



Fifteen years of grief

and

A death, a dot, a datapoint

Katie Anderson-Kelly | u4538447

*ANU ARTV8039 Practice-led Research
Project research documentation and
critical reflection*

My practice led research project has resulted in two related pieces of work. *Fifteen years of grief* is a physical data visualisation that charts my grief around the death of my father, based on a qualitative dataset I created. A *death, a dot, a datapoint* is a data story that is both the digital presentation of the former work, and a contextualisation of it within the broader dataset of Australian cancer mortality data and an experiment in anthropographic approaches to visualising data about people.

Exploring my interest in visualising data about people was the impetus for this project. In 2021, I first saw a powerful visualisation published by the New York Times when reporting that the USA had reached 500,000 COVID-19 Deaths (see figure 1 below). In responding to this piece, I found myself attempting to ground it in my own experience. Fortunate to not have known anybody who died of COVID-19, I reflected on the losses I had experienced and imagined what it would be like to know that my loved one was represented by one of those dots. Seeing this visualisation also sparked an interest in how data visualisations about people are designed, which I pursued through an [analysis of New York Times COVID-19 death visualisations](#) as part of the ANU's *Points of View* theoretical research unit in 2022.

My body of work for ARTV8039 is a direct continuation of that research. In my analysis I had used the design space of anthropographics (Luiz Morais et al., 2020, see Figure 11, page 11) as a framework to examine the design decisions made by the New York Times. In *A death, a dot, a datapoint*, I use this same framework as a basis for my own design decisions, experimenting with the dimensions of the design space to create six different presentations of the same data. My theoretical research had also focused heavily on data feminism and data humanism, and *Fifteen years of grief* is in many ways a direct response to the call to action Giorgia Lupi presents in her 2017 manifesto *Data Humanism: The Revolutionary Future of Data Visualization*. These two driving influences will be discussed in further detail below.



Figure 1 Left - full front page; Right - detail. "U.S. virus deaths nearing 500,000 in just one year," The New York Times, 21/2/2021, Front page,
<https://www.nytimes.com/issue/todayspaper/2021/02/21/todays-new-york-times>

DATA HUMANISM

SMALL big data
data bandwidth ~~quality~~
~~imperfect infallible~~ data
~~subjective impartial~~ data
~~inspiring descriptive~~ data
~~SERENDIPITOUS predictive~~ data
data conventions ~~Possibilities~~
data to simplify complexity / ~~depict~~
data processing ~~DRAWING~~
data driven design
SPEND save time with data
data is numbers ~~people~~
data will make us more efficient ~~HUMAN.~~

@giorgialupi

Figure 2. Giorgia Lupi, "Data Humanism: The Revolutionary Future of Data Visualization," Print, 2017, <https://www.printmag.com/article/data-humanism-future-of-data-visualization>.

Fifteen years of grief

Giorgia Lupi's *Data Humanism* challenges data visualisation designers to engage with complexity and context, and to explore new visual languages. *Fifteen years of grief* is a response to this challenge, a qualitative data physicalisation intended to draw the viewer into my experience of grieving my father.

The data visualisation is a crocheted scarf, which originates in a large black circle representing his death. This is a reference to the dots commonly used to visualise unit level data (as in the New York Times visualisation above). Tails from either side of the dot chart out my grief surrounding his death, with each row of the scarf representing either a specific memory, or a period of time (a single month) in my grief. This is a visualisation of a dataset mined from my memory, a visual encoding of memory metadata while the memories themselves remain concealed.



Figure 3. Me, wearing my response to Lippi's manifesto and call to action.



Figure 3a. Sketches and notes (above).

Figure 3b. Initial colour mock-up (middle).

Figure 3c. Final scan (right).

The algorithmic nature of many knitting and crochet techniques lends themselves to data physicalisation, with datasets readily transformed into patterns that can be embodied in yarn. For example, the exploding popularity of temperature scarves and blankets is the result of a highly accessible data visualisation trend. Commonly, such works engage with quantitative data, with numerical data divided into tidy ranges and assigned values on a neat colour continuum.

In contrast, the immediately apparent messiness of *Fifteen years of grief* clearly donates the qualitative nature of the work. I used colour to categorise the emotions I associate with each memory and time period, with emotions arbitrarily assigned a colour scheme based on a synesthetic sense of what felt right. Many memories have multiple colours, reflecting a complex jumble of emotions that defies tidy categorisation. A secondary language of texture and shade emerged within the broader emotion categories as I worked on the piece, as nuanced variations of feelings emerged. One particular skein of blue yarn came to represent “the longing of wanting to share a new experience”, while one soft lilac shade of purple came to mean “soft, aching grief” and a vivid violet meant “acute, stabbing grief”. This layer of meaning is not made explicit to the viewer, but the sense of complex and varying emotions is communicated through the variety of colours and textures used throughout the scarf.

The passage of time is encoded through the layout of the work. The memories are arranged sequentially, with a border on one edge of the scarf using bumpy stitches to mark the passage of time, drawing on the visual language of time-series charts. However, rather than the data being fitted to the axis, the axis is fitted to the data, with tick marks appearing arbitrarily wherever they are needed instead of at fixed intervals. Periods with many memories take up much more space than those without, reflecting the odd sort of time dilation we experience when looking back over our lives.

Measuring 480cm long and approximately 20cm wide, the scale of the scarf denies the viewer the “at a glance” overview of the dataset that we typically associate with data visualisation. This is wholly appropriate to the content of the dataset. It is not possible to experience a decade and a half in an instant, or to distil the complexity of this experience into a single snapshot. The work invites the viewer to spend more time with it, taking a slower and more piecemeal approach to what becomes quite an intimate exploration of this data.

This slower, intimate approach was also reflected in the process of creating *Fifteen years of grief*. The process of mining my own memory and recording and arranging my experiences into a dataset was quite unlike any data processing I’ve ever conducted before. In a recent article, visualisation designer Shirley Wu discusses the slow processing and intentionality as a key aspect of physical representations of data, saying “*I could no longer hit refresh and get a result in seconds*” (2024, p66). This resonated strongly for me, not only in terms of the realities of working with the physical materials but also the sheer amount of time spent with each datapoint in the dataset.

The process of creating the scarf was extremely iterative (see figure 4). Each memory was recorded and arranged, assigned emotions, then had yarn selected, a bobbin wound, the row crocheted, ends woven in and trimmed, edged, and once the object was complete was considered again as annotations were selected and positioned. This meant visiting and revisiting each datapoint, which was sometimes comforting, sometimes distressing, or often somewhere in between. The process of creating this scarf was a complex emotional experience in and of itself, which then became a memory recorded within the scarf.



Figure 4. Physical data processing, a nine-step process. Pictured: yarn selection, bobbin winding, crocheting rows, weaving in ends, trimming. Proceeded by: recording memory, assigning emotions; followed by: edging, selecting annotations, positioning annotations.

This extreme immediacy and intimacy of working with this data was very different to the usual remove of data visualisation development. As a designer I am used to spending time with the details of the overview, but remaining distant from individual datapoints as they are handled by the algorithms of the visualisation tools I typically use.

The wearable nature of the object reinforces this intimacy. It is possible for the viewer to literally wrap themselves in this experience, and my intention is that the audience should be invited to do so when the work is physically displayed. At this stage, however, the primary display of *Fifteen years of grief* is as the focal point for the companion datastory *A death, a dot, a datapoint*. The digital presentation is not as immediate or intimate, but does create other opportunities, including the ability to create an intuitive way to more thoroughly explore the visualisation and make some of the memories explicit through annotation.

This documentation presents *Fifteen years of grief* at a point in time, at the conclusion of this research project. I am unsure about continuing to add memories in the future, but an important aspect of the design was that the form of the object allowed for potential continuation. The scarf itself remains (and will remain throughout my life) nominally unfinished, reflective of the ongoing nature of grief and loss. Though as much as we carry our losses with us, life goes on. In figure 6, a proposed display of the work, by pure happenstance of drapery, we see the black dot of my father's death intersected with the bright white stripe that represents the birth of my daughter.



Figure 5. Overview.



Figure 6. Proposed display.

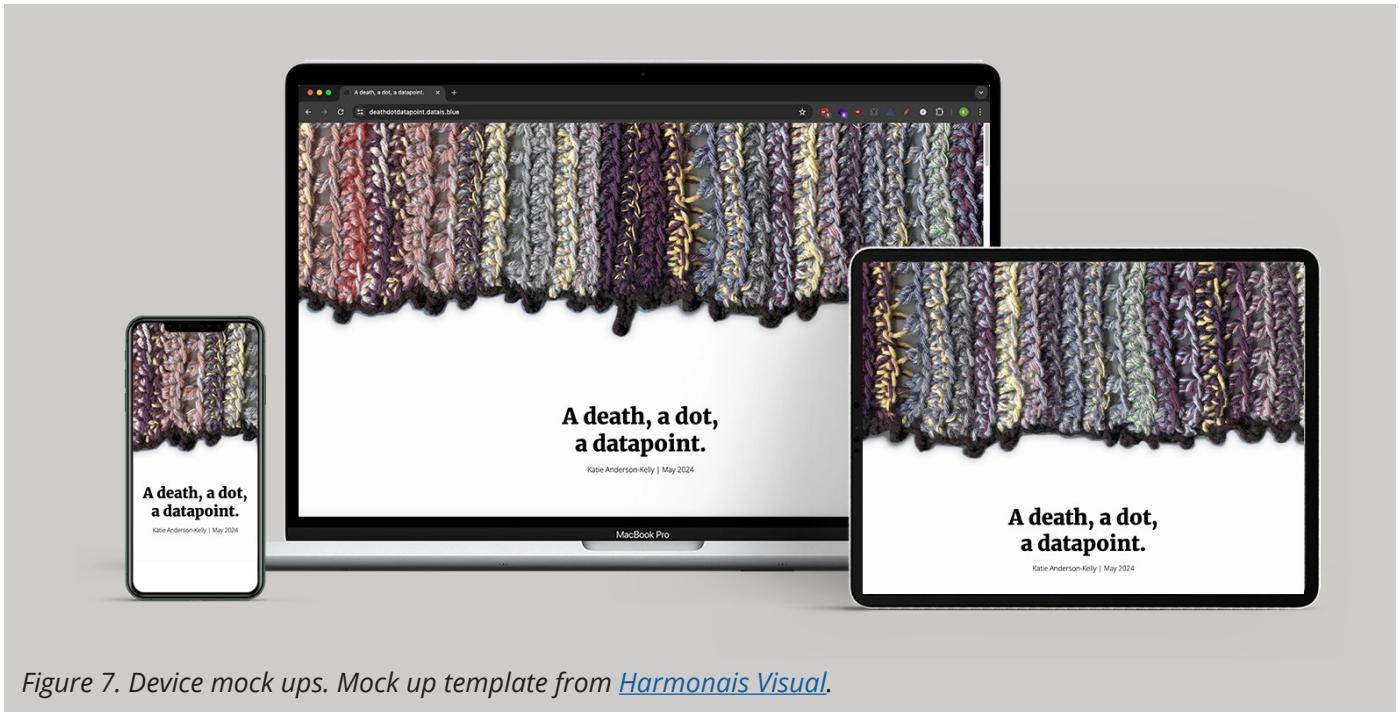


Figure 7. Device mock ups. Mock up template from [Harmonia Visual](#).

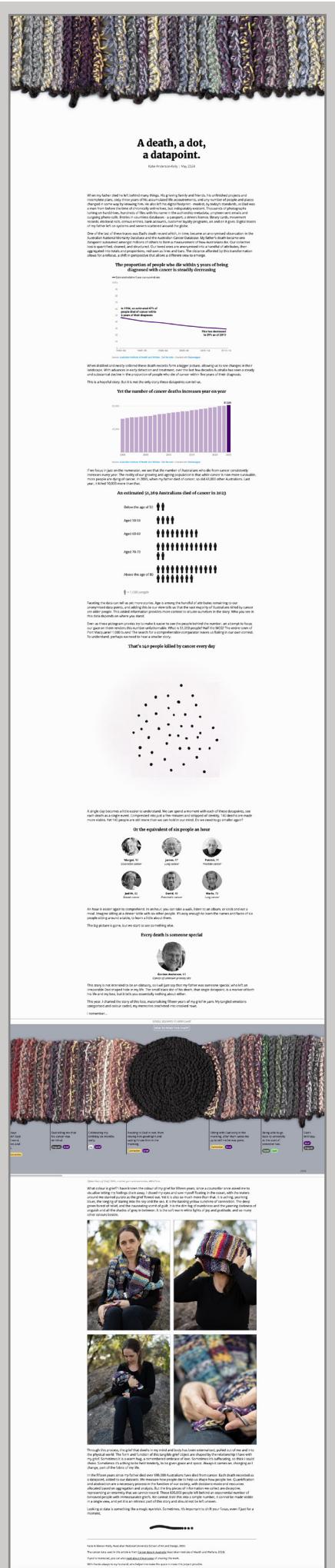
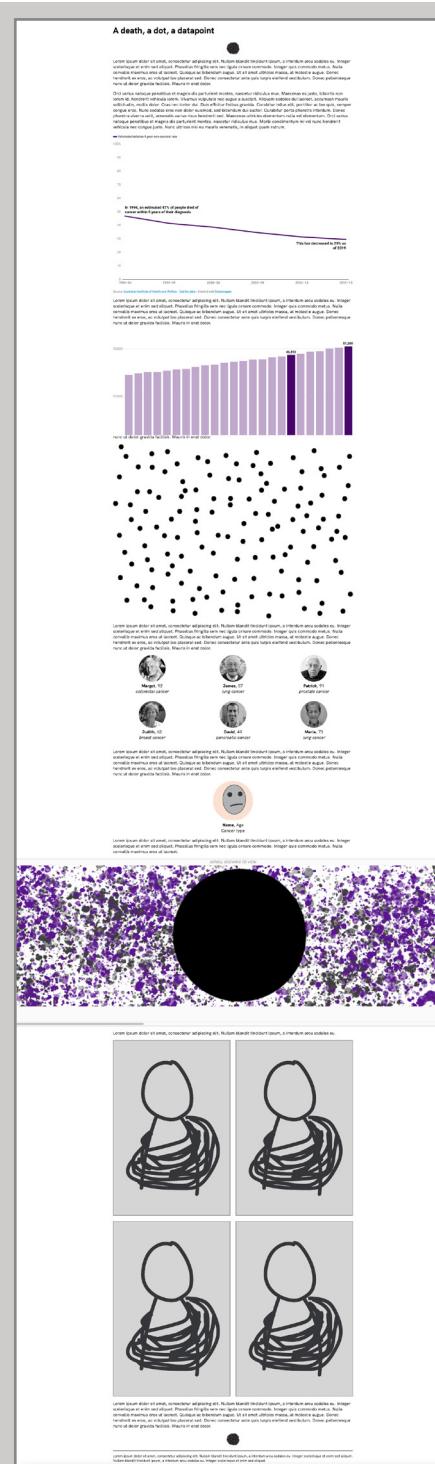
A death, a dot, a datapoint

This datastory has two primary purposes: to present *Fifteen years of grief* within a broader context, and to allow me to conduct a practical exploration of the anthropographic design space proposed by Luiz Morais et al., (2020). The intention was to visualise a single dataset using a range of visualisation approaches, exploring how varying the anthropographic design dimensions can change the emotional affect and create or reduce the distance between the viewer and the people represented in the data. This is, again, a direct continuation of my previous theoretical research, applied to a dataset I have a deep personal connection to.

A death, a dot, a datapoint visualises and revisualises Australian cancer mortality statistics, drawn from the Australian Institute of Health and Welfare's *Cancer data in Australia* report (2023). The datastory is in actuality the visualisation of two datasets, joined by a single datapoint - the death of my father. The narrative of my loss is woven around the visualisations, providing the story hook and throughline. Early drafts of the work had this personal aspect held back until the crux of the story, only revealed once the traversal of the anthropographic design space was complete, but as drafting progressed I felt that the story was more compelling and engaging if the mortality data was introduced within the context of my personal experience.

The design of the datastory was shaped by three key considerations: the concept of traversal of the anthropographic dimensions, the presentation of *Fifteen years of grief*, and the need for an incremental development process to fit around the care of my infant daughter.

Effectively presenting the digitised scarf made some design decisions straightforward, with the long, skinny object lending itself very naturally to a horizontal scroll interaction. Responsive design became a critical component of the work, as this interaction is enhanced by the immediacy of finger-swiping on mobile devices. The memory reveal of the annotations and the use of categorisation pills to familiarise the viewer with the emotional encoding are also advantages afforded by the digital form.



*Figure 8. Data story development.
Initial storyboard (left), code draft
(middle), final story (right).*

Initially a practical necessity, the modularised design process turned out to be well-suited to the traversal concept, as the datastory strings together a series of visualisations that could be produced discretely. There is, however, a tension between the experiment of the traversal and telling a tightly edited story. Some aspects of the exploration of the design space, such as the diversion into a “tiny wee men” age breakdown, may have been left on the cutting room floor or adjusted so that a new element (age) was not introduced and then left behind. I chose to retain the visualisation as is to maintain a sense of shifting from the typical informative visualisation (the focus of the first three visualisations), to the more emotive (the last three). Overall, the visualisation concepts, once drafted, remained consistent throughout the process, as seen in the process documentation in figure 8 (p9).

The six visualisations engage with all seven dimensions of the anthropographic design space (outlined in figure 11, p11). The starker shift is from the purely digital line, bar, and pictogram charts to the highly physical *Fifteen years of grief* (although this is, of course, a digital representation of a physical object, so within this form does not achieve maximum physicality). The intermediate visualisations are also intermediaries on this spectrum - the “140 dots” visualisation, while it appears to be an animation, is actually a video of a two dimensional real-time drawing, and the identifiable dots are photographs.

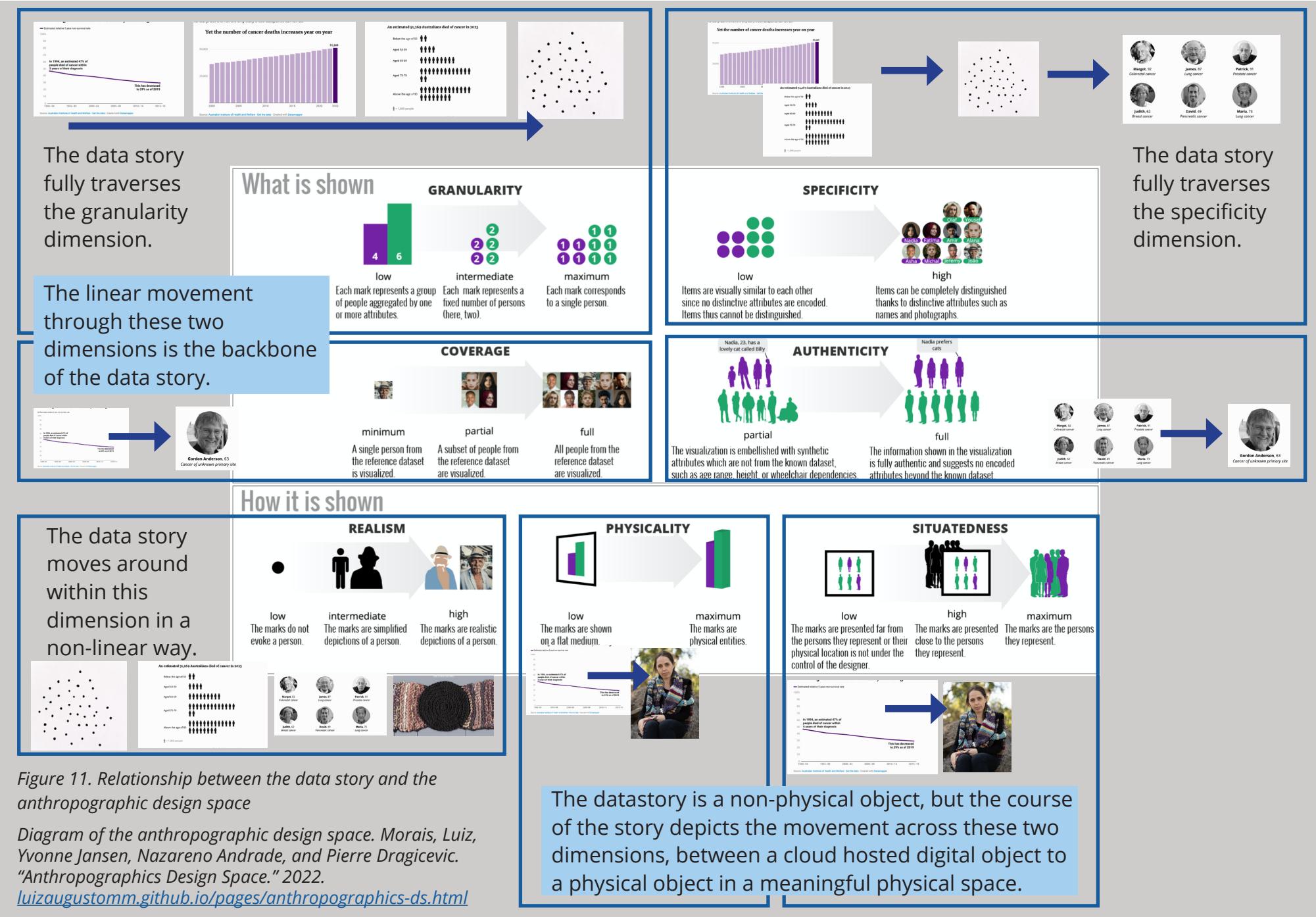
The backbone of the emotional shift of the story is in the full linear traversal of the granularity, coverage, and specificity dimensions. The explicit shift in perspective from the fully “zoomed out” overview of the anonymised mortality dataset to the fully “zoomed in” examination of a single identified datapoint is the throughline and emotional crux of the story.



Figure 9. Nap trapped web development.



Figure 10. 140 dots “animation” process.



The level of engagement with the other dimensions varies. The story bounces around the realism dimension to suit the needs of the individual visualisations, but this is primarily a byproduct of engagement with the other dimensions - the use of photographs being an effective way to achieve high specificity, for example. The partial authenticity of the use of stock photos and made up personal details in the "six dots" visualisation was essentially a pragmatic choice. Early drafts did involve experimentation with AI generated images (the essence of a synthetic attribute), however the results were displeasing and I was not prepared to engage with the inherent ethical considerations as part of this project.

Movement across the final dimension, situatedness, is both overt and covert, and again tempered by the story being a digital presentation of the physical. Apart from *Fifteen years of grief*, all of the charts have low situatedness. *Fifteen years of grief* has much higher situatedness, as it represents my own feelings and I can wear it, while the dot motif that represents my father can be worn by his daughter. On a covert level, not revealed directly to the viewer, the documentation photographs of this piece were taken in a place where we spent a great deal of time, with me sitting on a rock we used to sit on. The world has changed a lot since the last time we sat there together, but the rock remains.

This unseen element - not deliberately hidden from the viewer, but not made part of the story - was an aspect of the development process that I had not consciously considered until reading Ally Levine's behind the scenes article (2024, p54) about her visualisation *Awash in grief*. In it, she describes picking flowers from around her community for use in her grief cyanotypes, and how this related to her experience of living through the COVID-19 pandemic. Knowing the origin of the flowers is not necessarily important to the audience's understanding of the message of the work, but it is a reveal of how designers leave unseen and unspoken artefacts of their process and experiences within their works.

Much more overtly, and a highly deliberate choice, *Fifteen years of grief* leaves the details of most of the memories hidden. Of the 302 memories included, 46 are shared with the audience as annotations within the digitised work. The selection of these shared memories was a mix of careful choice and pragmatic layout design. I sought to give a candid and authentic representation of the evolution of my grief, while still retaining my privacy in sharing such a deeply intimate experience. While the full dataset will never be shared, remaining mine alone, it is not required for the viewer to understand and experience the work. The un-annotated parts of the scarf leave space for the viewer to see and imagine, and spend time with the emotion of the piece.

The strength of *A death, a dot, a datapoint* is in the space it makes for the viewer to experience this emotional dimension within a broader context. I have deliberately framed the story as finding a different perspective on a dataset that is initially very typically presented mortality data, without positioning this perspective as being in opposition to more familiar approaches. The notion of quantification as "*a technology of distance*" (Porter, 1995 in Kennedy and Hill, 2018) is often discussed in data humanist and data feminist analysis of the value and positioning of qualitative and quantitative data (Kennedy and Hill, 2018; D'Ignazio and Klein, 2020; Lupi, 2017). As a researcher, I am very familiar with the tension and interplay between qualitative and quantitative research approaches. I have chosen to situate *Fifteen years of grief* within this tension rather than on one side of it. I would call *A death, a dot, a datapoint* a mixed methods story that honours the utility of the distance afforded by the quantitative representation, while highlighting the value of the closeness created by the qualitative.

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