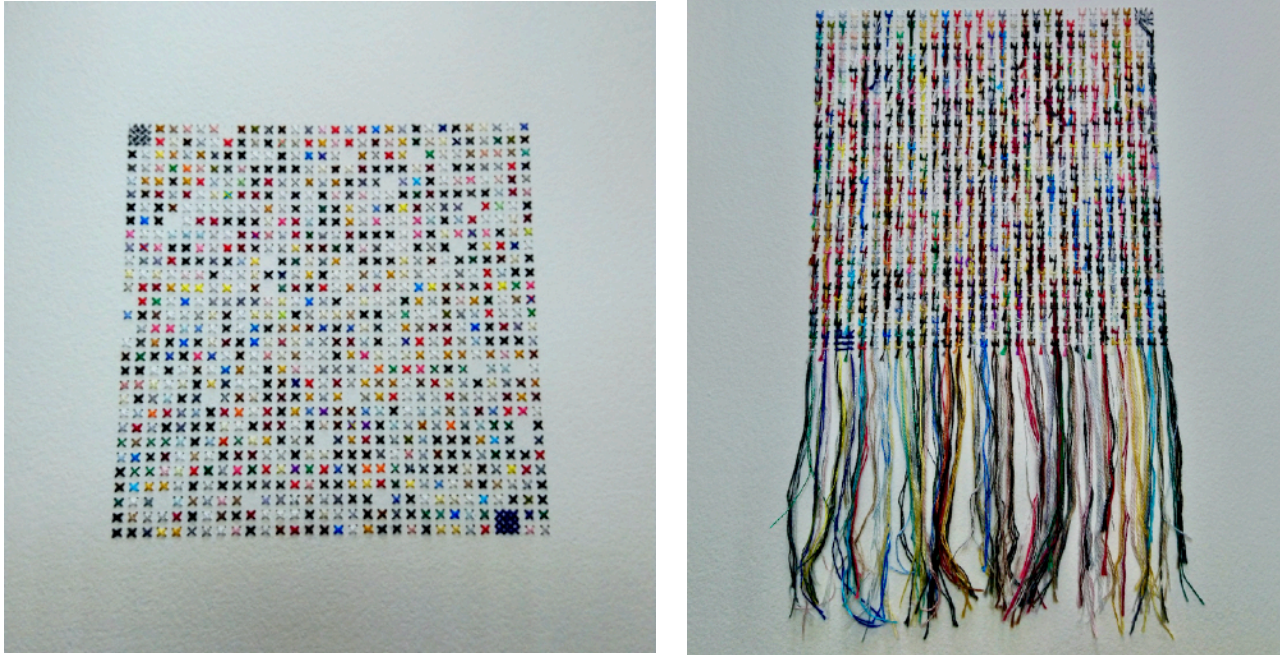**Figure 5**
Colour Words / Neuromancer (2022)

Figure 6

Colour Words / Neuromancer / mini (2021); verso (left), recto (right)

Other Books

I applied the *Colour Words* process/practice to three other novels: Ray Bradbury's *Fahrenheit 451* (1953); Edwin Abbott Abbott's *Flatland* (1884); and Aldous Huxley's *Brave New World* (1932). I have also begun working on the remaining two books from Gibson's *Sprawl Trilogy—Neuromancer* being the first—namely, *Count Zero* (1986) and *Mona Lisa Overdrive* (1988), though these remain only in digital renderings.

Reflections

As I reflected on and wrote about this process/practice, I was surprised by the multitude of thoughts that tugged at my mind. I took time to consider the specific tactility and making of these pieces, the intense physical work of the pinpricking, the way I had come to treasure the rhythmic repetition of the movements to stitch each square, and the sound the needle made perforating and then passing through the thick paper. I cannot do justice to all thought-avenues here; however, I have selected some threads to pull and reflect on in depth.

Making Physical

Initially, I would have labelled the following fact as an aside, but it is becoming increasingly obvious that it may be entirely pivotal: I experience aphantasia. It feels hard to explain, though Costandi (2016) does well: I do not "see" images/pictures in my mind or visualise in my mind's eye. When someone asks me to picture a tropical beach for example, I have no visual representation; I had always thought that was just a turn of phrase. I can certainly generate a sense of a beach, a knowing, an experience I can draw to memory, but no actual picture forms. It was a coincidence that I heard more about aphantasia as I was making these pieces, but I began to wonder if it might be a driving force in this body of work, as well as in some of my other projects. Perhaps the fact that I cannot form a picture in my mind leads me to make a representation in the real world, in this case, the colours as I read them in a novel.

It also mattered to me that I was making something to show to someone else. The pieces were not made simply for my own enjoyment of the process, or the outcome (though that was substantial enough), nor as simply something to do with my time. Fundamentally, the pieces were a means of communication, initially intended as a way for me to show you the colours words. It was only upon the completion of the pieces that I realised they offered more than even that.

It was not enough for me to make the digital workups for the *Colour Words*, however, I needed to make them physical. Maybe I wanted to touch them, to hold them in my hands. Perhaps digital is not yet real enough for me. At the *Small Data is Beautiful: Analytics, Art and Narrative* symposium, Michalewicz (2022) spoke beautifully and made the case that small data is "data you can hold in your hand, you can hold in your heart."

Embroidery and Craft

In this body of work, words were taken from paper and reconfigured using a craft-form commonly associated with women and viewed as feminine. Despite my preference to see them as stand-alone, I submit to the reality that *Colour Words* will be read as part of the contemporary reworking of craft, embroidery in particular.

First, I offer some brief historic context. Embroidery is considered embellishment, for the stitches are not structural to the fabric being worked. It is a form of creative expression that has been repeatedly diminished, and, since the eighteenth century (and perhaps prior), considered a feminine and domestic craft at best, and rarely as an art practice (e.g., Antrobus & Preece, 1928; Edwards, 1976; Parker, 1984; it is also

infuriatingly interesting to read older texts such as Kendrick & Cole, 1911; Embroidery, 1915; Lefébure, 1888). I agree with Parker's (1984) proposal that, in cultures influenced by Western Europe, particularly England, a clearly "defined separation of art and craft" took place in the seventeenth century (p. 11) which, she posits, coincided with the "development of an ideology of femininity" (p. 5). Embroidery was forced into the domestic sphere, no longer an artform to be held in esteem alongside tapestry, paintings, and sculpture.

Cross-stitch, in particular, has come to be synonymous with samplers. These developed from general samplers of all types of embroidery and darning stitches, examples of which date to the fifteenth century (Victoria & Albert Museum, n.d.). Its most recognisable form came into focus as skills building and status display for girls from the late seventeenth century (Victoria & Albert Museum, n.d.); tying into the timeframe Parker (1984) identifies.

Evidence of subverting the expectations of the cross-stitch sampler is as old as the practice itself (see, Lord Libidian, n.d.b; Travers, 2019). Parker (1984) holds that "the art of embroidery has been the means of educating women into the feminine ideal, and of proving that they have attained it, but it has also provided the weapon of resistance to the constraints of femininity" (p. vi). One wonderful example of subversion, also reflecting Murphy's (2003) view that "needlework has always been a form of self-writing" (p. 646), is held by the Victoria and Albert Museum (London): made in 1830 by Elizabeth Parker, it is text only, in red thread, and list out sins and complaints with not a decorative motif in sight (Parker, untitled, 1830).

Applying these concepts to my work, I can see an element of self-writing in these pieces, for I am communicating my own experience of these novels. Equally, I can understand that these pieces may be viewed as subversive. Although they were not intended as such, they do translate the words of men using women's craft.

Unpicking the phrase "words of men," it happens that all novels I have so far applied *Colour Words* to have been authored by men. In contrast to textile work, it could be put forward that works of literature, particularly novels and poetry, have held their place as artforms, and that the field has historically been dominated by male authors. It might be speculated that, as men were preferentially educated in many cultures, this would create an increased power to access publishing—and resulting opportunity to earn money—for an expected readership of (male) peers. Further research reveals that this proposition holds true, albeit to a varying degree for some periods and genres. Underwood et al. (2018) surveyed 104,000 works of fiction (from academic library collections, via HathiTrust Digital Library), from late eighteen to early twenty-first centuries, and found "a fairly stunning decline in the proportion of fiction writers who

were women, from the middle of the nineteenth century to the middle of the twentieth …
from representing almost half the authors of fiction, to barely a quarter" (p. 5,6). The
Victorian-era decline in female authorship was also noted in *Edging Women Out*, where
Gaye Tuchman and Nina Fortin (1980) define the *empty-field phenomenon*:

> … when a field or occupation is not socially valued, women and other
> minorities will populate it heavily. If the field grows in prestige, (white) men
> may push women (and other minorities) out. Conversely, as a field loses
> social value, when "proletarianization" occurs, (white) men may decamp
> and leave the field to women (and other minorities). (p. 309)

As defined here, one could also apply the empty-field phenomenon to describe what
occurred to the status of embroidery.

Gathering these threads and reflecting, these historic and modern currents
potentially influence my hesitance to claim the label of *artist* and preference for *maker*. I
have even wondered, if it holds true that all humans are artists, whether the label of
artist is even necessary—or maker for that matter. Is the claiming of the label more
about the fact that the individual has chosen to actually exercise that potential, and is
signalling how they want to be viewed by others? Is there perhaps something I expect
or imagine of an artist that I cannot or am not willing to bear responsibility for, and that I
can avoid, by calling myself a maker? Do I believe artists to be more special than I feel I
am? I have no answers right now, and this will continue to be a personal reflection.

Colour and Words

Now, I consider a more practical aspect of the work. When choosing colours for
the colour words, I had varying degrees of discretion. If the author wrote "pale avocado"
I had little room to move, but terms such as "dark" or "blue" gave more freedom. The
colours, and their relationship to each other, were rigidly dictated by the text and rarely
created combinations I would put together for the sake of beauty. These pieces are not
purely aesthetic; they are faithful communications of an underlying set of data with
established relationships.

Albers makes several statements in *Interaction of Color* (1975) that resonate with
my specific personal understanding and perceptions of colour: "a color has many faces"
(p. 8); "the nomenclature of color is most inadequate" (p. 3); and

> If one says "Red" (the name of a color)
> and there are 50 people listening,
> it can be expected that there will be 50 reds in their minds.
> And one can be sure that all these reds will be very different. (p. 3)

If anyone else were to undertake this process, even if they used my sentence data, their colour choices would be different. They may choose to ignore some classes of colour descriptions, for example "colourlessness", or include the *black* in "black market", not to mention that they may make different decisions on how to pattern the squares or make entirely different representations. It would be a wonderful experiment for a group of makers to use my data and see what they make from it. Different and new interpretations would surface, each contributing something unique to the understanding of the original novel.

When selecting embroidery thread for *Count Zero* (1986), the second book in Gibson's *Sprawl Trilogy*, the few choices for darker skin tones became particularly evident. The implications of this erasure, non-representation, and failure of acknowledgement were troubling; there were many more pinks and pale skin tone colours than brown and darker skin tone colours. This was my first experience of not being able to find a ready-made colour that fit. I was forced to compromise, and I did not like how this felt. I would have minded less if this was about the colour of a building or a coffee mug, but this was about people, and I felt it mattered. The only way around this gap would be to dye my own coloured thread. This would allow for more accurate representations of the colours as I experience them while reading; however, the constraint of using ready-made thread turns out to be an unexpectedly important part of this work to me. Were I to dye my own thread, I anticipate I would be caught in a never-ending search for exactly the right shade (not to mention needing to develop the requisite expertise), and, in all sincerity, the pieces just would never get made. I remain unsure how to resolve the discomfort of representing many characters' skin tones with a very limited set of thread colours, and *Colour Words / Count Zero* currently exists only in digital draft form.

Moving on to the patterns the colours made: while experimenting with the proportions of the works—how many columns and rows to organise the squares into—I was taken with the arrangements of the colours, especially where colours repeated. For example, the way the pink colour for Ratz makes a claw shape in the 3-wide arrangement (Figure 1), and the patterns of the blues of Armitage's eyes in each character study (Figures 2 and 3). Especially interesting was how each coloured square looked different depending on what colours were adjacent— a phenomenon relating to "simultaneous colour contrast" (Soranzo, 2016) and "perceptual grouping" (Zavagno & Daneyko, 2016).

While I chose to make meaning only of the words that describe colour, the exercise was wholly predicated on the context as communicated through the other words in the novel. The non-colour words were not excluded or erased but subordinated, used as scaffolding to frame the exact coloured thread I chose to

represent the colour words. To the viewer of the finished works, all non-colour words in the novel are invisible, only the colour-words are represented.

It would be fair to conclude that during this work I experienced a shift in my (already deep) appreciation of colours and how they work together, and that the self-imposed constraint of using ready-made thread turned out to truly matter.

A New Understanding of the Novels

In making the *Neuromancer* character pieces, I was fascinated by Gibson's descriptions of skin and eye colour. While Gibson declared the eye colour of almost all the novel's characters, including a few unnamed incidental ones, he never once identified the eye colour of Case, one of the two main characters. I did not notice this while reading the novel, only when considering the stitched piece made from the eye colour data. Why did Gibson do this? Are we, the reader, not permitted to be intimate with Case, can we not look him in the eye? Is it a deliberate contrast to Molly, whose silver metallic eye inserts are repeatedly mentioned?

When I finally made the whole *Neuromancer* piece—with 894 coloured squares; 14,160 hand-pricked position points; 15,932 stitches, the needle passing through the paper (puncturing plus stitching) over 46,000 times—I found I could "read" the book by the colours. Point to a square of coloured thread, and by its relative position and the colours around it, I could describe what it referred to and its location in the novel. The piece had become a mnemonic device. I no longer saw just the colours and their patterns, as someone without knowledge of the underlying data may see the work, but the story itself.

There were movements and shifts of colours and colour themes through the novel, especially (but not limited to) when the geographic plot setting changed. A viewer's perception of these movements in *Colour Words*, however, is affected by the overall shape of the final piece. For example, the three-piece *Colour Words / Neuromancer / Triptych* looks and feels entirely different to the singular square *Colour Words / Neuromancer.* Therefore, there cannot be one fixed *Colour Word* story, because the form of the individual piece informs the viewers' experiences. Were I to create a *Neuromancer* piece that was long and narrow, perhaps structured by chapter, the reading would be different again.

It was interesting that the final work *looked* different to how I *felt* the novel. When I first read the book, Tokyo felt gritty and grey but also neon; the Sprawl felt dirty and brown; it felt electric in the matrix, and brightly synthetic when the characters were in

orbit. The data told me that twelve percent of the colour words were black; however, when I looked at my *Colour Words*, the picture felt different, the black and grey were not that dominant. Without question, the white of the substrate paper influenced this, and a different colour choice would completely change the perception. To my mind, however, the important revelation was that—alongside using colour words, and words that are not usually used for colour as colour descriptors—Gibson had created a feel of colour with non-colour words. Words not included in the representation were, in fact, a key part of the development of my sense of colour while reading the novel.

Comparing *Colour Words / Neuromancer* to pieces based on other novels, Gibson's love of colour words is obvious. For the scale of the book, *Neuromancer* has substantially more colour words than other books I have so far worked on. Abbott's *Flatland*, while a slim volume, was remarkable for its almost complete absence of colour but for the few pages, with sixteen words, describing the "colour revolution" (p. 41-44). Bradbury's *Fahrenheit 451* has mainly fire-coloured words, as you may expect, and the lower word count reflects that this novel could be said to be mainly focused on an idea and ideology, and not on descriptive visual world-building. Huxley's *Brave New World* is almost made for this kind of exploration, for it is set in a future synthetic society where colour is used as the marker of stratification. My focus (so far) on classic speculative science fiction is because that is where my reading interest has settled in recent years. It would be intriguing to explore what this process/practice may reveal if applied to, and compared across, novels written in different time periods, or in identifiable countries and/or cultures (I expect colour meanings within societies change over time, as do fashions).

Through representing novels using coloured squares, my relationship with the words deepened. I have an attachment to these novels I have to few others. I know them intimately now. I see them. I have created the means to show how I feel them. I have also created a way for me to understand more about how I feel about them, and to find interesting insights I did not have when only reading the text.

Making Meaning and Mode Changes

In this process/practice I have created a meaning translation—from many words on paper, to selected words as thread in/on paper. This could also be considered a *transduction*, a subset of translation as understood by multimodal theory (Kress, 2009, p. 124-125). I think of mode change as expressing the meaning in one type of communication, expression, or mode (e.g., written language, spoken language, image, audio) in another mode. Transduction is then not only this translation of meaning, but the remaking of meaning across modes. There can never be perfect meaning

translation, and, in my understanding of transduction, this is not even expected. Within this framework, Kress' (2009) description of a sequence of steps in semiotic work is akin to the methodology I developed through this process/practice:

[my] *interest* shapes
attention, which produces
engagement leading to
selection of elements from the message [the book], leading to a
framing of these elements, which leads to their
transformation and *transduction*, which produces a
new ('inner') sign. (p. 42)

The *Colour Words* meaning translation is unique to me; the produced work can never be wholly understood in the same way by another person; they will always see through their own eyes and knowledge and overlay their own meaning. The interference between my meaning and the viewer's experience will blur further if they: read the novel in translation or on a screen-reader; experience synaesthesia, colour-blindness or vision impairment; place alternate meanings on, have aversions to or favour, particular colours; have a natural preference for reading images and text from right-to-left (as opposed to the left-to-right of English-language layouts); and so on.

While the colour words are represented in the order they appear in the English-language version of these novels, the ordering might be expected to be the same, or very close, in other languages. If so, then the finished *Colour Word* pieces may also be an act of multilingual translation, a communication across languages. Were the ordering different, it would be interesting to explore the linguistic protocols at play and consider whether cultural specificities lead to a different feel for individual colours and the final pieces.

These works have also created a change in the act of interaction with the original message: from reading words by holding a book close to the body, at most at arms-reach, to looking (without touching?) at a *Colour Words* piece hanging on the wall or propped on a shelf. Have I required the readers of *Colour Words* pieces to distance themselves, become less intimate, compared to how they may relate to the book? Furthermore, a book is only read by turning pages sequentially; all of the words, other than those on the open pages (or active screen), are hidden. In *Colour Words*, the book, as represented by coloured squares (Figure 5), is available in one glance. For a reader intimately familiar with the novel, this is a dramatic change in speed and scale, and opens opportunities for patternmaking. I wonder what a viewer might experience if they were to see *Colour Words* pieces first, then read the novel; whether the colour translation may prime or impact them.

A Last Thought

I have written about my making process/practice because, fundamentally, I enjoy thinking and writing, not to mention that writing in first-person feels delightfully transgressive after years of writing as an anonymous third person in unnumbered corporate reports and academic assignments.

More importantly, I consider this exercise an extension of the "Show Your Work" principle of Data Feminism (D'Ignazio & Klein, 2020). I am a strong believer in, and advocate for, valuing the work of making data and making that work visible. By showing and explaining the significant labour required to produce the data underneath statistics, artificial intelligence models, visual diagrams, informative maps, pamphlets, and so on, the desired result is that data work will no longer be hidden labour and will become more recognised and thus valued. This matters to me in my professional work, and here apply it (without need for amendment) to my creative practice for the same reasons.

Reflecting on my making process/practice as an exercise in self-study raised some questions, and I conclude by answering some of them. I still find it difficult to claim the label of artist and recognise this will take much more delving and making to process. I have come to appreciate just how fundamental aphantasia may be to many of my projects. The importance of textile techniques to my creativity has always been obvious, though the additional research into the history of embroidery and its devaluing has made me both angry and more loyal to it. It might be necessary to petition thread manufacturers to add more diversity in skin tone colours. The way others see your work is often much richer than how you see it yourself, and the terrifying vulnerability is absolutely worth the insights gifted to you. Finally, to the question of how I could show you, and myself, what I felt when I read a novel: I think *Colour Words* has achieved this aim, and created more ways of seeing the story, and understanding the process/ practice, than I could have anticipated.

Acknowledgements

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ENDNOTES

[1] I use the phrase *practice/process* to describe making *Colour Words*, for I have found them surprisingly elusive to satisfactorily define, and I felt unable to characterise the work using either word alone. I began the body of work by playing with the words in the first chapter of *Neuromancer*, which then turned into a process (which could be formalised and applied to more chapters and books) to gather and build up the data, which then evolved into a practice through which the pieces were handmade and further explored. This, in turn, fed back into a process and/or practice as the rules of visualisation emerged and more books visualised.

[2] The definition of both *slow* and *small* data are still subject to active discussion and are often defined in contrast to *fast* and *big* data. My personal interpretation of small and slow data methodology, and how I see these as being appropriate to *Colour Words*, is described in the "Data" section of this paper.