

TRANSFORMING PERSONAL DAILY
GPS DATA THROUGH PERFORMANCES:
MOVEMENT, MEMORY AND TIME

Submitted by Sophia Belasco New
to the University of Exeter as a thesis for the
degree of Doctor of Philosophy by Publication
in Performance Practice

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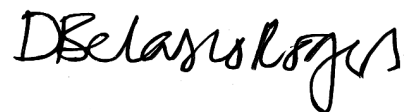
A handwritten signature in black ink, reading 'Sophia Belasco New'. The signature is written in a cursive, flowing style with a large initial 'S' and a distinct 'N' at the end.

Signature:

Statement of joint authorship

This is to confirm that 50% of all contributory research, conceptual work, design and execution of the practical works listed and referenced throughout the thesis as plan b are the work of the candidate.

Yours sincerely,

A handwritten signature in black ink, reading "DBelasco Rogers". The signature is written in a cursive, flowing style with a large initial 'D' and a long, sweeping underline.

Daniel Belasco Rogers

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Abstract

This thesis examines three plan b performance pieces, which are all based on a long-term practice of recording GPS data daily (fourteen years for me at time of writing). The works comprise different performative processes to materialise the data through public drawing, narrating and collective knotting. Each of the pieces is related to the respective central themes of movement, memory and time. Through performance methodologies involving durational and slow processes, I show how all the works deal with means of visualising and materialising the otherwise invisible: the traces and journeys of where one has been and when. I argue that alongside these performances of our data, the works create new insights and knowledge of a spectator's own sense of the shape of their own daily movements, the scale of journeys, recall of their own biography, and their experience of time. I examine how the art works ask the viewer to consider their relationship to the idea of the drawing of their own lives, the stories they would tell if revisiting their own journeys and what they might learn from seeing their pattern of activity across a whole year in the form of a carpet.



Figure 1: *All my journeys in Berlin 2007–2015*, Sophia New. Copyright plan b

Introduction

Every human being is unique, an unrepeatable existence,
which—however much they run disoriented in the dark, mixing
accidents with intentions—neither follows in the footsteps of another
life, nor repeats the very same course, nor leaves behind the same story.
(Cavarero 2000, 2)

I have been recording everywhere I go with a GPS since January 1st 2007.¹ I first worked with a GPS during a collaborative project with Arnolfini Gallery and Mobile Bristol Unit in 2004, locating sound files to create an audio work where GPS triggers the sound files.² I was invited to the project together with Daniel Belasco Rogers, with whom I have worked under the name plan b since 2002. Daniel had begun using GPS on a daily basis since 2003 as a way of revealing how he was learning about a new city, Berlin, to which we had relocated in 2001.³ As Daniel and I were both working together and living together and increasingly integrating technology into our performance practice, I became interested in seeing how our lives are entangled with similarities and differences, especially as I noticed how my mobility was changing with having a young child.⁴ Initially I intended to join this practice of recording movement for one year and yet fourteen years later I still carry on, due to the fascination of being able to render those invisible traces of movement into something visible and tangible. Over time I found that the accumulation of data allowed for a richness and depth in the artworks, and that the layering of years opened up creative questions that can be fully explicated through the accumulation of time. I would like to point out that initially my desire to record where I go was less concerned with creating maps of an area or

city and more about seeing the amount of time spent walking the streets and playgrounds in the neighbourhood in which we were then living.⁵ This is also how I tend to navigate: with a street view in mind, with landmarks as visual reminders rather than an innate sense of where North is located. Daniel's impulse for recording his movement, on the other hand, was to observe how he 'learns' Berlin, to see how his knowledge of a new place was developing over time. In that way his approach was more in keeping with his ability to have in his mind a bird's-eye view of the terrain.⁶ Daniel's initial records of his movements (before using a GPS) were laboriously made by hand through a process of scanning maps and drawing where he had been as a new layer in a computer graphics programme. The eureka moment came when he realised that a GPS can do this 'drawing' process for him, thus he could outsource the drawing to the device. From the outset he intended to do this on a daily basis for an indefinite amount of time, as is referenced in his early reflection published in *Radius Berlin*:

My desire, like all everyday practises, has shifted. From starting out with the wish to catalogue every trip I have made, to read story of my life, to see my personal map, written by my ageing body through time and on the surface of the earth, this drawing that takes a lifetime to make; I now wish to transcribe knowledge as well. (Belasco Rogers 2004, 25)

Thinking of the GPS as a kind of mark-making device, which therefore produces a result that resembles drawing, I would like to consider the term 'drawing' for a moment. We refer to the whole set of data collecting as 'The Drawing of Our Lives'; both because we have no intention of stopping this practice of recording our movements outside (potentially a lifelong project), and because the possibility of having a record of our lives in this way fascinates us as a form of diary, self-portrait or source for memory feats, performances, and object making.⁷ I will elaborate on the process of doing so in this thesis. Crucially, the ability to see where we have been is key to my central argument, which proposes that the practice of visualising the invisible is a unique source of knowledge-making. 'We' here refers to the collaborative artistic work of plan b; throughout the thesis I will use 'we' to refer to plan b and 'I' to refer to the structuring, reflection, methodologies and

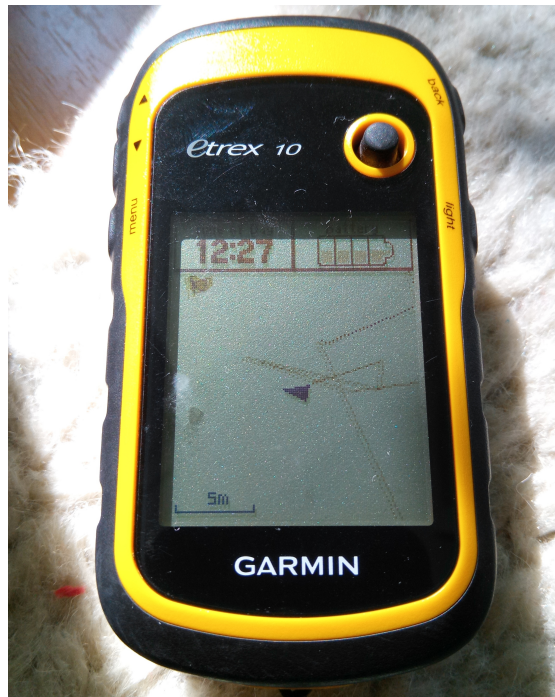


Figure 2: How the GPS we use daily shows the screen of recent traces, photo: Sophia New

arguments that I am putting forward about the work as part of this PhD.

I will now take a moment to explain some basic information about how GPS works and how we are ‘drawing’ with a GPS device. A stand-alone GPS, such as the ones we use, is a device that receives timing information and calculates its position in the device. It does not send out any data or information. The GPS device has a limited memory so the data has to be manually and fairly regularly downloaded (average for us is every 7–10 days depending on how much data we are recording). The device needs a clear view of the sky to receive signals from at least four satellites before it can calculate a position. The more satellites the device can use to calculate its position the better. During the course of our practice, more and better satellites have been launched and our devices can now access GLONASS, the Russian system, as well as the GPS (US) system. In cities, a more accurate position is made easier by wider streets, as is often the case in Berlin, but the reception is hindered by tall, flat fronted buildings (which produce errors of reflection) like New York or narrow streets like Prague which produce so-called urban canyons. On the navigation screen of the Garmin eTrex GPS that I use

(Fig. 2), I can see a line appearing as I move outside on the surface of the earth in plain view of the satellites above.⁸ At this stage, the line is an artefact rendered by the software in the eTrex device. It is actually a series of data points occupying a memory location in the hardware. The data is downloaded from the device to a computer as a GPX file (a GPS specific XML schema) that can be imported into a geographical information system (GIS). We use the open source software Quantum GIS.⁹ The line is only produced by joining these points up, and even then it has no materiality, only taking space in the world when it is transformed into a print, engraving or drawing. But even if the line is in many ways not actually present, we feel that we are involved in the act of drawing, prompted by this persuasive representation of a line. Interestingly, this is also how memory works: we may remember singular events or episodes and then we connect these events by imagining or deducing what happened in between them (this is discussed in Chapter Two as we use an animation of GPS data as a means of retrieving memories).

When asked why we don't use the GPS that is now integrated into a smartphone we point out that it is the quality of the line that still interests us, and as our GPSs are only doing this one job they are often more accurate than those of a smartphone, which is juggling many different functionalities. The metaphor that we use is that it is like choosing to work with a pencil rather than a thick marker. We are also very concerned about where and how this data is stored and prefer a device that cannot send (or leak) information (I will say more about the politics of data later). I am specifically interested within the remit of this thesis to examine the ways that as plan b we have performed our personal data collection through different material and medial processes.¹⁰ Therefore I have chosen to concentrate on three works that all use the same database of recorded movement: *Re-Drawing Everywhere we have been since 2007*, *Narrating Our Lines*, and *Knotting Time*. I will reflect on the process and performance of transferring the digital data we collected into these different media: drawings, performance for video, and knotted carpets. In all of the works we install our bodies as part of the process of making and demonstrate different spatial configurations, be that by doing live drawing side by side in a gallery setting, or through videoing ourselves trying to remember

what we were doing several years before, or documenting ourselves in profile in conversation and reflecting on the process of knotting a data rug that shows time spent inside or outside. My main argument is that these material and corporeal processes and the re-visiting and transformation of the original data recorded, expand performance beyond just data visualisation into embodied knowledge. The way in which the data is used and transformed reaches beyond mainstream data usage, which usually collates, analyses and extracts data to prove certain factual propositions. Rather the processes that we put our data through allows for modes of reflection that don't necessarily simplify the data but search for aesthetic representation of an ongoing practice of everyday movement outside. These acts of re-drawing, remembering and knotting are all ways of slowing down that allow for another kind of physical comprehension or embodiment of spatial and temporal processes, which reflect on where we have been and how we have been moving. In addition to this, the scope of having extended this practice over many years, which is still ongoing means that the work takes on an existential, mortal weight.¹¹ In order to clarify the knowledge that has been produced by the work discussed here, my central research questions are:

What kinds of knowledge and bodily awareness can be generated from data relating to everyday movement?

What role have the material and aesthetic choices had upon the acquiring of knowledge?

How have the shifts in perspective and scale played a part in the knowledge produced?

How does the use of media, and shifting of media, in representing data sets affect recall?

What modes of narration are produced when human memory is pitted against machine memory?

How does engagement with data through performance enable an understanding of time on different scales?

In reference to the three works under discussion I have structured the writing thematically in terms of the works' relation to **movement**, **memory** and **time**. These themes were prevalent whilst making and reflecting on the works in question and have repeatedly arisen in public talks and showings as well as in our publications and in publications by others about our work. Although all the works include aspects of these three themes, I have chosen to concentrate in Chapter 1 on **movement** through the *Re-Drawing of Everywhere We Have Been Since 2007*, in Chapter 2 on **memory** in relation to *Narrating Our Lines*, and in Chapter 3 on **time** through *Knotting Time*. Throughout the thesis I proceed chronologically through the three works. This also moves the data representation into increasing abstraction, from a recognisable image of recorded GPS data (in drawings resembling a map) to the data represented only in black and white wool knots.

I have chosen to examine re-drawing the pre-recorded movement in Chapter 1 because it allows me to reflect on how we generated an embodied knowledge of movement through repeatedly re-drawing digital traces. This led to new insights into issues of scale as an embodied sensation, shifting between the shrunk overview of the cityscape to the 1:1 scale of leaving the gallery. Furthermore, the choice to shift from the digital traces to the analogue of paper and pencil allows, through the hand drawn line and physical pressure repeated over time, for unforeseen events, such as the multiple exits and entrances of my home becoming a hole. Chapter 2 examines the issue of memory by asking what kind of knowledges about one's own biography emerge when pitting human memory against the machine record of position and inferred movement. It elucidates on the re-discovery of one's own life through digital records as a trigger for memories, whilst also demonstrating the fragmented nature of human memory against the archived record within the database. The piece *Narrating Our Lines* also shows how memory is enacted differently, by either time or space acting as a trigger. The kind of narration shifts then between fluid, enthralled recall to pauses and gaps of doubt. Lastly, in Chapter 3, in which I examine *Knotting Time*, a different view of the same data is examined—that of time as opposed to location. The data is viewed as a new pattern: a binary of time spent outside and inside, emerging from having a GPS record of our presence (outside) or not (either inside or lost data).

Time is invested into the process of making by hand, which creates a carpet that could become an heirloom object, that might have a future life beyond the information encoded into it, disassociated from the data it represents. It also serves as a mode of scaling time, which allows one to ‘see’ a year represented as a unique set of data that has passed. These central themes of **movement**, **memory** and **time** are also discussed in the chapters in reference to the activities and modes of materialisation that we choose from the central practice of daily recording, which in these instances were *drawing* (paper and pencil), *animating and narrating* (video and performance piece) and *knotting* (creating a carpet).¹² The practice of recording movement is a clear decisive choice to turn the device on and store the data produced. By doing so over many years this practice becomes at times both automated or unconscious (I have often turned the device on before realising it) and at other times aware, conscious or mindful of where one goes and that a record is being made (an awareness of a line being drawn—see Chapter 1). This particular form of recording is perhaps best rendered by the German word for recording, *festhalten*, which encapsulates both a sense of holding onto (keeping) as well as recording something. This daily, repeated act of holding on creates an accumulated embodied knowledge of one’s environment and movement: it creates another sense of how one is in/formed by the places one passes through and spends time in. In this way it exemplifies a kind of ‘personal geography’: it is a building up, over many years, of a relationship to an environment and its impact on me.

Our work opens itself naturally to certain other disciplines. It is not surprising that over the past decade of plan b publicly sharing—through conferences, exhibitions and performances—the works produced from this collected movement, we have entered into dialogue with architects and geographers, as well as new media theorists and performance scholars. Hence we were invited to the *Mediated City Conference*, Ravensbourne, London in 2014; the *Tracing Mobility Symposium*, Nottingham Contemporary, in 2010; and ‘sandpit events’ through the Nottingham University Horizon programme with the English and Geography departments between 2010–12. Our work is discussed by the sociologist Monika Büscher in her book *Mobile Methods* (2010) and by the media theorist Laura U. Marks in her book *Enfoldment and Infinity: An Islamic Genealogy of New Media Art* (2010).



Figure 3: Detail of *All of our Traces Berlin 2011* (2012) Sophia, photo: Daniel Belasco Rogers

Articles have been published about our work in the architecture magazine *Arch+* and in *Springerlin* art journal.¹³ We have contributed to the online journal *Living Maps* as well as to *Performance Research* journal.¹⁴ I was part of the research project *Writing Movement* (2016–2018), funded by Volkswagen Foundation, which culminated in a book, *Expanded Movement: Inscriptions of Movement between Art and Science*, to which I contributed a chapter.¹⁵ The fact that as plan b we are an artist duo means that there is a ‘dual’ nature to the work, and the doubling of data demonstrates ways of being together as artists in conversation through a practice that purposely entangles art and life. This led to us being included in the conference on *Mediality Couples* in 2017.¹⁶ In examining my practice of recording everywhere I go with a GPS, the question of what knowledge this nearly fifteen-year long daily practice has produced has at times not always been so apparent. Key scholars have been pivotal in my process of understanding the relationship of the artistic work to knowledge production. It is therefore fitting that I began this introduction with a quote from the philosopher Adriana

Cavarero, whose book *Relating Narratives* (2000) has been central to forging my argument for what this practice does. In the beginning of her book, Cavarero recounts a story from the author Karen Blixen about a man who hears a sound in the night and realises the dyke is leaking, and in the morning sees that his frantic nocturnal action has drawn the figure of a stork on the ground:

At this point Karen Blixen asks herself: ‘When the design of my life is complete, will I see, or will others see a stork?’ We might add: does the course of every life allow itself be looked upon in the end like a design that has a meaning? (Cavarero 2000, 1)

In this story it is significant that the protagonist is initially unaware of recording his movements into the mud. It is afterwards, in the light of day that the figure of the stork is revealed to him. This kind of revelation about a past event has relevance to the daily recording of movement that we undertake as plan b, as it is a mode of representing movement outside and making it visible.

Although we do not discover any easily recognisable figure like a stork in our work (although the map of certain cities when shown on a scale is recognisable), we constantly rediscover ourselves through our traces. In that way we can begin to relate and narrate the abstract lines in order to create for ourselves and others a kind of meaning. This relating of one’s life story to others and by others is what Cavarero calls the ‘narratable self’, and she proposes it is what makes us part of social and political life. Moreover, part of this narratable self is a search for a kind of ‘unity’, not necessarily a cohesive identity but rather a desire to bring together the disjointed and inconclusive events of our lives into a recognisable, relatable figure.

Fundamentally the traces we record via GPS could be likened to seeing one’s footprints or tracks in mud or snow. They are a means of seeing where we go as moving beings, but extended over many thousands of days and nights and many kilometres of territory, and including every journey yet leaving no physical mark in the landscape. At its core, having a record of everywhere we go is a practice motivated by the human question with no exact answer: What would it be like to view my life from a totally different perspective? A perspective that would

compress all the events onto one plane, present them in such a way that some other meaning (or design, or Cavarero's 'stork') is revealed. The practice of recording one's position on the world's rocky sphere every day for years, without an intention to stop, is an attempt to approach this fundamental question of having an encompassing view of one's life. In this way, this ongoing practice is existential, a desire to see the drawing of one's life—like the retrospective view that Cavarero proposes, only with the ongoing intention to purposely record the tracks for the foreseeable future. Our practice produces both an ability to see one's life through movements over time and space, and performances and art objects that reflect on this.

Besides Cavarero, I will reference further scholars whose work elucidates issues that have greatly informed my understanding of what my practice of recording and transforming of data produces in terms of knowledge. Often coming from sociology, geography, psychology, philosophy or anthropology like Cavarero, Michel de Certeau (1984) or Tim Ingold (2007, 2011, 2014), the interdisciplinarity of these references mirrors the variety of contexts in which plan b's work has been discussed by us and others. These contexts range from mediated spaces, surveillance, digital transformations, walking practices, time and technology to tracing mobility. I will return repeatedly to the work of Tim Ingold throughout this thesis. It is the breadth and interdisciplinary nature of his work that has been key in relating my work to his insights around human (and non-human) movement and line making; walking practices and storytelling in relation to place making; and the role of crafts, particularly the act making things with one's hands as knowledge-production. Having a background as a performance maker I will also refer to key performance scholars who are specifically interested in the relationship of performance to movement, memory and time (and some of whom have done so in reference to plan b's work) such as Fiona Wilkie (2014), Nina Tecklenburg (2014), Deirdre (Dee) Heddon and Cathy Turner (2010), Tim Etchells (2015) and Adrian Heathfield (with Tehching Hsieh) (2008). In Chapter 1, I look at Fiona Wilkie's writing on the implications that the 'mobility turn' has for performance and movement and Dee Heddon and Cathy Turner's reflections on walking practices and performance. In Chapter 2, Nina Tecklenburg's work on *Performing*

Stories sheds light on new modes of narration in experimental performance, which includes some of the works of plan b. Tim Etchells and Adrian Heathfield have for many years collectively and separately reflected on the relationship between performance and time, and their reflections inform the last chapter on *Knotting Time*.

In terms of relating our work to the field of art and performance I have chosen artists whose work is particularly interested in my central themes of movement, memory and time. In terms of **movement** I mostly refer to artists engaged with urban practice and the use of GPS technology, such as Christian Nold, Aaron Koblin, Esther Polak, Nikki Pugh, Francis Alÿs, Jen Southern and Jen Hamilton, although I do also refer to Land Art, the Situationist International and the walking practices of Gail Burton, Serena Korda and Clare Qualmann. In terms of **memory** and the act of recall I refer to Monica Ross's performance *Acts of Memory* and new media artist Julius von Bismarck's *Perpetual Storytelling Apparatus*. In terms of **time** I have selected artists with durational task-based practices such as Tehching Hsieh's year-long performances and On Kawara's date paintings.

Finally, there have been other insights that have occurred whilst making these works that cannot all be covered in detail within the remit of this thesis: they include the politics around data, who owns data and gets to use it, as well as the ubiquitous nature of GPS.¹⁷ The fact that, like many technological advances, GPS was developed by the American military is a reminder that having access to such mapping devices is privileged (the military still has access to devices with much better accuracy); and yet these devices allow for a self-mapping that is independent of corporate gain and power.¹⁸ Unlike the 'Quantified Self' movement we are not interested in optimising ourselves through our recorded movement, but rather in having a record of what we did when.¹⁹ We are interested in creating a self-portrait through a record of where we went, at what moment in time. The repetition of engaging with the ordinary through recording everyday movements, and the length of time we have done this for, makes us extra-ordinary. In that way our work, which is committed to the act of taking charge of and care over the data we choose to produce, is more aligned to the act of *sousveillance*. *Sousveillance* is

a term coined by Steve Mann as an inversion from ‘below’ of the ever-increasing surveillance through GPS, not only on streets and in the public sphere, but also through online and mobile phone activities.²⁰ By selecting the technological methods of ‘care’ that we employ (open-source platforms and locally stored data not shared with other companies) and developing questions and queries around our own data, we perform our own ‘personal data mining’ outside of the capitalist concerns of corporations’ digital tracking. This detailed and intimate relation to personal data produces another kind of awareness of what data is, who has it and what can be done with it beyond giving it to third parties in return for ‘free’ services. The material manifestations derived from our data are also a refusal to be anonymised within a mass of corporate data, and in this way our work tries to steer clear of some of the problems posed by ‘big data’s’ extractivist greed for information that can be commodified and sold on to third parties. Rather, our work is a search for complexities and anomalies within a relatively simple set of data. It is embedded in lived experiences that can be shared with audiences. Of course, the lived experience we speak about and produce work from is a position of privilege as white, able-bodied, cisgendered heterosexuals based in Europe. Although thus created within a specific context and from a specific position, the work serves as a means of showing, sharing and opening up personal data sets in order to engage in conversation and imagination, encouraging the viewer to reflect on what they might have produced that could be approached as lines, stories and carpets. Our work is often initially received in terms of the empathetic, theatrical ‘what if’. It encourages the viewer to consider: What if all *my* movement on earth was recorded and shown as a journey? What if I could see where I was in any given year, and what could I say about it? What if I could see how I divided my time between inside and outside, and what would that tell me about my life? These are existential questions that are arrived at through the performance work acting as a prompt, alongside the engagement with our practice provided by ourselves and other commentators. Rather than provide answers to these questions, our practice is like the mud in which Blixen/Cavarero’s stork appears. It offers the ability to visualise or manifest the usually invisible, without which figures, thoughts and ideas would remain inaccessible.

Notes

1. The American military Global Positioning System (GPS) has been available to civilians since the 1990s. Bill Clinton lifted further restrictions in 2000.
https://en.wikipedia.org/wiki/Global_Positioning_System/ [accessed 25.02.2021]
2. Mobile Bristol (2002-2005) was a research group comprising computer programmers from Hewlett Packard and academics from Bristol University who worked together on ‘pervasive media’—mostly the integration of GPS as a means to trigger sound files on a simple mobile computer based on location.
3. Berlin was not a new place for me as I had lived there in 1996 and visited many times since 1989.
4. For instance, in the early months after birth I shifted from my previous travel mode of mountain-biking to mostly walking, and my pace later slowed to accommodate the small steps of a curious child.
5. In terms of mapping at street level I am reminded of the extraordinary work that Phyllis Pearsall undertook in order to create the *A to Z* map of London—walking the ‘3,000 miles to check the names of the 23,000 streets of London’. https://en.wikipedia.org/wiki/Phyllis_Pearsall [accessed 24.02.2021]
6. Daniel also spends more time looking at the tracks as part of the maintenance work he does to ‘clean’ the tracks before they are uploaded into the database. I am less involved in the technical care and coding but simply import my tracks into the database using software he developed.
7. <https://planbperformance.net/works/lifedrawing/>
8. It is worth mentioning that the commercially produced GPSs for civilians are marketed and designed for rural walking and mountaineering and not intended for urban daily use. Hence both

Daniel and I have been getting through several devices over the last ten years as the on-off switches break from daily use.

9. On his blog *Binary Stumble*, Daniel publishes information on how to technically realise recording movement with a GPS and the maintenance of that data
<https://danblog.planbperformance.net/?p=1127>
10. Our output as plan b far exceeds the work that is discussed within the remit of this thesis. There are a number of other works that are also a result of the personal data collection such as the acrylic, *All our Traces in Berlin 2011* (2012) <https://planbperformance.net/works/acrylic/>; and *Everywhere We've Been 2007-2011* (2012).
<https://planbperformance.net/works/everywhere-weve-been/> These are stand-alone art objects; for the sake of this thesis I have chosen the works that specifically incorporate performance processes.
11. In our contribution to *Living Maps Review 4* (New and Belasco Rogers 2018) we specifically reflect on this aspect of mortality. This text is included in the appendix accompanying this thesis.
12. I am using the term 'practice' in terms of the action of recording becoming both a habit and being performed repeatedly as a daily action.
13. See Belasco Rogers 2007; and Schneider 2012.
14. New and Belasco Rogers 2010; and New and Belasco Rogers 2018.
15. A copy of which is included with this thesis.
16. *Mediality Couples* was a funded research group at the Freie Universität Berlin
<http://www.kunst-paare.de/en/events/> [accessed 21.09.2020]
17. Not only is GPS used in logistics for just-in-time delivery of goods, but it is also now crucial in the timing signals needed for the Internet.
<https://www.bbc.com/news/science-environment-12668230> [accessed 26.02.2021]. In 2014 we addressed this in a residency at Ausland in Berlin through a performance called the *GPS*show, in which we contextualised the 'what if' scenario of GPS no longer being available and the potential global consequences.
18. An alternative to the monopoly of Google is Open Street Maps, which is a comprehensive open source mapping tool updated and augmented by its users. <https://openstreetmap.org/> [accessed

25.02.2021]

19. The ‘quantified self’ movement’s byline is ‘self knowledge through numbers’
<https://quantifiedself.com/> [accessed 04.03.2020]
20. Steve Mann works at MIT and has been video recording with wearable devices since the 1990s. Sousveillance inverts the logic of the all-seeing eye from above of surveillance and advocates other positions from ‘below’. <https://en.wikipedia.org/wiki/Sousveillance> [accessed 25.02.2021]

Chapter 1

Performing a Personal Geography through the Re-drawing of Everyday Movement

People are not paths, they just cannot avoid drawing them.

(T. Hägerstrand, quoted in Cresswell and Merriman 2012, 139)

In this chapter I will explore how the process and performance of ‘re-drawing’ our previously recorded movements leads to new insights and understandings of how we perceive movement and the environment through which we move. Especially because these recorded movements are both a daily act and undertaken over a number of years, I argue that a durational re-visiting of this data through a material process of re-tracing those lines over a number of weeks leads to an embodied knowledge about shape, form and scale. In order to explore this, I will also consider how this work relates to, but is ultimately not defined by, concepts of the line, drawing and the map. Therefore in this chapter I will reference the work of scholars who seek to understand how daily movement and mobility affect us and our environments, including geographers Tim Cresswell and Peter Merriman, sociologist Michel de Certeau, and scholars interested in walking practices such as anthropologist Tim Ingold. More specific to the field of performance making and artistic practice is the research Dee Heddon and Cathy Turner have undertaken



Figure 1.1: *The Re-drawing of Everywhere We've Been in Berlin Since 2007*, photo: Manuel Reinartz

into walking practices, to which I will also refer.

To begin with, I would like to set the scene of what is happening in the photograph above, which shows the piece *The Re-drawing of Everywhere We've Been in Berlin Since 2007*. The commissioned work took place at the Haus der Kulturen der Welt in Berlin, 24 November–12 December 2011, as part of the exhibition *Tracing Mobility* curated by Miles Chalcraft and Anette Schäfer. Although we previously produced and exhibited from the GPS data set many drawings (Fig. 1), mostly as inkjet prints or using a vintage architect's pen plotter¹, it is the manual act of re-drawing in this piece that made our 'personal geography' not only visible but also tangible. In the *Re-Drawing of Everywhere we have been since 2007*, Daniel and I were present in the gallery during opening hours, standing side by side and retracing the recorded GPS data of Berlin. We drew with pencils onto paper sheets of 1.5×1 meter, and the lines we followed were projected onto the paper. We drew each line segment by segment in chronological order starting in 2007. The specially adapted animation software was controlled by a self-made device (a foot pedal

that presses the space bar of a laptop), which moved the projected animation to the next track once one was completed. We refer to this as a ‘re-drawing’ to imply that the initial recording of the GPS data can be considered a drawing practice in itself. What began to build up resembled a map in its reproduction of the street patterns of Berlin but it wasn’t actually a map at all. For instance, it was lacking in any legend or clearly defined landmarks. As I explain further below, it actually represented the affordances that the city of Berlin offered an individual over a certain amount of time in the performance of their daily life, rather than being an attempt to render a territory in order to navigate through it. By referring to the practice of recording daily movement as ‘personal geography’ I wish to call attention to the act of becoming conscious of one’s environment by moving through it, and more specifically to the act of transforming that movement again through the process of ‘re-drawing’ it. Through the conscious and deliberate act of re-drawing by hand, we gain an embodied knowledge of the previously digitally recorded movement. The shift in perspective from the initial street-level recording to the bird’s-eye drawing viewpoint and the transformation of digital data to an analogue materialisation created a new representation of how I was moving through the spaces of Berlin over that time period.²

However, it is in the process of making these seemingly immaterial lines into another material form that the knowledge is produced in the performers and becomes manifested into an artwork.³ Not only did we come to understand the perspectival shift from street-level to above-street-level, but also the time spent making an analogue object allowed for the hand and brain to embody lines, shapes, angles and repetitions. It is through the process of re-processing, re-assessing, and in the case of *The Re-drawing of Everywhere We’ve Been in Berlin Since 2007* re-tracing the journeys taken, that the re-drawing created another space of encounter. The re-performing of previous actions into a material document is both the record of this knowledge production and a representation of the knowledge produced. I will go into this experience in more detail later in this chapter. By re-visiting the journeys taken, scaling them to the paper or wall, we created a representation of these journeys in a haptic, relatable and readable form. For a moment I would like to return to how technology can render the invisible

visible, challenging the issues that some theoreticians have with the ephemeral nature of human experience. By showing the traces of movement recorded by the GPS one can see precisely that which Ingold laments:

People, as they walk the streets leave no trace of their movements, no record of their having passed by. It is as if they had never been. [...] It appears that people, in their daily lives, merely skim the surface of a world that has been previously mapped out and constructed for them to occupy, rather than contributing through their movements to its ongoing formation. (Ingold 2011, 44)

By collecting daily movements over a number of years we have a record of not only where we have been but also how (public) spaces themselves have changed. Cities like Berlin are in a constant state of flux. Areas are filled in and opened up all the time, and our practice documents this.⁴ Ingold's point that it is rare that everyday pedestrian movement gets to dictate how spaces are planned still holds, however.⁵

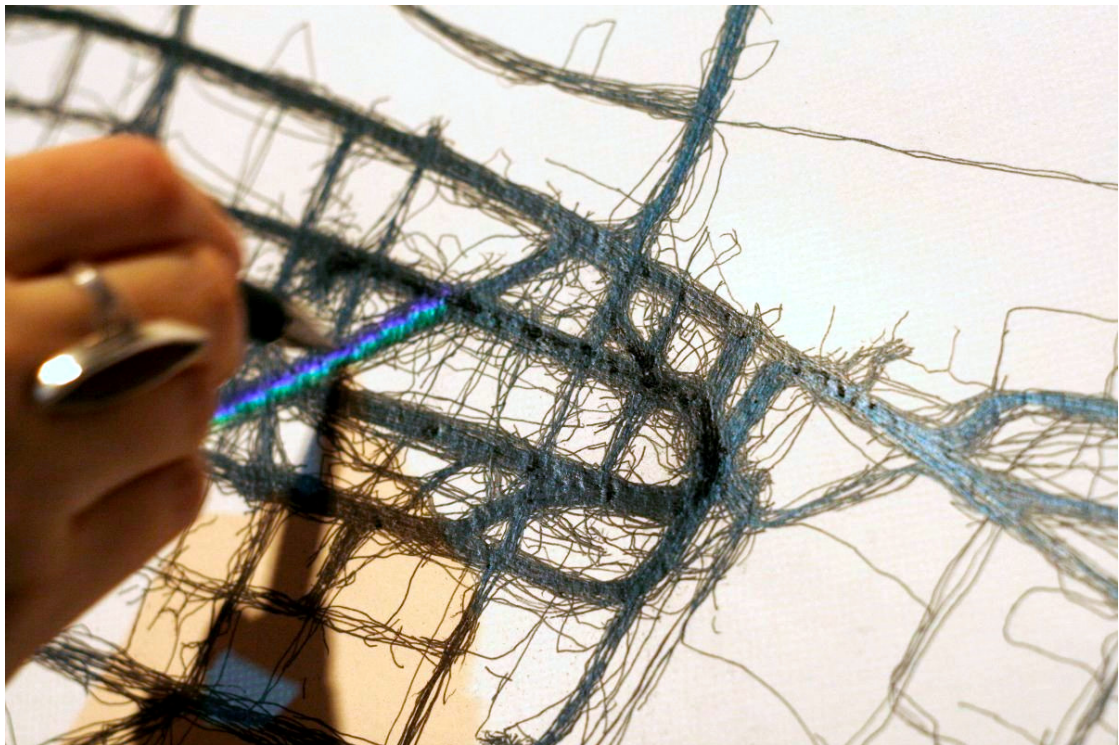


Figure 1.2: Detail of *The Re-drawing of Everywhere We've Been in Berlin Since 2007*, showing the process of tracing photo: Daniel Belasco Rogers

What can be ascertained from such a data collection about movement then? In her introduction to *Performance, Transport and Mobility*, Fiona Wilkie includes two images of *All Our Journeys in Berlin 2007–2013*. One could consider those two images like the ones that were drawn for *Re-Drawing Everywhere we have been since 2007*: as simple line drawings that open up a complex game of comparisons. One might wonder why certain areas are frequently visited by one of us and not the other? Or why some lines look like they would have been on the same journey, just the lines are broken? Clearly there are further stories to be told. As Wilkie remarks:

Here, Rogers and New turn the mobility that underpins their creative work into the work itself, forging connections between the journeys of their private and professional lives and presenting potentially dry mobility data as a rich set of mobile narratives. (Wilkie 2014, 10)

The Re-drawing of Everywhere We've Been in Berlin Since 2007 is also a form of performing data. It was a live durational act before a public during the opening hours of an exhibition. Our presence in the gallery allowed us to have conversations with the public about what the work was and how it was created. It made the process palpable in that it took three and half weeks and roughly 100 hours of drawing to complete the five years of recorded movement. The insistence to be present in the gallery, publicly making the re-drawing, was also an attempt to clarify that the drawing was not the result of projecting one final image of journeys onto paper but rather was a durational process that directly related to the specific chronology of the original recordings. In that sense it was a re-performing of the original journeys. Wilkie points out what performance can do in relation to mobility:

[...] performance not only responds to but can also produce mobilities, reshaping existing models and engendering new, alternative possibilities for movement. (Wilkie 2014, 2)

I understand her also to be relating here to the imaginative field that can be opened up by and through mobility. When looking at the large-scale drawings and prints of the GPS traces over many years that plan b have produced, one thinks

about not just where one *has* been but also where one has *not* been. In this way the city becomes a place of imagining what could be there. However, it has never been the intention of this GPS recording practice to fill in ‘blank spaces’ of where we have not been in the city, or purposefully to make figures or images as other artists have done, such as in the work of Jeremy Wood or Lizzie Philps⁶. Our intention was always to record and reflect upon what we do in our daily lives rather than to use a GPS to draw recognisable figures with. The impulse to ‘re-draw’ came partly from a desire to find out what it is like to re-make those movements together on another scale,⁷ as the projection of the traces allows us to make a larger drawing. The other intention was to make the material process present: as performers to put our bodies into the physical action of creating the drawing rather than simply let an inkjet printer or plotter make the marks. This was also a choice to slow the action of drawing down to that which could, as faithfully as possible, be copied or re-traced from the projected line. The slowing down process aided the comprehension of the data we had produced and a re-inscription of those pathways into our bodies. During this durational process of redrawing five years’ worth of data I began to teach my hand, brain and body through repetition the shapes of those streets I frequently moved through in my neighbourhood. In an article entitled ‘Drawing with Tim Ingold’ for *Sensate—A Journal for Experiments in Critical Media Practice*, the editor Julia Yezbick reflects on how

Many artists and scholars have theorized the ways in which we think with our hands, our eyes, our bodies. As one of the oldest forms of human expression, drawing or sketching has been both a mode of documentation, communication, and duplication as well as a method of discovery, interpretation, imagination, and desire. (Yezbick 2014)

Although in many ways our ‘drawing’ is also an act of copying projected lines, the pressure on paper differed between our two drawings. Dan tended to press harder with the pencil than I did, and the two drawings had different qualities of mark making. The repetition of the most frequently accessed streets eventually tore through the paper. ‘Home’, the place where most journeys began and ended, became a hole through wearing the paper away over the weeks of ‘re-drawing’. Over time and through re-drawing the lines, we began to develop a sense that they

created specific shapes and forms through repetition.

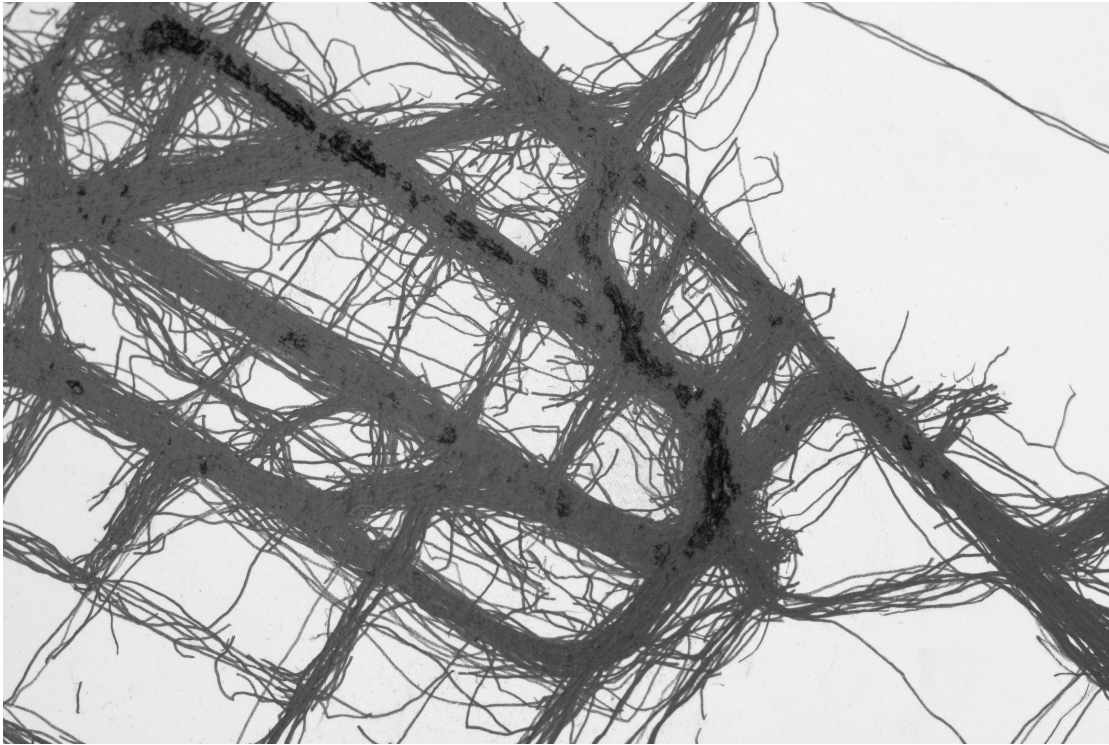


Figure 1.3: Close up of Sophia's *The Re-drawing of Everywhere We've Been in Berlin Since 2007*, showing damage done to the paper by reiterated drawing photo: Daniel Belasco Rogers

One of the stranger sensations, and one that stands out for me as a form of embodied knowledge produced, was that after several hours of re-drawing, I developed a heightened sense of the scale, direction, shape and line of my journey home. After years of turning my GPS on every time I left a building, it was only through the re-drawing practice that I gained a palpable sense that my body was leaving a trace, like a pencil. I began to know how this journey would look, shrunk to the scale of a 150×100cm piece of paper. And I began to know how making this mark would feel. This knowledge stemmed from a process of visual and physical training of my body through repetition and re-tracing. So it is that I came to know well the length of Wrangelstrasse (where I took our daughter Ruby to Kindergarten) both as a physical journey and as a line. I would not have known these things otherwise, my body learnt the angles and lengths of the lines I spent those weeks re-drawing. I could have studied a map to find out the angle and

length of daily journeys. But this was the acquisition of embodied knowledge, produced through hand, eye, pencil, paper and through reiteration over the course of several weeks. Time and repetition are important factors here, both in the actual accumulation of recorded journeys in ‘real’ or clock time and in the repeating of the journeys as lines in the form of a drawing. Both of these the body comes to know through putting itself through walking streets and through hand gestures. This sensation bled out of the gallery space and had an impact on our journeys to and especially from the gallery. It was like an augmented consciousness of virtual mark-making, knowing we were recording a trace as we cycled home as if our trail would leave a physical trace.

My experience of recording movement outside in the city was also about the transition from seeing the world from a street level to the overview map position—albeit a view that represents a Eurocentric position, orientated north with a Mercator projection.⁸ It is this shift of perspective that Michel de Certeau refers to in *The Practice of Everyday Life*, whilst looking down at pedestrians from the top of the World Trade Center in New York:

The ordinary practitioners of the city live ‘down below’, below the thresholds at which visibility begins. They walk—an elementary form of this experience of the city; they are walkers, Wandersmänner, whose bodies follow the thicks and thins of an urban text they write without being able to read it. These practitioners make use of spaces that cannot be seen; their knowledge of them is as blind as that of lovers in each other’s arms. The paths that correspond in this intertwining, unrecognized poems in which each body is an element signed by many others, elude legibility. It is as though the practices organizing a bustling city were characterized by their blindness. The networks of these moving, intersecting writings compose a manifold story that has neither author nor spectator, shaped out of fragments of trajectories and alterations of spaces: in relation to representations, it remains daily and indefinitely other. (Michel de Certeau 1984, 94)

Although we are no different from these ‘ordinary practitioners’ and cannot

immediately see the marks we have left by walking down a street, I argue that through maintaining and materialising those traces into art works, we do have the possibility to retrospectively ‘read’ our ‘urban text’.⁹ Although this potential reading of a line is a picking out of an individual trace from the other pedestrians in the street, it is in some ways both exemplary, in standing in for those other urban texts being written, and ordinary, in that it is of the everyday. Of course, the radical shift in position from the street to the bird’s eye view from above that de Certeau is reflecting upon is an extreme bodily shift that takes him from being amongst those on the street to removing himself to the position of the voyeur. So, in some ways, by practising reading our traces we also practice a similar shift in perspective from that of the pedestrian to that of a being a voyeur of our own lives: taking distance in order to become literate in our ‘urban text’ as ‘sousveyors’, perhaps.¹⁰ Or to return to Cavarero’s argument for a moment: ‘In other words, the one who walks on the ground cannot see the figure that his/her footsteps leave behind, and so he/she needs another perspective.’ (Cavarero 2000, 3). She points out that this ability to see from another perspective is a position of privilege that not everyone is able to have. I am aware that it is also a privilege to have a GPS device and to have access to all the affiliated technological infrastructure. As geographers who are interested in how movement affects one’s sense of place, Cresswell and Merriman, also referring to de Certeau, agree that ‘mobility is practised, and practice is often conflated with mobility’, and go on to claim that:

Mobile, embodied practices are central to how we experience the world, from practices of writing and sensing, to walking and driving. Our mobilities create spaces and stories—spatial stories. (Cresswell and Merriman 2012, 5)

Apart from the narrating I will talk about in the next chapter, what are the spatial stories that our re-drawing produces? The spatial story we depict is a personal portrait of two people whose lives are clearly entangled yet recognisably different: my teaching job makes a thick W in the north-west corner of the map, whereas Dan’s weekend trips to Qi-gong create a regular route in the south west (Fig. 1.4). This places us in dialogue with but also different from many artists whose walking practice involves leaving a physical trace in the environment, such

as the Land Art works of Richard Long or the urban interventions of Francis Alÿs, whose work *The Green Line* (2004) documents a walk in Jerusalem with a pierced paint pot to mark the former border of Israel's territory before its occupation of Palestinian-inhabited areas beyond the line.¹¹ These art works are then shared through the mediation of photography or video. The movements we record with a GPS, on the other hand, have no decipherable dimension or physical impact on the landscape we pass through.¹² Yet what we share with Long's or Alÿs' work is a fascination with making works beyond the scale of the artist's studio by venturing outside. The UK touring exhibition *WALK ON: From Richard Long to Janet Cardiff – 40 years of Art Walking*,¹³ therefore placed plan b's work alongside that of other contemporary artists who use devices, such as Tim Knowles with his *Windwalks*,¹⁴ whilst acknowledging earlier seminal works that explored the physical act of walking as a mode of mark-making, such as Richard Long's work. Lines, traces and tracks exist in 21st century life as both immaterial and material processes, through human behaviour online and offline, in digital and analogue forms. In his book *Lines: A Brief History*, Tim Ingold gives a fascinating and wide-ranging account of the various manifestations of lines: from tracks left by animals, to musical notation, to handwriting. He makes the point that,

it only takes a moment's reflection to realise that lines are everywhere. As walking, talking and gesticulating creatures, human beings generate lines wherever they go. (Ingold 2007, 1)

Although Ingold is explicitly uninterested in virtual and digital processes, my previous point about the choice of a GPS device (rather than the smartphone) is ironically in line with the kind of craft choices of tools that Ingold is interested in. To see our movements as lines that leave no physical trace in the landscape but are created from points recorded roughly every six seconds with the GPS is an extreme reduction of the experience of being in the world. It says nothing about the textures, feelings or sounds of those places through which we were moving. This, as I will discuss in Chapter 2, became the starting point for the piece *Narrating Our Lines*, which exactly explores this absence of information and tries to fill in what is missing by using the animated lines as a basis to give precisely more sense of what else is going on at that time and place.



Figure 1.4: *All our Journeys in Berlin 2007–2017*, Sophia Red, Daniel Blue. Copyright plan b

Christian Nold is an interesting example of an artist whose work deals with what maps leave out. He creates maps that augment an environment with participants' emotional responses to it.¹⁵ For instance, his project *Greenwich Emotion Map* (2005) was a participatory project that used GPS and galvanic skin response to certain local areas,

which is an indicator of emotional arousal in conjunction with their geographical location. The resulting maps encourage personal reflection on the complex relationship between us, our environment and our fellow citizens. By sharing this information we can construct maps that visualise where we as a community feel stressed and excited. (Christian Nold n.d.)

This overlay of human responses creates peaks and troughs that show the

complexity of these responses rather than the pared down aesthetics that plan b uses for our maps. The film maker Dan Frodsham wrote about plan b and Christian Nold in his PhD study on artists who engage with modes of mapping and argues that,

the experimental maps produced by artists working with locative media both bear witness to and participate in an on-going transformation in the way that space is conceived and encountered. This fundamentally reshapes how the world and our place in it is seen and understood, and accordingly brings into question assumptions about the nature of ‘knowledge’, ‘representation’, and ‘power’ that have stood for centuries. (Frodsham 2015, 11)

I find Frodsham’s distinctions between a past cartography as analogue or static map and a present cartography through mobile devices, such as GPS, useful:

They are most often processes rather than finished products and take place within an evolving context that draws on diverse practices and performances; not just those of artists and participants, but in conjunction with these, the performances of the technologies they employ. (Frodsham 2015, 20)

Although some of the work that plan b has made with a GPS looks like maps it is the procedural, ongoing nature of the work that makes us resistant to refer to it as just a map. However, plan b has also explored the less recognisable and map-like representations of the GPS data to reveal its abstract qualities. In works such as the diptych *Five Years of Coming Home* (Fig. 1.5), the scale of representation is such that only the mathematical grid of various different GPS devices’ recording position to varying levels of accuracy is evident. It is only the title that situates this seemingly pure abstraction as a part of someone’s daily life.

The fact that the movement around the city when recorded and visualised resembles a map is not an insignificant point. Maps are highly contested instruments of power, like GPS, often originally developed by the military (like The Ordnance Survey in the UK) and extremely expensive to produce, not least because they need to be continually updated. In her 2004 article *Questing the*

frame—thoughts about maps, spatial logic in the global present, Coco Fusco points out how the media, banned from showing images of the Iraq war, instead used maps to stand in as the de-humanising military tool (Fusco 2004). *The Re-drawing of Everywhere We've Been in Berlin Since 2007* is in many ways useless as a map, even though a group of visitors to the gallery and to Berlin asked us if they could use it as such. Rather it acts as a snapshot in time of where I have been, and in that way it speaks more about passage and the affordance given of the city. As I have mentioned above, passage and affordance are where I am able to go at a given time. Embedded in *The Re-drawing of Everywhere We've Been in Berlin Since 2007* are traces that are no longer possible to make as they were on waste ground that is now built on; and at the same time new areas have opened up. In temporal terms also, the re-drawing works in the opposite way to a map. It is an inscription produced by physical space and a body (like a rubbing), rather than a projection of information about a territory in graphical form. It clearly speaks of past action and promises nothing about the future, whereas the city plan from a tourist office implies future action and access.

To visualise our movements (and time spent outside) on scales other than the 1:1 that it took to create the journey allows for an 'overview' and the possibility to consider the summation of one's movements as a life lived by the ground one covers, in and through movement. In that way the re-drawing becomes not a spatial representation but a temporal portrait produced over many years. It also mirrors the neural activity of connecting synapses that form as one puts one's body through streets and landscapes.¹⁶ The act of performing *The Re-drawing of Everywhere We've Been in Berlin Since 2007* is a questioning of both the habitual and the everyday, and in the everyday there is still the presence of the unusual, the one-off and the unexpected. There are the hundreds of trips to the same shop, but there is also the singular and thereby memorable trip to get something specific from the other side of town. For Ingold, these multiple paths are enmeshed with the environment and the paths of others:

As people, in the course of their everyday lives, make their way by foot around a familiar terrain, so its paths, textures and contours, variable through the seasons, are incorporated into their own embedded

capacities of movement, awareness and response—or into what Gaston Bachelard (1964: 11) calls their ‘muscular consciousness’. But conversely, these pedestrian movements thread a tangled mesh of personalised trails through the landscape itself. Through walking, in short, landscapes are woven into life, and lives are woven into the landscape. (Ingold 2011, 47)

In that way our ‘embedded muscular consciousness’ that occurs through moving in the city is more aligned with the urban experience that de Certeau reflects on in his aforementioned chapter on ‘Walking in the City’ in *The Practice of Everyday Life*. Neither scholars are concerned with a practice of recording movement as such but with what they think happens to us as humans when we move in and through places, spaces and cities on a neurological, psychological and physiological level. Their reflections, I propose, are detailed accounts of embodied experiences that extend to philosophical analysis. Indeed both Ingold and de Certeau are characterised as being at the threshold of fields between sociology, anthropology and philosophy and clearly interested in everyday practices and especially walking.

When creating *The Re-drawing of Everywhere We’ve Been in Berlin Since 2007*, as we shrank the city to the scale of the paper and re-drew the traces we created, we made also a bodily ‘imprint’ of the regular routes and pathways we had taken. I am using the term ‘imprint’ both to mean physically leaving a mark on something (like on the paper); and (in the sense that it is often used in body practices) as an expression for the bodily sensation left within the body from certain movements. It is unsurprising then that it is mostly the repeated daily movements and commutes that seem to leave the greatest imprint, as is also the case with repetitious movement in specific movement practices (such as the ‘turnout’ that ballet dancers practice in the rotation of the hips and feet).¹⁷ Rather than necessarily always viewing daily movement as an act of making a pattern, I can of course relate to the presumption that daily life is restricted by routine and repetition. This sense of feeling bound by regular commutes was articulated by one of the founding members of the Situationist International, Guy Debord, in response to Paul-Henry Chombart de Lauwe’s drawing of a student’s journeys to piano lessons, library and university over the course of one year (Wnek 2018). For Debord, the regularity of

the commutes represented in Chombart de Lauwe's drawing was stifling and indicative of all that he railed against. In his 1958 essay in the second edition of the *Internationale Situationniste* he advocated drifting (the *dérive*) as a means to combat the dogmatism dictated by the city and capitalism and to look for other ways to interact than the pre-given normative structures that the city proposed. Adopting a different position to the city is akin to the distancing, observational role that the urban flâneur takes on, as described by philosopher Walter Benjamin in his *The Arcades Project*. Artists Gail Burton, Serena Korda and Clare Qualmann, who collaborated between 2005–2010 under the name walkwalkwalk, worked with this restriction of daily routes rather than against it:

Staging a sort of anti-dérive, walkwalkwalk plotted their daily routes to define their own triangle and 'rather than diverging', decided to 'explore' the relationships within it (Heddon and Turner 2010, 18).

Through the act of *The Re-drawing of Everywhere We've Been in Berlin Since 2007*, I am also confronted with the bounded conditions of my life with a small child. As a mother I found myself feeling more tethered to a neighbourhood than I had been before. It is indicative of the precarious, nomadic life of a 21st century art freelancer that in the ten years before Ruby's birth, there was rarely a month in which I had not travelled to other cities and countries. And before Ruby had to go to school, we were able to continue to travel extensively. My decision to accept a part-time job was influenced by a sense of being grounded by Ruby's school attendance (a legal requirement in Germany) and contributed to the inability to travel so much for artistic projects. Miwon Kwon, in her book on site-specific art and locational identity, *One Place after Another*, critiques this culture of incessant movement for work:

The more we travel for work, the more we are called upon to provide institutions in other parts of the country and the world with our presence and services, the more we give in to the logic of nomadism, one could say, the more we are made to feel wanted, needed, validated and relevant. (Kwon 2004, 156)

Feeling invisible as I am unable to perform presence elsewhere as a 'grounded'

parent, I take some comfort from the suggestion by writer Bertie Wnek that something is going on in the everyday:

Because the way we experience the same street over and over does indeed seem to be a kind of layering. A reiterated experience accumulates in our minds until our understanding of these spaces, these journeys, coagulates into a thick mass, a heavy indistinguishable line. A non-graphic moment. Like capital, the lines on our maps are reified by repetition, routine, the five-day week, the eight-hour working-day, commercial holidays, productivity, degrees of ease. (Wnek 2018)

Although we do make a literal ‘graphic moment’ in our pencil drawings, my life is not completely regulated as I do not have a full-time, nine-to-five job. Even so, I can relate to the ‘thick mass and indistinguishable line’ of daily movements we have recorded over a long period of time. There is a kind of numbness to experience, an inability to give detail or definition to routines and repeated journeys, or, as the writer Georges Perec put it, ‘This is no longer even conditioning, it’s anaesthesia.’ (Perec 2008, 210)

An act and artefact like *The Re-drawing of Everywhere We’ve Been in Berlin Since 2007* is also a way of marking that one ‘was here’. The shift from immaterial data to material form makes a document of one’s existence: the act of making the journey into a line on paper becomes a means of reiterating and reaffirming one’s movements on earth as a sign of a life lived. As a mode of representing and visualising personal data the re-drawing acts both as a ‘snapshot of time’, like an open shutter of a camera recording an urban scene of blurry lights of traffic, and as a spatial reminder of where one can go in the city at that time. It differs from the transport map or tourist map in leaving terrain clearly unmarked as we simply have not been there yet, while other areas are ‘thick’ with use which would never appear in conventional mapping. This thickness is also due to GPS accuracy, which at best is three meters. Over time and through repeated journeys this leads to a ‘bleed’ beyond the strict delineation of the street. The artist Nikki Pugh was precisely interested in such GPS inaccuracies in a collection of inter-related works looking at the ‘errors and glitches’ manifested when taking a walk with two GPS

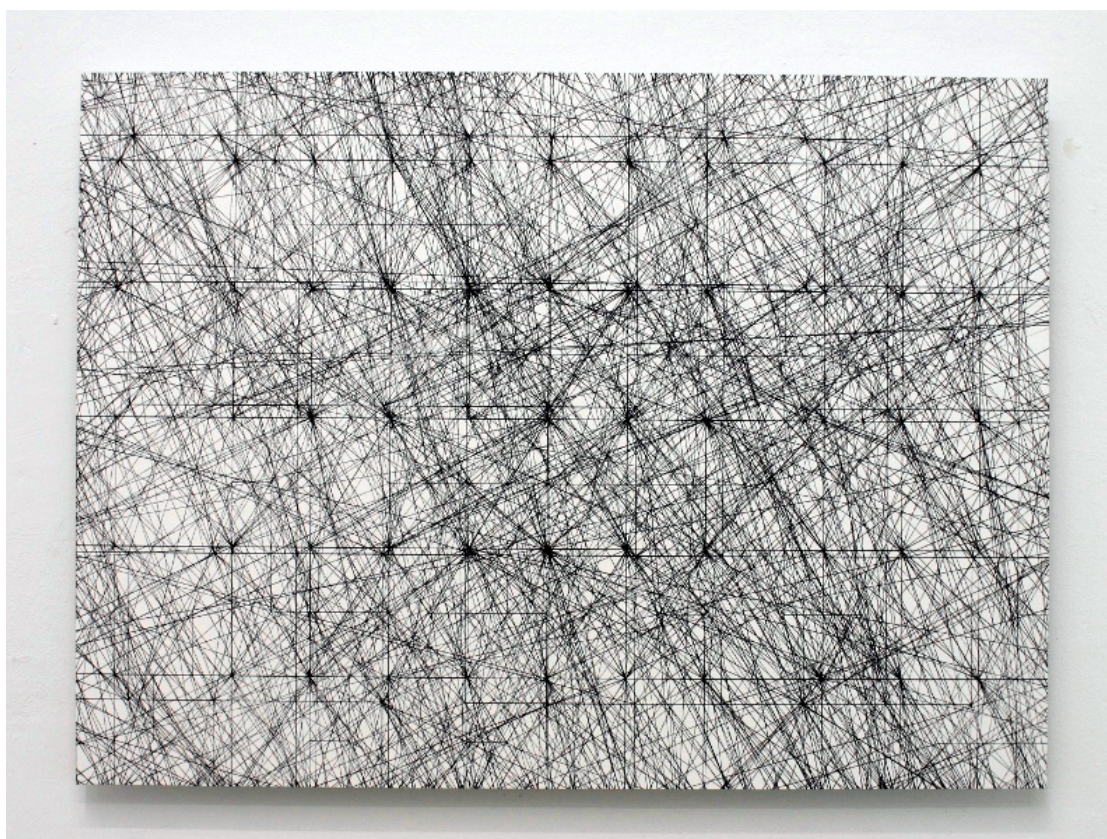


Figure 1.5: *Five Years of Coming Home 2007-2011* pen plotter unique print, photo: Daniel Belasco Rogers

devices. For Pugh, GPS is also a perceptive tool for revealing other aspects about the cityscape through varying reception of the satellites at a given point in time.¹⁸

The excessive mark-making and intentional gap-leaving in the re-drawing we do as plan b creates a representation that speaks of a subjectified experience of place at a particular time. Tom Corby, in an essay on ‘Landscapes of Feeling, Arenas of Action: Information Visualization as Art Practice’, argues that artists working with visualisation from data is different because:

They work with an understanding of the image as a producer of meanings that are often ambiguous or multi-leveled and that produce embodied, affective, sensory experiences that elude rational description and measurement. (Tom Corby 2008, 467)

Nina Tecklenburg’s proposition—in her book *Performing Stories*—that what we

are doing as plan b could be considered a kind of ‘re-mapping’ (a point she makes in reference to *The Re-drawing of Everywhere We’ve Been in Berlin Since 2007*) shows how the piece differs from a regular map in being personalised:

The common urban street map was overwritten by individual paths that transformed and distorted the geography of a normalized urban space. In the midst of a recognizable geographic map, the commonly shared living space of a couple began to materialize, a space whose almost always parallel paths became visible, through the act of re-mapping, as a biographical account of a relationship. (Tecklenburg 2014, 242)¹⁹

She here draws a link between the biographical and the graphical in a personalised geography. In all of the work that we make as plan b there is the ethos that the more personal the work becomes the more there is for an audience to relate to. Viewers perhaps ask themselves what the drawing of their lives might look like or what their ‘personal geography’ might be so far. There is a further ethical dimension to the work that relates to the taking of control of our own data, which distinguishes it from the mass data scraping that large corporations and governments are doing. It is about untangling our paths from the mass that Michel de Certeau describes as ‘intertwining, unrecognized poems in which each body is an element signed by many others, elude legibility’ (de Certeau 1984, 94) precisely in order to try to ‘read’ them. This reading—along with the aspect of being an artist duo with ‘parallel paths’—will become more apparent in the next chapter, in which I will also elucidate (with Tecklenburg) on the artistic strategy of ‘narrating’ and (with Cavarero) on the work’s performance of the ‘narratable self’. By narrating the animation of our movements, we re-position ourselves physically from having our backs to an audience to facing them; and we expose what we know and don’t know about the journeys we have made.

Notes

1. For installation shots of our inkjet prints see <https://planbperformance.net/works/lifedrawing/> A plotter was one of the first ways of producing graphics using a computer. It moves a physical pen across paper to make drawings. <https://en.wikipedia.org/wiki/Plotter> [accessed 02.03.2021]. Fig. 1.5 is also an example of a work made with the plotter.
2. Another artist who works with perspectival shifts and different media is Esther Polak. In her 2009 piece, *NomadicMILK*, she used custom made robots to show Nigerian cow-herders their routes in different coloured sand. See <https://www.polakvanbekkum.com/done/major-gps-projects/nomadicmilk/> [accessed 18.01.2022]
3. As James Bridle points out in his critique of ‘cloud storage’, data does actually take up physical space to store. Such storage is only seemingly immaterial but in fact requires a huge physical infrastructure. See <https://cloudindx.com/technology/> [assessed 23.04.2021]
4. The opening of the former Tempelhof airport as open space has quickly led to the area becoming a nature reserve with a quarter of the city’s population of skylarks nesting there. It is widely used for sports and urban gardening. We have used it for a mapping exercise with BA Dance students during the workshop *Choreographing the City* that plan b gave at HZT in 2013. In contrast, the car park that we learned to ride a tandem in for the piece *Wonderworld* was later developed into a shopping mall near Alexanderplatz.
5. An exception might be that of ‘desire paths’, which are now recognised as useful information for the planning of paths in green spaces: park planners sometimes wait to see where users choose routes through spaces before laying formal paths.
6. For more information about the work of Jeremy Wood see <http://www.gpsdrawing.com/> and Lizzie Philps’ work on ‘GPS embroidery’ <https://lizziephilps.com/> [accessed 01.02.2021]

7. The prints we had made until that point were often limited by the equipment we had access to, which restricted the largest format to A0 (841×1189mm).
8. This is the controversial map projection originally intended as a navigation aid to Spanish colonisers on their route across the Atlantic. It also has the (at the time unintended) side-effect of rendering land masses nearer the equator smaller than those nearer the poles, exaggerating Europe's size while lessening that of Africa, Asia and South America.
9. By 'reading' I mean that the trace can act as a trigger for more information or further narration, as is explored further in Chapter 2.
10. Here I am playing on Steve Mann's terminology of sousveillance.
11. The work can be viewed here <https://francisalys.com/the-green-line/> [accessed 23.01.2021] An example of Richard Long's work is A Line Made by Walking from 1967, which can be see here: <http://www.richardlong.org/Sculptures/2011sculptures/linewalking.html> [accessed 23.01.2021]
12. It has been pointed out to me, often by architects in public talks that we have given as plan b, that the hard environment of cities does of course change over time with people traversing it—the steps of public buildings are eventually worn down over time by the repeated footsteps of the people who exit and enter, for example. This is to see cities on a time scale beyond a human life span. I doubt that I will be able to trace the way I have worn down the pavement outside my house over the last nine years that I have lived here.
13. The exhibition took place across venues in 2013: <https://www.walk.uk.net/portfolio/walk-on/> [accessed 15.02.2021]
14. In *Windwalks* Tim Knowles has created a device that assists in determining where to walk, allowing himself to be guided by the wind: <http://www.timknowles.co.uk/Work/Windwalks/tabid/496/Default.aspx> [accessed 15.02.2021]
15. Daniel was commissioned at the same time as Christian Nold by Independent Photography to make a project on the Greenwich Peninsula in 2006, which I assisted on.
16. Research on the brains of London taxis drivers has shown that as a result of doing 'the knowledge', a method of learning the best routes through London, the driver's hippocampus (which is the part of the brain responsible for navigation) increased in size. (Maguire et al. 2000). As plan b, we are fascinated with this 'scientific proof' of the way that movement and knowledge of a city writes itself into human body cells.

17. In the DVD compilation of *The Work of Director Michel Gondry* (Palm Pictures, Directors Label Volume 3, 2003), Gondry describes his walk to school as creating an ‘imprint’: ‘This is my route back home from school. I’ve calculated that I must have walked it like 2,000 times from 1st to 9th grade. Somehow this route must be engraved in my brain—I mean—physically engraved. Each corner of the street, the tree, roots, garden, brick wall, must be imprinted in my cells. Maybe if I dissolved my brain in acid we could see the shape of the streets as well as my house map.’

18. See the project presented in Nikki’s blog
http://npugh.co.uk/blog/uncertain_eastside_presentation_for_performance_fictions_symposium/
 [accessed 17.01.2022]

19. I am citing William Wheeler’s translation from the forthcoming book. The page number refers to the German original.

Chapter 2

The Role of Memory in Narrating Our Lines

As all travel is movement in real time, a person can never be quite the same, on arrival at a place, as when he set out: some memory of the journey will remain, however attenuated and will in turn condition his knowledge of the place. (Ingold 2011, 152)

In this chapter I will reflect on the role that memory plays in plan b's *Narrating Our Lines*.¹ I will focus especially on the relationship between how the recorded data is replayed in the computer animation and how we use our individual and shared memory to recall other information that supplements the GPS data of only time and location. Like all the pieces I am referring to in this thesis, it is the act of re-visiting the recorded data and choosing a specific form to explore it where the knowledge is embedded. Unlike in the artwork discussed in the previous chapter, where we were working together side by side with our backs to any audience that might have been visiting the gallery, *Narrating Our Lines* is a frontal performative act of collective memory recall, in which we use an animation of the GPS tracks to trigger recollections.

As this performative act bears resemblance to storytelling and autobiography, I will discuss how Adriana Cavarero's *Relating Narratives* reflects on

meaning-making and the ‘narratable self’ as a helpful frame for understanding the act.² Furthermore, I will draw on Nina Tecklenburg’s (2014) identification of different forms of narration in contemporary performance practice, and call on her explicit references to our work as plan b, including her own discussion of *Narrating Our Lines*. I will also refer to Tim Ingold’s work on the way that story and place become enmeshed, as in *Narrating Our Lines* we are literally trying to tell the stories of the places we have been in.

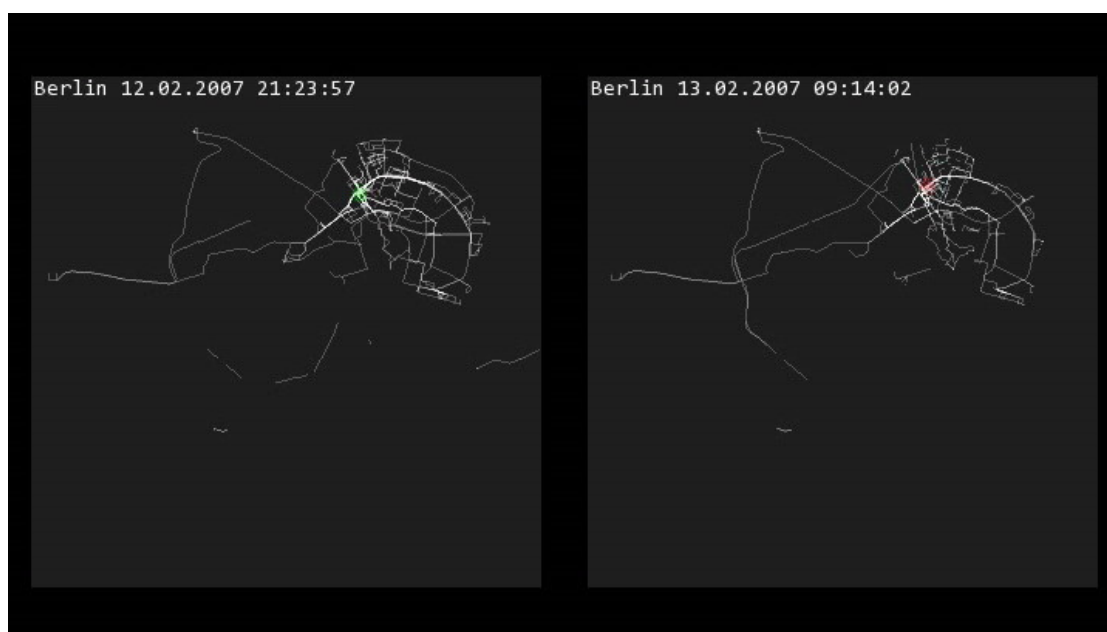


Figure 2.1: Still from the animation referred to in *Narrating Our Lines*. <https://vimeo.com/16705958> Copyright plan b

The central task of *Narrating Our Lines* is for us to watch an animation of our traces from a previous year and to tell a camera or a live audience what life events prompted the movements depicted by the animation. The animation has a black background and is divided into two areas with a more or less central green or red dot representing one of us. In the top right of our animation is the date and time and a rough indication of location such as ‘Berlin’, ‘London’, ‘Graz’, ‘San Francisco’. As the animation plays, the dot leaves a white line behind it, a trace. Gaps in the GPS record for us both (such as nights where no data was recorded or overwritten data) are skipped; though when one person has movement recorded and the other hasn’t, one side of the screen is active while the other side is

paused.³ As the animation progresses, the white lines build up in certain places, for example around our home in Berlin at the time, becoming dense by the end as a year's worth of daily movement accrues. For the first iteration of the piece in 2010 which we performed for camera, we played our traces from 2007, narrating what we could remember was going on at the time based on the animation. The resulting video is a split screen of the video of us talking and looking at the animation and of the animation itself.⁴

As performers of this piece, in the video and live versions, our role is to add as much further information as we can recall: what the weather was like, who else we were with, what we were doing, and how we were feeling. Like the differences in our ability to navigate, Daniel and I think about time differently too—for instance, the date rarely acts as a trigger for Daniel, who is more able to access memories through places, whereas for me the time and date are often the prompts I need. In *Narrating Our Lines* there are also spatial clues that act as triggers for memory; for instance, at a certain point, areas we are often in, like Berlin, become legible for us because the accumulated lines act like a map of the city. This begins to help us remember, for instance, that we were borrowing a friend's car to hunt for places to live. What else becomes evident is the entangled nature of family life in our life-lines; caring for, and picking up a child is revealed as an inherent part of our life at that time.⁵

When invited to do lectures we have often included a section in which the task is the same as *Narrating Our Lines*, referencing a related excerpt of time (such as the same month as the lecture but three or four years previously). For instance, when the commissioned piece *Crossing Paths* was launched at the Artefact festival in Leuven in 2012 with a performance lecture about our GPS work, we played animated tracks from 2008 to test our memory of that time. We specifically chose a different time to narrate from the one we had already used in *Narrating Our Lines* as a strategy to challenge ourselves as performers, as the idea of getting 'too good' at repeated memory recall feels like cheating. The occasional gaps and pauses are part of the 'realness' of the recall. The intention is to give the audience a sense of our process of re-discovering one's self in the moment. Within such task-based performative works we are uninterested in deliberately inventing



Figure 2.2: Still from the dual channel video *Narrating Our Lines*. Copyright *plan b*

fictional stories, especially as in the face of so much data information it is often hard enough to access any concrete memories.

It is important to point out that as this is a task-based performance piece we have made the decision not to stop the animation to give us time to remember but to let it run. In that way the machine recall sets the frame for the performative action. I would like to take a moment to consider the difference between the machine replay of data versus the human recall of memory and the implications this difference has on the way in which *Narrating Our Lines* is performed. There is no struggle for the computer animation to represent the data of our movements, which mercilessly plays through a year's worth of daily journeys in an hour. This is contrasted with our often evident struggle to remember the reasons for our movements and journeys. 'Why were we in Frankfurt? What did we do with [our daughter] Ruby?' The animation functions as a trigger for, or aid to, memory, albeit often with a delay of human processing as we shift through our 'memory bank' to try to recall something about that time or place. One issue that we have had to consider therefore in the making of the piece is the timing of the playback of the animation. There is a presence of urgency and doubt as we try to get our recollections to catch up with the speed of the animation before it moves inexorably on. In *Performing Stories* Tecklenburg remarks on this:

A numeric clock inserted into the top of the video shows how fast the lines are drawn proportionate to real time. However, New's and

Belasco Rogers' accounts are in no way aligned with this chronological linearity. Their accounts get stuck or dash too far ahead. They reach back, lunge out and make huge leaps. Episodes overlap at times, such as when Belasco Rogers intends to finish an anecdote about their Christmas party with friends in England precisely when a change in direction of the line on the monitor spurs New to begin a new narration. (Tecklenburg 2014, 243)

Our rate of recall patently competes with the technological rhythm of the animation. It also has a corporeal effect on us. When the animation is whizzing around a particularly busy period of work away from home, with the animated lines shifting and the locations changing rapidly, we remark on how exhausted this makes us feel in the moment of recollection. It is because we ask ourselves to shift so radically from recording in real time to the compressed time of the animation to the act of recalling that the task becomes so challenging. The seemingly intangible nature of the animation and the fleeting moments of passing places are reminiscent of the ephemerality of performance per se. *Narrating Our Lines* reflects on the passing of passages and what gets forgotten; it is about seeing part of one's life replayed and feeling partly estranged from it and thereby struggling to remember it.

Narrating Our Lines is purposefully challenging and requires the ability to respond in the moment. Working with this time pressure is an aesthetic choice that creates a one-off event witnessed by a camera or live audience. A very different artistic strategy to that is Monica Ross's piece *Acts of Memory* (2008-2013), for which she learnt the Declaration of Human Rights off by heart in order to be able to recite it in public. She wished to embody the text and have it embedded in her memory as part of her ethical practice of responding to acts of police violence. Ross then opened this practice to others to learn sections of the Declaration in order to recite them together in public; she did sixty iterations (or 'Acts') of this work in different contexts (I took part in Act 26 at *Tanz im August* in Berlin in 2010).⁶ The audience witnesses a collective act of memory recall. These two instances of struggling to remember in the live moment—what one was doing in past years or the wording of the Declaration of Human Rights—are perhaps performatively

interesting as an audience experiences texts unfolding temporarily in front of them. In both cases there is not a classical narrative structure but nevertheless an attempt to relate to a greater whole: a whole year and a whole declaration. There is also a reference in both pieces to the list as organising principle: in *Narrating Our Lines* the list of data that the animation plays, and the list of articles in the Declaration of Human Rights. It is worth noting that the list is a common strategy (practiced by many live art and experimental groups like Forced Entertainment) within the genre of contemporary performance practice; a list is a means of setting a rhythm within frames of repetition and variation.

Media theorist Jason Farman, in his book *Delayed: The Art of Waiting from the Ancient to the Instant World*, reflects on how ‘digital technologies create interactions that free portions of our brains’ functions to focus instead on new things, in much the same way that writing freed us from the need to store every important fact in our memories’ (Farman 2018, 86). Farman discusses how cognitive scientists have shown that the brain needs ‘wait times in order to process and turn them into lasting memories that can be later accessed’ (Farman 2018, 107). Perhaps then in *Narrating Our Lines* the ‘getting stuck’ or perceived ‘gaps’ could be considered such ‘wait times’. Neurobiologist and psychologist team Blake A. Richards and Paul W. Frankland, in an article on ‘The Persistence and Transience of Memory’, argue that we need to forget information in order to be able to make ‘intelligent decisions’ and they propose,

that memory transience [forgetting] is required in a world that is both changing and noisy. In changing environments, forgetting is adaptive because it allows for more flexible behavior. (Richards and Frankland 2017, 1076)

As my time is predominantly spent in cities, and as an urban dweller and worker, I encounter environments that are ‘changing and noisy’. In the plan b piece *Everywhere we have been 2007-2011*, a list of time spent in different locations over five years is engraved into granite, which results in looking a little like a monument or gravestone (Fig. 2.3).⁷ In *Narrating Our Lines*, on the other hand, the relentless sequence of new places causes a kind of astonishment, dizziness and exhaustion.

Were we really in so many different places within such a short time frame? There is a record of where one was, which in the act of re-visiting one now feels estranged from.



Figure 2.3: Installation shot of granite engraving *Everywhere we Have Been 2007-2011*. photo: Daniel Belasco Rogers

This estrangement also feels like a meeting with oneself through confronting oneself with the ‘factual’ or ‘real’ information of one’s life. It is a way to test one’s ability to give one’s life form by imagining or assuming things (as part of the process of remembering) in order to give the data a context of lived experience. This re-visiting oneself is described by Tecklenburg as the task of the *Wiedergänger*:

New and Belasco Rogers become literal *Wiedergänger* (the literal translation of which would be ‘one who walks again’), their own recounted paths revealing certain obstacles, namely, gaps in memory. (Tecklenburg 2014, 244)

The *Wiedergänger* is also a kind of walking ghost, and there is the sense in the work that memories have a ghostly quality by being hard to grasp.

In *Narrating Our Lines*, narration functions as ‘spoken commentary or description of events’ rather than as a story with a specific plot. The work does not create a classically crafted narrative and dramaturgical structure of exposition, conflict and resolution. Its beginning, middle and end are dictated purely by the calendar year. Yet narrative and storytelling are present in other ways. The work is linked to storytelling by being an attempt to make the tracks feel cohesive, as if a story could be constructed even when it is stilted, broken and full of ruptures. I would like to revisit briefly the story from Karen Blixen retold by Cavarero of the inadvertent drawing of a stork made by the protagonist stumbling around in the dark to fix a leak in the dyke. In *Narrating Our Lines* we are not able to generate a complete picture of what was happening; rather the task is to piece together the fragments we remember to create a sense of coherence of our actions. The retrospective narration that takes place is a kind of puzzling together of what is plausible with the limited information provided by the GPS (time, place and movement towards other places/vectors). Yet our memories function differently at different times. The piece does not try to make a rounded story of our lives, but to work with the fragments and the gaps that occur in order to allow ambiguity and doubt so as to access other memories in that moment of recounting. This performative act can be understood in relation to Cavarero’s notion of memory as narration:

The narratable self finds its home, not simply in a conscious exercise of remembering, but in the spontaneous narrating structure of memory itself. (Cavarero 2000, 34)

The act of narrating as a mode of storytelling is inherently performative, and its implications for creating memories lie not just in the recall but in the act of speaking itself. In *Narrating Our Lines* we decipher our life story through the live performative act of narrating our lines. The past journeys are an impetus to recount, recall and reflect on what was happening, but as we see them appear in the animation it becomes clear that our act of narrating and our memory of them are as messy and incomplete as they are revelatory. Like the figure of the stork made by footsteps in the mud, it is only later and retrospectively that our act of narrating becomes a figure—it is through seeing the traces on the animation and

in the act of retelling them meaning is given. Cavarero notes that:

Life cannot be lived like a story, because the story always comes afterwards, it results; it is unforeseeable and uncontrollable, just like life. (Cavarero 2000, 3).

The relationship of data and storytelling is also explored by artist Julius von Bismarck, whose *Perpetual Storytelling Apparatus* with Benjamin Maus ‘uses technical drawings sourced from patents to create a never-ending story’, which are then ‘drawn’ with a deconstructed plotter onto a long scroll of paper.⁸ The technical drawings of the patents are linked through the text descriptions which ‘generates new visual correlations and narrative layers’ (ibid). This machine generated narrative layer in the *Perpetual Storytelling Apparatus*, both through textual description and then visual representation, trawls through large data sets of 22 million reference terms. In comparison, *Narrating Our Lines* works with a relatively small data set. The other difference is that the gallery viewer of the *Perpetual Storytelling Apparatus* can construct stories only with the images and texts that they see when present in the gallery as the whole story is untenable and too large a set of references to work with. *Narrating Our Lines*, on the other hand, can be experienced as a whole piece as we choose the frame of a year to be told roughly in an hour of time. As plan b we are not interested conceptually or aesthetically in turning our daily lives into a well-crafted theatrical play (this would most likely be impossible anyway), but rather to stay with the awkwardness of getting lost, confused but also delighted as we re-discover and recognise ourselves again through our digital traces.

It is also worth noting that in *Narrating Our Lines* not only does the GPS data animation act as a trigger to our individual memories, but Daniel and I are prompts for each other in having a considerable amount of shared history to reference collectively. This allows us to prompt one another with memories of snippets of information that can then be ‘filled out’ by the other.

Ingold comments on the act of storytelling and intertwined stories:

To know someone or something is to know their story, and to be able to join that story to one’s own. [...] the meaning of the ‘relation’ has

to be understood quite literally, not as a connection between predetermined entities, but as the retracing of a path through the terrain of lived experience. (Ingold 2011, 160–61)

It is the combined effort of recalling past events through the animation in *Narrating Our Lines* that Tecklenburg describes as ‘webs of personal paths’ which create ‘a lively dialogue [...] in which each of them tries to fill the gaps in the other’s memory’ (Tecklenburg 2014, 243). The choice of the ‘web’ metaphor is apt as when one zooms into the GPS data that we save, it resembles abstract webs (Fig. 1.5). One of the first artists to use real time tracking to reveal a city map through personal paths is Esther Polak in her piece *Amsterdam RealTime*, created in 2002.⁹ There are other artists who work more specifically with Big Data to visualise webs, patterns and connections. For example, Aaron Koblin’s work *Flight Patterns* uses the data of a 24 hour period of flight traffic through the US to tell a visual story of pattern-making through frequency, time of day and power (as the East coast is more dominated by flights to New York and Washington).¹⁰

However, just as there are gaps in our GPS data due to us being either inside or having no reception on a high speed train or choosing to turn off the GPS in planes, there are even bigger gaps or jumps in what we can recall. Due to the unrehearsed nature of the piece our recall also becomes ‘animated’ and emotional as memories are brought forth into the present, like the sudden recognition of ‘I know why we were there’. This re-discovering of one’s own life that seems at first so mundane and yet mysterious is of central interest and a key intention of the piece. It is important to us, therefore, that (like our performance piece *The Last Hour*, which can only be performed once a year as it is intended as an unrehearsed hour in a theatre saying everything we would say if it were our last hour together), it is not something we should perform or repeat often but is meant as a ‘one-off’ act of ‘live narration’.¹¹ *Narrating Our Lines* functions as a purposeful test of memory—otherwise the task or testing element becomes a set and repeatable element.

In other plan b projects like *A Day in the Life: The Walkers of Birmingham* (2011), *Crossing Paths* (2012) or *The Hidden Choreography of the Everyday* (2017),

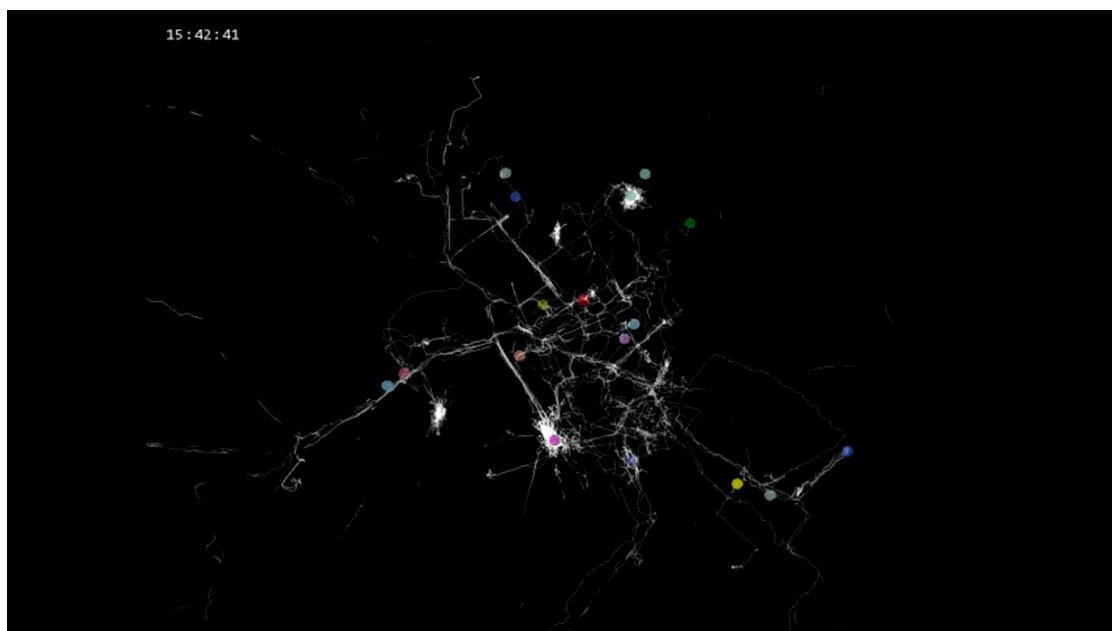


Figure 2.4: Still from *Walkers of Birmingham* video: <https://vimeo.com/21772894> Copyright *plan b*

we give other people the opportunity to record their daily journeys and use our tools to animate them. We then interview and record the reactions of the participants viewing the animation of their own traces after an interval of between one and four weeks. We have found that even with this short a gap between the recording and the interview, there are surprisingly frequent memory gaps.¹² It is intriguing to observe participants (volunteers and members of the public who responded through the commissioning art centre or theatre’s call out) re-visiting their movements as they often have the prior conviction that they will know where they were and what they were doing, and yet there is a moment or place that is unfamiliar or mysterious when displayed as a line or animation. Sometimes we would reveal the background map as a prompt, and there would be an ‘aha’ moment of recognising what was happening or where they were. This works well for an audio interview as videoing participants watching their tracks for the first time can be too invasive and potentially intimidating. The audio captures how the quality of the telling changes in those moment—the intonation or surprise is present in the voice. As participant Joke Colmsee said in *The Hidden Choreography of the Everyday* looking at her traces in Freiburg, ‘O wie schön, ich

war beim Yoga! (Oh how lovely, I went to yoga!)', as if it was an utter surprise rather than a regular event. It reveals the performative nature of this personal type of data collection: a pride that she is represented doing this activity.¹³

It is precisely in these kinds of revelations, when a part of oneself that was lost or forgotten for a time is re-discovered, that the work produces knowledge in the form of visualising the invisible. One sees oneself again, through a rediscovery of oneself through one's moments at a particular location and time. Through showing people the tracks they made they can access a part of themselves that had been lost to themselves without them knowing. There are several differences between the long-term ongoing practice of an artist duo and a time restricted project that incorporates audience participation. When approaching potential participants there is the idea that artists lives are inherently interesting, lively and diverse. When in fact the data shows how much repetition is embedded in our traces. It is worth noting that the demographic of these participatory projects was mainly limited to those already acquainted with the art centres or who had seen the projects advertised locally. There are of course, more vulnerable, marginalised people, such as refugees, who may have made difficult journeys that they would not want to have recorded in this way. Perhaps the association of recording journeys with surveillance might be a rightfully fearful aspect of their lives. Even if as artists we are sensitised to state surveillance and corporate exploitation we are still able to risk publishing our location. The artist and American citizen Hasan Elahi exemplifies this problem when he was mistakenly added to an FBI list as a terrorist due to his name, making his regular national and international travelling from 2002 for six months very laborious, involving long delays and interrogations. He therefore decided to create a website called Tracking Transience, in which he published as much data as possible about his whereabouts (using GPS), his credit card purchases, photos of his food and information on the flights he was taking.¹⁴ Although we limit our recording to movement and text messages it also exemplifies the act of recording of as a conscious act (which in itself changes one's perception as to how and where one is moving or what one says in a text message). It is also very difficult to keep the trace in one's head at all times. Therefore it is through this specific mode of viewing (from above and with the distance of time) that one

has the opportunity to reflect, revisit and narrate what was happening both to one's self and to others. This fascination for trying to understand one's own life or that of another (in the case of sharing this practice with others) through traces is both infectious and engaging. As Cavarero points out:

This is also why life-stories are told and listened to with interest; because they are similar and yet new, insubstitutable and unexpected, from beginning to end. (Cavarero 2000, 2)

This is perhaps the antithesis to Paul-Henry Chombart de Lauwe's drawing of the student's bounded life and Debord's reaction to it (mentioned in the previous chapter). Having made this work now in several contexts and with many different people, I can confidently assert that if the student had been able to record her journeys with a GPS, there would be anomalies and unrecognisable traces that would confound the idea of life being a bounded one and surprise both her and her observers.

Narrating Our Lines tells a story about a very specific point in our lives—for instance, the story of parents reflecting back on their life with a toddler in 2007 at the time when that child is about to go to school in 2010. The personal GPS traces shift from being abstracted data to being embedded in a life story. In *Narrating Our Lines* stories of actions and places interweave through the re-telling of associated memories. Ingold advocates for an embedded sense of place through storytelling as well as asserting that the kind of stories that one tells are affected by the places one traverses:

There is no point at which the story ends and life begins. Stories should not end for the same reason that life should not. And in the story, as in life, it is in the movement from place to place - or from topic to topic—that knowledge is integrated. (Ingold 2011, 161)

Notably for Ingold, knowledge is passed on through stories as part of an oral tradition, in which technology plays no role. Whether the stories that we tell in *Narrating Our Lines* will exist beyond our lifetime, however, is also dependent upon technology—on the storage medium and archival approach to video and computer animations in the future (we already encounter problems of archiving

our work). I will now turn to the issue of storing digital information in non-digital objects in the following chapter on knotting our data into carpets.

Notes

1. Initially made as a performance to camera after a short residency during the *Sommerbar* at Podewil in Berlin in 2010, it has been shown in various different contexts as a video and live performance. <https://planbperformance.net/works/narrating-our-lines/>
2. Heike Roms once referred to the kind of text we produce in our work as ‘real time text’, in reference to the performance piece *The First Hour*, a version of *The Last Hour*, which was performed at Chapter Arts, Cardiff in 2005. I find the term ‘real time text’ useful as we work performatively within a structured frame, devising text live.
3. We specifically chose not to record flights on any devices on planes due to post 9/11 nervousness and the fact that one is so far from the ground and taking such straight lines that it is hard to have a sense of the relation to the ground or place one is flying over. High-speed trains (ICEs in Germany) have special mesh in the windows that make phone signals better but block GPS signals.
4. In our ‘solo’ show *Navigating the Everyday* at Art Laboratory Berlin in 2012 we showed the piece as a synced dual channel video.
5. We have been asked many times why we did not give our daughter a GPS at birth and record all of her journeys. Our decision was made because of the tricky ethical issue of gaining her consent as a young child and because of the practical issues of the extra maintenance and care that would be required from her other carers and us.
6. <https://www.monicaross.org/artworks/AnniversaryAnActOfMemory.html> [accessed 29.12.2020] I chose article 24, the right to rest and leisure, having not had a job that has given me a paid holiday for over a decade. Although I did benefit for the first and last time that year from the Schwankhalle Bremen fund for performance artists to take a holiday.

7. See <https://planbperformance.net/works/everywhere-weve-been/>
8. See <http://juliusvonbismarck.com/bank/index.php/projects/perpetual-storytelling-apparatus/> [accessed 29.12.2020]
9. See the project commissioned by the Waag art, science and technology centre
<https://waag.org/en/project/amsterdam-realtime> [accessed 18.01.2022]
10. See <http://www.aaronkoblin.com/work/flightpatterns/index.html> [accessed 29.12.2020]
11. See <https://planbperformance.net/works/the-last-hour/>
12. See <https://planbperformance.net/works/crossing-paths/> or
<https://planbperformance.net/works/a-day-in-the-life/>
13. The original video (only available in German) is available to view here:
<https://planbperformance.net/works/hidden-choreography/> The moment described happens at 1 min 33 sec.
14. <https://elahi.gmu.edu/track/> [accessed 11.02.2022]. It is worth noting that Elahi goes out of his way not to include other people in his images and thereby differentiating his work from that of the flood of selfie images which permeate social media as evidence that one was there.

Chapter 3

Knotted Time

In performance as in life, you can do something different in five minutes than you can do in five hours; two hours offers different options than 30 minutes, 30 months or one day. The events' boundaries in the field of time determine the framework of seconds, minutes and hours, days, weeks or months in which it will transpire. (Tim Etchells 2015)

A GPS is not only a navigational device, it is also an extremely precise timing device, hence its widespread use in all sorts of movements of goods and animals, including humans. Having a GPS log allows us to not only look at recorded spatial located movement but also examine the temporal aspects of this information. For some time we have been interested in representing the GPS data in textile form, not least because encoding information as a textile could potentially last longer than the digital storage devices (hard drives) that we currently rely on. An analogue form of recording data is more future-proof in that it does not rely on electricity or complicated systems of technology to retrieve it. We discovered that textile data encoding, like the South American Quipu,¹ is a practice that is millennia old and a means of recording information that can last many hundreds of years given the right conditions. Thinking about Quipus and carpets as cultural objects that store encoded data, we wanted to see how we might materialise our data as textile.



Figure 3.1: Installation Shot of *Knotted Time*, Villa Merkel Esslingen, photo: Daniel Belasco Rogers

The work I will discuss in this chapter, *Knotted Time*, was a commission for the exhibition *Networking the Unseen* curated by Greta Louw and presented at Villa Merkel in Esslingen in Germany.² The form of data representation we used for *Knotted Time* has its roots in a visualisation we call ‘Birch Forest’ visualisation. It started as a computer and then paper-based graphical representation of when we had recorded GPS data over the course of a year. The ‘Birch Forest’ visualisation is so called because a number of years lined up in a row produce a repeating column of black and white patterns that look like birch tree trunks.

The format we developed was to divide a line of blocks representing a 24-hour period into 72 twenty-minute blocks. If there was a GPS record in the database within a twenty-minute block, it would be represented by a black block (or later wool). If there was no data for whatever reason, it would be white. Each line of the graphic represents each day of a year with January 1st at the top and

December 31st at the bottom. The binary representation comes from reducing the data in our database to the condition of either having a record or not. This more often than not equates to having data when being outside a building and or having no data when inside a building. Making *Knotted Time* has also modified how we refine our tracks before importing them into our reference database. We now try and identify the ‘false positives’ that occur when leaving the GPS on inside a structure that permits GPS reception.

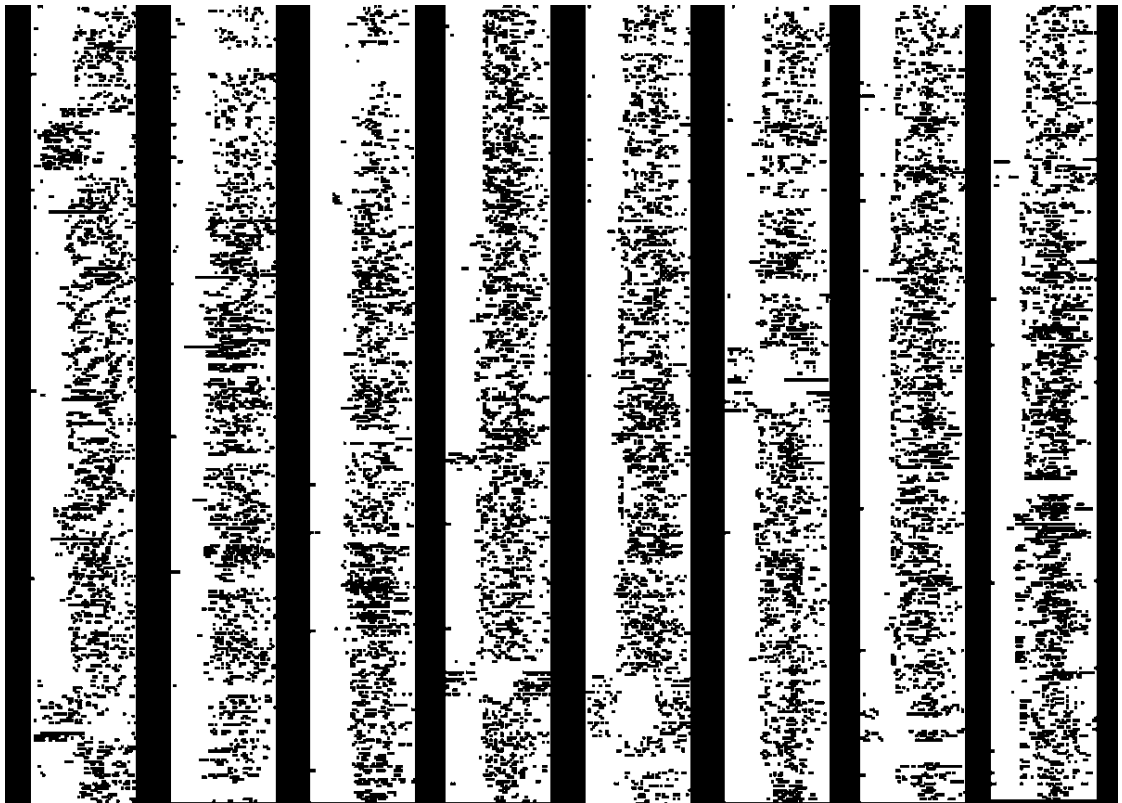


Figure 3.2: *Birch Forest Visualisation*. Daniel GPS data from years 2004 till 2011 Copyright: Daniel Belasco Rogers

Frodsham argues that new media devices have fundamentally changed the nature of cartography, and therefore the data analysis that creates the Birch Forest visualisation interests him:

The gaps and breaks in the recording of data become interesting not because they represent something—since they are just gaps—but because, in their abstraction, they become a meditation on the nature,

qualities and patterns of data and the way in which these infiltrate our lives. (Frodsham 2015, 334)

Initially we were interested in using Jacquard looms to produce the work. There is a well-documented link between the punch cards used for these 17th century looms and the programming of 1950s computers via methods for gathering census data in 19th century America.³ After consulting with a textile artist in Berlin, we found that Jacquard Loom technique is suited to creating kilometres of fabric of a repeated pattern but prohibitively expensive for a small number of different patterns. After much consideration, we settled on knotting the carpets by hand. It is a hobby technique that is straight-forward and utilitarian, which we found out was relatively popular in the 1970s and 80s. It uses a gridded rug backing mesh and precut wool threads which are looped through the backing mesh with a hook one strand at a time. Daniel wrote software that produced knotting instructions from the GPS database. In the final installation, the knotting instructions were available as A4 sheets on clipboards next to the unfinished carpets. In this way, gallery visitors were explicitly invited to contribute to the artwork by knotting a few lines themselves. In addition, there was a long narrow format diagram on the walls made with our pen plotter, which represented the pattern of the carpets but annotated with information about where we were (different cities) or the reasons for longer gaps (a stay in hospital in Daniel's case, for example) or changes in the pattern (clocks going forward or school holidays).

One of the unexpected challenges in making this work was the time the carpets took to produce. *Re-Drawing Everywhere we have been since 2007* too was to some extent laborious in chronologically retracing journey segments over three and half weeks to represent four years' worth of data. But *Knotting Time* was even more labour-intensive. It took approximately three months to make a carpet representing one year for just one of us. The time it took to produce the carpets, however, also opened up new insights and possibilities that completely changed the outcome of the final installation. Rather than exhibiting ten finished carpets as we had initially planned, we decided to make an installation that was more evidently about process and collaboration. We also quickly realised that this would allow us to share the making process with different people. The carpets were produced by

ourselves and friends and family who joined us at home, and gallery visitors also contributed. Even though the work was created from the data of just two people (Daniel and I), making them in a collective manner opened the piece up to other voices, hands and recollections. This both practically helped to fulfil the task of completing a carpet to show during the exhibition, and brought the stories, associations and expertise of others into the process, much of which we recorded on video, which was also shown in the installation.

This collective approach relates back to how Quipus were used, as summarized by Frank L Salomon in his book *The Cord Keepers*:

Knot recording was not only *about* the community—a controlling simulacrum, and important as such—but was itself the means of *producing* the community performatively. (Frank L. Salomon 2004, 269)

With this ‘community’ of helpers around us, we made time manifest through knotting the recorded time of a previous year into the carpet, thereby marking not only that past time but bringing it into the present moment through the act of knotting with others. Just like the Quipus, our records were shared, performed and materialised by a wider group of people. Like many craft activities, knotting a carpet is absorbing but also social, promoting a particular type of reflective conversation. As well as family members and the intern that we were hosting at the time of preparing the installation, we invited people to help us that we thought might have interesting reflections on crafts or carpets. This included an Iranian student that told us about the silk carpets she had seen being produced in her home country. The video that resulted from that ‘*Knotted Time*’ was intended to honour this collective act of making, as well as capturing the stories, memories, associations and skills of the people who contributed to the carpets.

We were particularly interested in the stories associated with carpet making. For instance, in Iran the process of carpet making is accompanied by a sung call and response between the carpet makers and the pattern holder; this process is called Naqshe Khani or singing maps (Shayani 2020). Although there is little formal resemblance between the carpets we made and Persian carpets, in terms of the

sophistication of pattern and the thickness of the wool, there is a parallel in that traditionally the female weavers would include aspects of their lives in the carpets. The anthropologist Narges Erami writes in her article ‘Of ladders and looms: Moving through Walter Benjamin’s ‘Storyteller’, ‘the women who create gabbeh rugs weave their own life stories and hence control the aesthetic production from conception to delivery.’ (Narges Erami 2015, 98) By following the pattern of our lives, as expressed through recorded movement, we tell the story of how our time is spent. It is not as pictorial as Persian rugs, but it nonetheless contains information about how our lives are lived. There were other outcomes of having time to reflect while making the carpets and having many hands involved in the knotting process. At some point we thought it might be easier and less error-prone (unknotting of errors also occurred) to knot sections of black wool first, for instance, and in-filling with white wool later. There were technical reasons why this was not easy nor satisfying to do—it was difficult to tie a small number of knots in the middle of a big block of other knots. But it was also dissatisfying to not follow the sequence of the data as it was recorded. We decided that it was better to take a line (representing a day) at a time and produce the carpet in this way. This logic—like that of the *re-drawing*—related to and embodied the ‘original’ time of recording over a day. Another effect of collaborating on the carpets was that each person’s knotting style is different, like different levels of tension in knitting, so that it is possible to see differences across the pile of the carpet where people swapped over, making the carpets not only a record of a year of data but of the circumstances of their own making, as many craft objects do.

As they represent data that can be thought of as a record of when we were outside and inside, the carpets also reveal other things, like whether it was dark or light, cold or hot, as these circumstances had implications for how long we spent outside. The patterns of daily life became easy to read. The school holidays are clearly visible as breaks in the regular pattern of waking up and going to school or work, as are trips away from home for jobs at regular times of the year. But even though there are clear patterns that can be ascertained in this way, it is the ‘quirks’, the odd late nights out and early morning trips, that deviate from the pattern that make one become curious and that we annotated on the pen plot pattern diagrams.



Figure 3.3: Installation shot of plotted drawing and Daniel's carpet of 2016, photo: Daniel Belasco Rogers

What was she doing up so early on a Thursday in November? These dots of black wool in a sea of white wool representing that specific night work in a similar way to the one-off trips represented in the *re-drawing*: they are outside of the regularity of the pattern created by the commutes and repetitions of everyday life. Yet, from having embodied and materialised daily produced data for over a decade, I have learnt that everyday life is littered with more of these 'one-offs' than one would think. Through creating a carpet, the idea of making a pattern of how we spend our lives makes the threshold between the inside and outside more palpable. Like the knot in the handkerchief to help us remember something, when leaving a building I think about the 'future' knot I will make to represent this stepping-out (especially if I am outside for less than 20 minutes, which is rare).

In an interview with Adrian Heathfield, the artist Tehching Hsieh reflects on how an idea of 'inside' or 'outside' can also become reduced within the confines of an

interior space. He recalls the cell that he chose to live in for the duration of one year in 1978–79:

In order to make the space inside the cage bigger, I treated the corner with my bed as ‘home’ and the other three corners were ‘outside’. I would take a walk ‘outside’ and then come ‘home’. (Heathfield and Hsieh 2008, 327)

I wonder if this was an imaginative and psychological device to assist in the hardship of his self-enforced solitary confinement. Certainly the reduction of life to the confinement of a cell, or to the punching of a time clock at hour intervals, which is the project Hsieh created the following year, makes time palpable. As performance scholar Carol Becker asks, ‘Aren’t we all then “doing time” until our time is up and there is no more?’ (in Heathfield and Hsieh 2008, 368). *Knotting Time* is a marking of time in relation to space too, yet devoid of geographical information within the carpet as an object; the abstraction of inside or outside rather speaks of rhythm and routine. By making the carpet I begin to see my life as containing certain rhythms and I start to read patterns of night and day, the seasons, the changing of clocks, the holidays and irregular working periods, a child growing up and no longer needing accompaniment to school.

A year represented as a flat object in the binary of black and white wool is a way of reducing it to simplified data and visual simplicity. This is analogous to the simplicity and rigour of the Japanese artist On Kawara, who is known for his date paintings that make time into a material object. As Leslie Satin points out, walking through an exhibition of On Kawara’s work,

steeps me both in the embodied experience itself and in the artist’s decades-long meditation on time, Kawara’s cumulative commitment to his concepts and directives: its implications of memory, loss, and desire, of the present imbued with past and future, its articulation of time as consciousness. (Leslie Satin 2017, 51)

She suggests that it is the spatial dominance of accumulated date paintings on display (there are nearly 3000 in total; 150 of which were shown in the exhibition she discusses) which makes time become an embodied encounter.⁴ The weight and

dimension that the carpet of *Knotting Time* contains gives a sense of the heaviness of a whole year as a significant sum of time with a total of 26,280 handmade knots. The knot as a means of representing 20-minutes, that when repeated become hours, that then become days and weeks and months and eventually a year, resulted in tired, callused hands and newly developed muscles. The rhythm of making the carpet (mostly in the evenings in the winter months) made for a contemplative nocturnal pursuit (accompanying by talking or listening to the radio—video was impossible to watch simultaneously). I felt the irony that having to stay indoors to make carpets would result in long monotonous white passages in future carpets. An example of a transition from digital data to material matter that inspired our thinking about encoding our data into something more long-lived is a work that Daniel and I saw at *esc medien kunst labor* in 2015 as part of *steirischer herbst* by the artist collective La Société Anonyme called *SKOR Codex*, which responded to cuts in Dutch culture funding of 2013:

The SKOR Codex is a printed book which will be sent to different locations on earth. It contains binary encoded image and sound files selected to portray the diversity of life and culture at the Foundation for Art and Public Domain (SKOR), and is intended for any intelligent terrestrial life form, or for future humans, who may find it. The files are protected from bitrot, software decay and hardware failure via a transformation from magnetic transitions on a disk to ink on paper, safe for centuries. Instructions in a symbolic language explain the origin of the book and indicate how the content is to be decoded. (La Société Anonyme 2012)

The desire to preserve information in an analogue form not only creates a tactile object but is a process of selection and reduction of information to make it haptic, and to also make data tangible. Another artist duo who have worked with GPS and analogue processes are Jen Southern and Jen Hamilton in their 2006 piece *Running Stitch*. Participants took a GPS on a walk; their tracks were then projected onto a large screen into which volunteers stitched the journeys.⁵ Jen Southern confirms in a talk (see footnote) about the work that it is less about creating a tapestry as a lasting object (as its size of 5×5m makes it hard to store)

and more about human and machine processes and spatial understanding and connections. However, these are objects that could potentially have a duration beyond that of a human life, as Quipus have proven, passed down and lasting for centuries. The decision to make an object that we hope has longevity, beyond the lifetime of our technological devices, relates to the idea of carpets as heirlooms and storytelling devices, carrying meaning and narrative. Their production and use by (formerly) nomadic cultures also resonates with our database of movements.

Although abstract in their representation they can be seen to be analogous to Cavarero's figure of a stork, insofar as they visualise a life lived. That the carpets are an encoding of time spent outside and inside over the period of a year, however, is not self-evident. Whether an accompanying text, title or video manages to also stand the test of time alongside the carpet is an unknown factor. Many of the ethnographic debates around Quipus are about whether and what kind of 'writing' or 'parallel writing' they represent. But a comment about materiality that Salomon makes in his conclusion, drawing on the work of other ethnographers, makes an argument for considering Quipus in the context of other ways of knowing:

Perhaps, as the Aschers, Conklin, and Urton hold, the peculiar kind of reasoning involved in the handling of fiber medium itself influenced ideas about the proper structure of information. (Frank L. Salomon 2004, 282)

Despite the problematic terminology of 'peculiar' rather than 'particular', Salomon suggests that working with materials such as wool can create other ways of knowing the world and encoding information. The impressive body of work of the artist and textile designer Anni Albers is a testament to a life dedicated to understanding weaving. At the recent retrospective of her work at the Kunstversammlung Nordrhein-Westfalen I found it particularly intriguing to see her knot drawings and carpets called *Haiku* and *Code* from 1961 and 1962. Not only is there clearly a fascination with mathematics and geometry but also with pattern and abstracted writing, as Maria Müller-Schareck describes about *Code* in her essay 'The Language of Threads':

If you 'read' the lines from top left to bottom, staccato signs similar to

a script emerge, bright knots of yarn (like the heads of musical notes) and longer strokes merging into a rhythmic sequence that runs in a long horizontal line skipping vertically before touching the selvedge. The pattern seems to suggest the transmission of messages in an unknown, encrypted script. (Müller-Schareck in Coxon 2018, 140).



Figure 3.4: Still from *Knotting Time* video: <https://vimeo.com/248202754> Copyright: *plan b*

Through the long process of knotting my time spent inside and outside, I came to understand not only patterns of daily life and its divergences, but also how that is expressed in the thickness and strength of wool and its (non-)uniformity and peculiarities. By marking and making a year as a carpet there is another kind of calendar emerging: one that speaks not necessarily of appointments and obligations but simply movement and time. Here I am again reminded of the year-long works that Tehching Hsieh made between 1978 and 1986, which Adrian Heathfield sums up as being about:

How time is lived and felt in the body; how it leaves its marks in material things; how the past lives in the present; how singular lives and times remain. (Heathfield and Hsieh 2008, 11)

The fact that Heathfield calls these works ‘lifeworks’ in the way that material and

life experiences are enmeshed relates to our interest as plan b to incorporate daily data as material processes. *Knotting Time* was both a laborious and tactile means of creating a document of time (albeit clock time aided by the GPS), a means of representing the traversing of thresholds in and out of buildings.

Notes

1. A Quipu (sometimes also spelt khipu) is the Quechuan word for knot. It consists of knotted cords or strings that the Incas used to store information such as numerical and calendrical data.
2. The exhibition took place from December 20th 2017 to March 4th 2018 and was about artists' perspectives on technological development and its interaction with culture and place.
<https://planbperformance.net/works/knotted-time/>. Video about the exhibition
<https://vimeo.com/277284548> [assessed on 13.05.2020]
3. IBM (n.d.), 'The IBM Punched Card', *IBM*,
<https://www.ibm.com/ibm/history/ibm100/us/en/icons/punchcard/> [accessed 25.03.2021]
4. Frodsham makes a direct comparison between Daniel's work and On Kawara's mail art postcard series: 'Compare, for example, the daily mappings of On Kawara for *I Went* (1968-1979) and those of Daniel Belasco Rogers for *The Drawing of My Life* (2003-) [...] Both involve the plotting of their movements over an extended period and documenting these in the form of maps. On Kawara worked with paper maps, producing around four-and-a-half-thousand in total, which were later bound together, in chronological order, as a twelve-volume set. By contrast, Belasco Rogers plots his movements and produces maps using GPS data. While he also uses maps to present his movements over time, the same data can be expressed in many different ways; as, for example, in *My Life as a Birch Forest* (2012) which visualizes not movement but gaps in data' (Frodsham 2015, 102).
5. Documentation of *Running Stitch* can be seen here <https://vimeo.com/6972165> [accessed 28.12.2020]

Conclusion

As the sea of data grows, artists raise questions about the importance and position of the individual within our technologically linked society and offer, in an act of resistance, alternatives to the standardized data world. (Himmelsbach and Mareis 2015, 35)

The transformation enacted by the work of plan b and referred to in the title of this thesis takes place in making invisible processes of everyday actions and movement visible. The daily act of recording with the GPS produces a database of digital information that can be referenced and revealed through different material and performative processes. For the sake of this thesis I have concentrated on three of these processes: hand drawing, ‘live’ narrating and hand knotting. It is through these modalities of re-engaging with the daily digital data that new knowledges have come into existence in relation to movement, memory and time, which I will now outline and draw together.

The three works discussed in the previous chapters are all visualisations of personal data. Yet I argue that their chosen materialisation and transformation takes them out of the realm of simply communicating information. Let us consider for a moment my research question about the role that the material and aesthetic choices have had upon the acquiring of knowledge. Within a normative paradigm of data visualisation in creating a map of daily journeys, the hole we created in the paper by redrawing the journeys back to where we lived would be seen as a mistake or something unwanted. Yet in *Re-Drawing Everywhere we have been since 2007* this development emphasised the significance of domestic and daily life, what Georg Perec describes in *Approaches to What?* as ‘endotic’ as opposed to

exotic.¹ For Perec, the ‘daily’, the endoctic, is to be examined, written about and celebrated. Part of the interest in recording daily data is to consider all journeys as significant. They become part of the image, the performance or object. However, ‘the hole that was home’ speaks poetically about repetition in a way simple inkjet prints of the same data made earlier did not. It was not a planned event and only happened by the act of actually re-tracing our journeys as a hand-drawn image using paper and pencil as the medium. It evinces that ‘home’ is the portal to all entrances and exits, the main nodal point of all navigation, arrivals, departures, and recorded traces. The ‘hole’ is signified as a place we both appear from and disappear into in terms of public visibility and the data collection. It represents both the excess and absence of data: the abundant traces of comings and goings and at the same time the void that is produced upon entering a building and having no GPS reception. In *Re-Drawing Everywhere we have been since 2007* I have shown how embodied knowledge resides in the hand-drawn repetition that takes place by scaling journeys down in order to shift one’s perceptive from ground level to above, thereby revealing a personal geography of a city. Let me return to my research question about how the shifts in perspective and scale played a part in the knowledge produced. Movement on a city-wide scale shrinks to that of an anthropomorphic scale (the extent of an outstretched arm) to allow the hand and body to embed another mode of coming to know one’s environment and urban mobility. As I discussed in Chapter 1, this act of recording and then revisiting the data through re-drawing led to a more intimate, concentrated and embodied knowledge for me as the maker. It occurred through both repetitious action and spending more time engaged with the traces previously made. A retrospective shift happens in seeing this other perspective from above and by altering the scale to one that the body can comprehend: one relearns the regular pathways and revisits one’s past self. After being indoors all day in a gallery, re-drawing traces of outside movement, as I leave there is an uncanny sensation of the expansion of entering ‘real time’ and 1:1 scale becoming the pencil line as I cycle home.

Considering the research question about what kinds of knowledge and bodily awareness can be generated from data relating to everyday movement: it is not only the details of learning the shapes and forms that a city contains and where

one frequents, but also how the repetition of journeys build ‘main arteries’ of regular activity that become written into the body, among which the single line journeys stand out as memorable anomalies. These representations of everyday movement in the city (Berlin) also open out to others to invite them to consider what their inscription of movement might look like over space and time and whether their home also becomes a hole by being defined through numerous comings and goings. Not least one can consider what digital traces one leaves often unwittingly through embedded location software and internet use on a smartphone, including the virtual traces one leaves when existing the gallery. The everyday practice we perform as plan b, however, is a conscious act of creating a personal geography firstly through the GPS recordings and then as hand drawn re-tracing. Therefore the imagination of the viewer is addressed in considering their own personal geographic drawing of their everyday movements. There is a sense that the thorough, slow and deliberate act of re-drawing acts also as a proxy activity: by watching the drawing emerge one can consider what one’s own drawing might look like without having to make it.²

When reflecting on the piece *Narrating Our Lines* in Chapter Two, the research questions addressed the role of memory and how recall is affected by the playing of the animation of our journeys chronologically. The knowledge that emerged for us as performers through the task of re-telling was a form of unearthing things that are known but are deep under the surface of memory. Even though it is neurologically necessary to forget some things in order to remember others, by re-encountering our daily journeys through an animated drawing, we are prompted to access memories of past journeys that allow us to tell the story of what could have been happening. Without the computer-generated re-play of past actions those events remain latent and silent, perhaps eventually fading entirely. By using technology another set of information becomes available to me that my brain could not store but my hard drive can, showing how differently machine and human memory function. The factual is pitted against the human recollection. This mode of narration is one of re-discovery and puzzlement. The flow of recollection is punctuated with pauses of doubt. It is aided by the fact that as plan b it is an act of recall that relies on joint activities and therefore allows the

memories of the other person to trigger one's own recollection. The experience of narrating one's journeys also confronts oneself with the sense of being a mystery to oneself, as even relatively recent trips can seem blurred distance memories, and only when one ponders a little longer piecing events together does one potentially have access again to what was going on. When working on collaborative participatory projects, we referred to this as 'the aha moment'. It confirmed the discovery that we also made through the practice: one can gain knowledge about one's self by relearning and revisiting previously forgotten and unseen elements of one's life. As a viewer of *Narrating Our Lines* one bears witness to an act of living simultaneously with different records of one's life: the digital trace and the performance of memory recall. Here the animation of journeys acts as visual record of a ghostly past self, writing the text that one can attempt to narrate and unite with one's present self (as Cavarero might say). The viewer sees both the ghostly trace of the animation accruing tracks and clues alongside the recorded performance of the first encounter with this past self being at times clueless and other times animated with sudden recognition. This re-relating to one's past self is in itself a relatable event: one can imagine that it would be potentially both a struggle and containing moments of enlightenment.

In *Narrating Our Lines* the choice to augment the computer animation with our own filmed presence takes us into the realm of performance for camera. Our incomplete and hesitant attempts to reconstruct together some kind of 'truthful' recall (as opposed to a deliberately fictional account) of why those journeys were made show the messiness of that recall, aligning itself to performance works that deal with attempting something impossibly difficult. As *Narrating Our Lines* is not a learnt text in any way, but rather a rule-based piece, it functions as a representation of what often happens when one is confronted with information from the past. The trigger or input (in this piece the animated traces) is either instant in terms of memory recall and entirely present or requires time to be reconfigured, reactivated and relived. Unlike the repetitious act of re-drawing, which slowly produces knowledge over time, this revisiting of past traces is an act that intends to replicate a confrontation with the past. It enables one to see what kinds of stories are possible with past events that one was involved in or created,

yet are not immediately available through recall. This performance of recall generates another kind of narrating, albeit one that jumps between certainty, doubt and collective piecing together of memories.

As someone who knowingly switches on a device every day to record a journey with the knowledge that in the future it will be used for something else, there is in that act a conscious shift in perception. There is the seemingly contradictory act of consciously framing all of one's movements whilst also being confronted with the automation of turning on a device before one even realises it. Even though in 2007 we were not aware that our tracks would be recounted three years later, our active decision at the time to record frames the journey in a way that wouldn't have occurred when passively recording through a smartphone's location software. The choice to use our data as a prompt for memory is a means of re-engaging with that initial 'conscious act'. In human versus machine there is a confrontation with the selectiveness of recall whilst one learns what acts as triggers: the time and/or place. *Narrating Our Lines* shows how the daily becomes blurry and indistinguishable from previous reiterations and how the 'one-offs' stand out as seemingly unique and therefore sometimes easier to narrate as anomalies. I argue that it is in the act of re-learning that trace later through another artistic process that one comes to have other insights on how one lives and who one is. It gives us the ability to tell another kind of story that would otherwise be lost to us.

Lastly, in reference to *Knotting Time*, the research question explored how an engagement with data through performance enables an understanding of time on different scales. Fundamentally, new knowledge is created through seeing the pattern of how one spends time. A calendar year becomes a material object that depicts late nights or early mornings or suggests the seasons changing as one spends more time outside. To visualise one's time spent as a carpet is to condense information that would otherwise be unattainable: a whole year of comings and goings contained within one object. It enables another kind of reading and interpreting of how one's life is lived. It too speaks of the time within which it is made—for instance, I may not always have the regularity of the school year written into my visual diary so clearly as I have in the years 2011 to 2020; I can see the pattern of the days shift from the early morning school runs to the

irregularity of the holidays. It reveals weekends, illnesses and even weather, all of which have an impact on recording with a GPS. It is a visual record that allows for an overview that is not possible by scrolling just through the database of collected data. In *Knotting Time*, these patterns of time were performed by many hands, finally becoming haptic and tangible in a way that is not possible drawing from just memory or just the spatial co-ordinates of the GPS data.

By including in *Knotting Time* not just the carpets as ‘data rugs’ but other information like the annotation of the patterns used to make them, and the video reflecting on the act of creating them with others, the process is opened up to the audience. The exposure of the act of reification, of the carpet coming into being, shifts the focus from the object to the making of the object, the time that it takes to create such an object and how to ‘make’ time, the necessity of embedding into the working day and the evening work necessary to finish the task. This mixing of art with life and life with art has been pivotal to many of the works that we make as plan b. In that way we are extraordinary with the ordinary; there is nothing particularly special about many of our journeys but like all lives, unusual and significant things happen, yet having a record of these events is unique. Despite Daniel and I first meeting through experimental theatre, the theatrical notions of the rehearsal or premiere cease to have real significance in the ways that we have chosen to work in the last twenty years, preferring to have an on-going conversation that has set working periods and leaks into everyday life.

During this COVID-19 pandemic, I look back on those as times of being inside and outside or with or without GPS reception or data as also being times of being off screen (or offline). Times when daylight delightfully obliterates the possibility of squinting at a device and forces other types of encounters beyond the limited gaze of a screen into and with distance. Simultaneously, there is the awareness that my newfound need to spend more time outside will mean more black wool in future carpets. Writing during the period of a succession of COVID-19 lockdowns, the installation *Knotted Time* created in winter 2017 seems oddly pertinent. It makes records of being inside and outside visible (something we are acutely aware of at the present time).

Being an artist duo, many of the works we make come from conversations in which we ask ourselves things like; ‘What if we were able to see our GPS data collection as a textile?’ or, ‘What if we were to try and remember what we were doing based only on the time and a visualisation of the shapes of our journeys?’ or, ‘What would happen if we re-drew our daily journeys in Berlin by hand?’. To answer these questions we need specific contexts in which the work could be shown and the time and space to execute them. Having a background as performers, the search for ways of sharing with audiences is integral to the chosen mode of presentation and action. In the best case, the audience asks themselves: ‘What might the drawing of *my* life look like?’; ‘Can I recall what I was doing if I were to be given just the time and place from years ago?’; ‘What would my carpet of time spent inside and outside look like?’. It is these acts of self-reflection and wondering that spark other imaginative relations to one’s own life. It is the ‘what if’ scenario of play that is so central to that act of making art works; but imagination is also essential to the possibility of thinking about life differently that can give personal and political agency.³ In that way it is also exemplary: we execute an idea that anyone could potentially undertake. Looking at our work, people might think, ‘my drawing may also look similar to that’. Not perhaps in the specific pattern of streets (unless they also have spent the last twenty years in Berlin), but in the somewhat surprising reiteration of lines, so intense in some places that it destroys the paper it is drawn on.

All of these works create artefacts, aesthetic objects in their own right, the drawing, the video and the carpet—but the process of their creation is also the work. We often make the performance of the task visible and integral. In that way the objects are also traces left behind by a performance: the pencil line on paper, the animation and memory performance captured on video, and the laboriously knotted wool. Having started as everyday movement by two humans, then a record of those locations stored digitally (as a film records a sequence of still images), they come into another dimension and materiality through their transformation from one media to another. This act of reification and transformation of the collected data is where the artwork exists and it is here I argue where the knowledge is embedded and embodied, through the capturing and performative

process. It is through the re-engagement and re-visiting of the data that we come to know new things: be it the shapes, scales and curves of frequents streets from another perspective, the past journeys taken chronologically and beyond our home city, or the patterns and rhythms of spending time inside or outside.

As I have pointed out before, not all steps of the transformation are made explicit, the downloading, the maintenance of the digital data and the writing of the software are all invisible in the final performance or artefact. Having an awareness of what it takes to take care of data over a long period of time makes us view the mass scale of digital data surveillance and storage that governments and corporations are investing in with grim awe. The work of plan b is personalised sousveillance, and it takes time and care to not use exploitative systems and to invest in software that is available to others (Daniel publishes the software he writes for the work on Github so others can use it).⁴ A smartphone app can now do this for you (which was not the case when we began this practice), but really coming to know or re-know those pathways through such a slow act of re-tracing is an engagement with one's own data and movement that is beyond the cursory viewing on a phone or web site. The quality of the mark-making and choice of materials is a different aesthetic regime, which is associated with the ethical principles of not letting another company visualise this data for me, not letting others make aesthetic decisions on my behalf nor letting them use my data for their nefarious ends. Perhaps it is worth stating that some may consider the act of performing and exhibiting one's movement data as too personal or over-sharing, yet it is still in fact a tiny data set when compared to the amount of information we all generate through internet searches and social media usage.⁵ Personal data mining differs greatly from what is happening with data mining as done by the likes of Cambridge Analytica or Google, who make money by extraction and predictions. As I have argued in reference to Caverero's 'narrateable self', we are interested in seeing what stories and works can be made based on what we have done rather than what we might do.

Creating artefacts or objects that have their own existence beyond the physical performances that produced them is also a means of extending our practice into other fields, such as fine art and exhibitions. The cross-over between the fields of

performance and fine art has increased in the last two decades, whereby audiences are more used to seeing live actions taking place within a gallery setting (more performance is now regularly included in Biennales, and large museums like the Tate have created dedicated performance spaces like ‘The Tanks’). For us as artists, this move between these fields was anyway a natural transition, considering the interdisciplinary field that we came from (the 1990s British Live Art scene). Part of creating plan b was about fundamentally questioning established formats that were set, such as the average 90-minute theatre piece. By exploring other modes of duration, we have transitioned into other spaces and contexts such as festivals and galleries. However, what has changed in the last twenty years of art making is our increasing daily dependency on digital devices. As artists we were both open to incorporating technology into our work, and in doing so have become increasingly politicised about how to do that (with our refusal to engage in social networks and the move to use open source tools and operating systems).

Using GPS is one way of showing the enmeshed co-existence that we all now have with devices.⁶ In this way the GPS is for us utterly embedded into our everyday life, and I can certainly relate to a sense of lack or loss if it is not present (perhaps twice in the last decade I have accidentally forgotten to put it back into my handbag after downloading the tracks). In terms of memory the relationship between forgetting and logging is an interesting issue; I wonder for instance if I am outsourcing the ability to remember to the device? The GPS logs so I don’t have to. Morris Villarroel, who works at the Technical University of Madrid, started after his 40th birthday to track his life in hand-written log books, writing down every 15 minutes during the day what he is doing. He has kept the practice up for over ten years. Like the ‘quantified self’ movement, he has done so out of interest to improve, or in his words ‘intensify’, his life (Robson 2019). As I have pointed out above, we are not undertaking this practice in order to optimise or intensify our lives in any way, but rather out of a curiosity to see our life represented in another form and from another perspective.

It is accumulation, resulting from keeping up the act of recording our daily movements, that in many ways allows for all the works to have insistence, persistence and depth. The four years documented in the *Re-Drawing Everywhere*

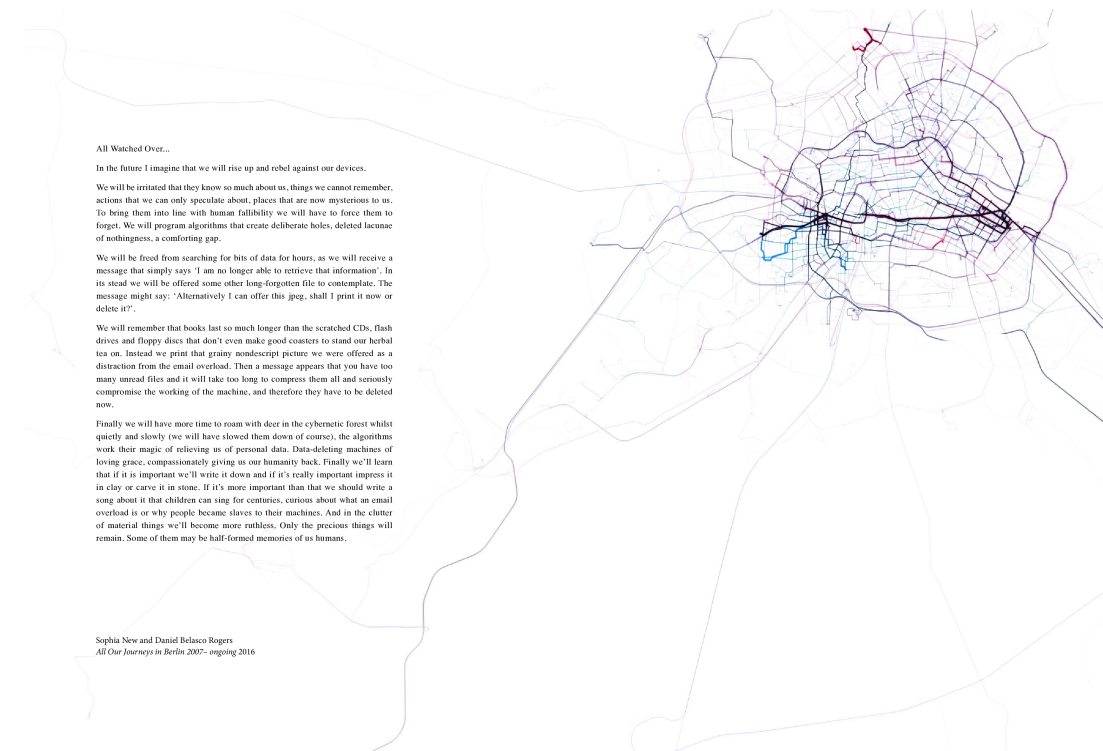


Figure 3.5: *plan b* artists' page from the *Imaginary Reader*

we have been since 2007 or the one year of *Narrating Our Lines* and *Knotting Time* are excerpts from a larger collection. This larger data set allows us to ask questions which can be asked over the time span of many years; for instance, where we were each year on a particular date or how much time we have spent in a place over several years. It exceeds the neo-liberal demand for the singular 'one-off' artistic project; and it is through its slow persistent excessiveness that the set allows us to make some time processes into haptic objects through performance. It is significant to consider what the role of time is in these processes of drawing, narrating and knotting. It is through actively slowing down that another kind of physical comprehension or embodiment can take place. It allows the body to take the time to get to know something differently. Through making the works I have examined, we found new ways of encoding information that create embodied knowledge about how we move when, what we can remember and the role that time plays both in the creation of the works but also in other modes of

representing time. It may be that the documentation of making the objects or performing the data will not last as long as the stories told by those who witnessed the actions live. As we speculate in our contribution to *The Imaginary Reader* (New and Rogers 2016) (Fig. 3.5 and Appendix) perhaps we will in the future need other ways of relating to our digital devices and the data we collect and store. We may have to programme forgetting methods as a coping strategy and consider songs and clay as good storage systems in perpetuity. The ability to see where we have been is in itself a journey that has led to new insights into how the process of visualising the invisible allows access to other modes of rediscovery and reflecting about human life in the 21st century. In terms of performance and art making the practice is an exposé of how the integration of technology into daily life can be transformed, interpreted and embedded into other objects and media. This in turn gives rise to new modes of knowing in art making and the stories we can tell. In a world increasingly full of information the works discussed in this thesis demonstrate that even with comparably simple time stamped movement data, a complex set of narratives emerge full of doubt, lacunae, re-discovery, rhythms and anomalies. As our work demonstrates, daily life is rarely as simple, known or bounded as one might think. In fact, the work is a testament to the ambiguities and complexities that occur in a long-term practice that is embedded in the everyday. Being part of the forerunners of artists to use GPS as a tool for art making, our work has had a significant impact within the field of expanded performance. The unique contribution it makes to how we can visualise human movement over a long period of time has proven to be of interest to a wide range of academics working in spatial studies, urban research, data and digitality, choreography and other 21st century art practices. The diverse contexts of performances and exhibitions in which the works have been shown have allowed for a wide variety of audiences to engage with our work and through that with the issue of with how technology is shaping and affecting our daily lives. The transformation that we as plan b create from the GPS data to other media allows for another kind of poetic visual and performative mode. In this way we represent aspects of our life that would otherwise remain intangible and invisible. We can see the scale, breadth, detail and repetition of our movements rendered through performative re-drawing. We reconstruct and remember journeys, places, acts and

encounters through the animated traces that we narrate. We mark time and activity in the black and white woollen knots of a carpet. All these performative acts and successive transformations are new ways of knowing the world, embedded in the bodies that made those initial movements recorded with a GPS. By showing these methods and artefacts, these ways of knowing are shared with people who encounter the work, accessing and through it access a previously perhaps unknown urge to see the invisible patterns and shapes that a human life accumulates.

Notes

1. ‘What’s needed perhaps is finally to found our own anthropology, one that will speak about us, will look in ourselves for what for so long we’ve been pillaging from others. Not the exotic any more, but the endotic’. (Perec 2008, 210)
2. During the exhibition one gallery visitor said ‘Oh good, you do it so I don’t have to’. Us realising the drawing in a painstaking fashion means that the idea can transmit without the viewer necessarily having to complete the action.
3. Here I am thinking about the initiator of transition towns, Rob Hopkins, and his inspirational book *From what is to what if: Unleashing the power of imagination to create the future we want* (2019), which argues for using the ability to collectively imagine other kinds of futures in the face of the climate crisis.
4. On his blog *Binary Stumble*, Daniel publishes information on how to technically realise recording movement with a GPS and the maintenance of that data
<https://danblog.planbperformance.net/?p=1127> [accessed 04.07.2021]
5. Tactical Tech is an organisation based in Berlin that assists citizens and researchers to be aware of issues of privacy and autonomy online <https://tacticaltech.org/projects> [accessed 04.06.2021]
6. See previous footnote on plan b’s *GPSshow* (2014) in the introduction, which also explored what might happen if our access to GPS were turned off and how quickly things we take for granted like our just-in-time delivery of food and goods and the Internet would be affected.

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Appendix

Three recent articles:

New, Sophia. 2019. ‘Expanding Choreography through Everyday Movement in the Work of *plan b*’, *Expanding Writing: Inscriptions of Movement between Art and Science*, eds. Hahn, Daniela, and Wortelkamp, Isa, 114–135. Berlin: Revolver Publishing.

New, Sophia, and Daniel Belasco Rogers. 2018. ‘Mapping Mortality – plan b reflect on their lifelong mapping practice’, *LivingMaps Review* 4.

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Expanding Choreography through Everyday Movement in the Work of *plan b*

– Teri Rueb is an artist who was an early adopter of using GPS in her work. This quote is from an e-mail that Teri Rueb wrote to Karen O'Rourke cited in her book *Walking and Mapping: Artists as Cartographers* (Cambridge, Mass.: MIT Press 2013), p. 134.

↻ This is what Daniel Belasco Rogers and I (we work under the name *plan b*) consider ourselves to be doing in our personal GPS mapping. See <http://planbperformance.net/works/lifedrawing/> (13.02.2018).

↻ If we trace back the etymology of the word 'choreography,' it's journey from

Greek *khoreia* through Latin to French *chorégraphie*, it clearly becomes the writing of dance. I am not claiming that my daily movements are as such dance, that feels like a poetic leap too far, besides I wish to align the work with Georges Perec's term 'endotic' in his work *L'Infra-ordinaire* in which he postulates that the daily news tells us everything but the daily, and we "should question the habitual" (Perec 1973: 210).

"Our everyday movement is highly choreographed, whether we realise it or not." (Teri Rueb) → –

What if we considered all the journeys that we make on earth as a drawing of our lives? What if we could then see the drawings of the places we had been as a portrait of our life? → ↻ What materials could we choose to represent these journeys? What does it do to think of these wanderings, not only as drawing, but rather as a kind of writing made from daily movements? How might we consider the constraints of a city as a score?

I would like in this chapter to consider how we might write a diary through the everyday movements that we make and think of it as an expanded choreographic practice. → ↻ For me choreography is the writing of movement and I use the word *expanded* to refer to the fact that the scale is far beyond the studio or theatre space that artists often work in. I have been

Alltagsbewegungen und ‚erweiterte Choreografien‘ in den Arbeiten von *plan b*

„Unsere Alltagsbewegungen sind in hohem Maße choreografiert, unabhängig davon, ob es uns bewusst ist oder nicht.“ (Teri Rueb) → –

Was wäre, wenn wir alle Wege, die wir auf der Erde zurücklegen, als Zeichnungen unserer Leben betrachteten? Was wäre, wenn wir die Zeichnungen der Orte, an denen wir waren, als Portrait unseres Lebens wahrnehmen würden? → ∞ Was verändert sich, wenn wir diese Bewegungen zwischen Orten nicht nur als Zeichnungen, sondern als eine Art des Schreibens verstehen, das von täglichen Bewegungen hervorgebracht wird? Ließen sich die Beschränkungen unserer Bewegungen in einer Stadt als ein ‚Score‘ begreifen?

In diesem Beitrag möchte ich fragen, wie wir durch unsere Wege, auf denen und an denen entlang wir uns im Alltag bewegen, ein Tagebuch schreiben und darin eine erweiterte choreografische Praxis entziffern könnten. → ∞ Unter Choreografie verstehe ich dabei ein Schreiben von Bewegung, und ich verwende hier das Wort ‚erweitert‘, um auf den Umstand zu verweisen, dass der Maßstab dieser Choreografie über das Atelier oder den Raum

nimmt es die Bedeutung eines Schreibens von Tanz an. Ich behaupte damit nicht, dass meine alltäglichen Bewegungen als Tanz verstanden werden können; das erscheint mir einen poetischen Schritt zu weit zu gehen. Ich möchte meine Praxis vielmehr mit Georges Perecs Begriff des „Endotischen“ (im Gegensatz zum „Exotischen“) assoziieren, den er in *L'Infra-ordinaire* (1973) vorschlägt. Hier postuliert er, dass uns die täglichen Nachrichten alles außer das Tägliche präsentieren und dass wir „das Habituelle befragen sollen“ (Perec 1973: 210).

– Teri Rueb ist eine Künstlerin, die in ihren Arbeiten schon früh GPS genutzt hat. Dieses Zitat stammt aus einer E-Mail von Teri Rueb an Karen O'Rourke, zitiert in: *Walking and Mapping – Artists as Cartographers* (Cambridge, Mass.: MIT Press 2013), S. 134.

∞ Dies tun Daniel Belasco Rogers und ich (wir arbeiten unter dem Namen *plan b* zusammen) in unseren persönlichen GPS-Kartierungen. Vgl. <http://planb-performance.net/works/lifedrawing/> (13.02.2018).

∞ Verfolgen wir die Etymologie des Wortes ‚Choreografie‘, dessen Reise vom griechischen *khoreia* hin zum lateinischen und französischen Wort *chorégraphie*, so

↗ I joined Daniel Belasco Rogers in his daily mapping which he began in 2003. Things that are omitted are flights and underground journeys. Naturally, there are also human errors that have occurred such as running out of batteries or failing to download tracks in time leading to data loss.

5 The question of the 'readability' of our scribbles/mappings/drawings is of great concern to us as artists. We prefer to exhibit maps of Berlin in Berlin and London in London so that the spectator should, through the repetition of our traces, be able to recognise the city that they are in: be it defined by a large river like the Thames or the S-Bahn-Ring or the straight axis of the Strasse des 17. Juni in Berlin.

6 See <http://planbperformance.net/works/narrating-our-lines/> (13.02.2018).

recording with a GPS everywhere that I go since 2007, I therefore have a record of my movements over the last ten years. → ↗ If I begin to reflect on this practice that incorporates everyday life with art making, I find myself preoccupied with issues of materiality; searching for means to aesthetically translate digital data into different forms and formats; and issues of scale, the reception of the large orbiting movements of the satellites 40,000 kilometres away that allow my small scribbles on earth to be written. → 5

It is through these musings on materiality and scale that I became fascinated by the idea of this practice as a kind of expanded choreography—a writing of movement on a larger scale. How then should I 'read' these movements and if this practice is seen as an act of writing what meanings can be contributed to it? When I look at the large ink-jet prints of the cities where I spend most of my time such as Berlin, I am struck by the disappearance of the everyday diary that makes speaking about any individual journey on a regular route/commute tricky. This is due to familiarity bleeding into the mundane over a long duration of time and not necessarily allowing for any specific recall, but rather a guessed hunch deemed from the time-stamp, location, and date. → 6 This relates to the *plan b* video piece *Narrating Our Lines* where in 2010 we try to recall what we are doing based on the animation of the journeys from 2007: we often struggle to 'know' what the database references with ease, we struggle to 're-read' what we have 'written.' A feature of the GPSs that civilians use is the lack of precise location (currently the best is three-meter accuracy as opposed to centimetre accuracy that the military affords), and through this inaccuracy

→ Daniel Belasco Rogers begann mit seiner täglichen Aufzeichnung per GPS im Jahr 2003; ich schloss mich ihm 2007 an. Flüge und U-Bahn-Fahrten werden nicht mitaufgezeichnet. Und auch menschliche Fehler kamen vor, wie etwa leere Batterien oder

der Verlust von Daten aufgrund nicht rechtzeitiger Speicherung.

des Theaters, in dem Künstler*innen oft arbeiten, hinausreicht. Seit 2007 habe ich alle meine Wege mit einem GPS-Gerät aufgezeichnet; ich habe also eine Dokumentation meiner Bewegungen der letzten zehn Jahre. → → Wenn ich beginne, über diese Praxis nachzudenken, die alltägliches Leben und Kunstproduktion miteinander verbindet, ruft das für mich drei Themen auf: Materialität; die Suche nach Mitteln, um digitale Daten in unterschiedliche ästhetische Formen und Formate zu übersetzen; und Maßstab, also der Empfang von Signalen von in 40.000 Kilometern Höhe die Erde umkreisenden Satelliten, die es mir erlauben, meine kleinen Wegzeichnungen auf der Erde aufzuschreiben. → ∞

Durch das Nachdenken über Materialität und Maßstab stieß ich auf die mich faszinierende Idee, diese Aufzeichnungspraxis mit GPS als eine ‚erweiterte Choreografie‘ zu verstehen – ein Schreiben von Bewegung in einem größeren Maßstab. Wie jedoch sollte ich diese Bewegungen ‚lesen‘? Und: Wenn diese Praxis als ein Akt des Schreibens verstanden werden würde, welche Bedeutungen gingen damit einher? Wenn ich die großen Tintenstrahldrucke der Städte betrachte, in denen ich die meiste Zeit meines Lebens verbracht habe (wie etwa in Berlin), überrascht mich das Verschwinden des alltäglichen Tagebuchs, welches das Sprechen über irgendeine einzelne Wegstrecke, die ich regelmäßig zurücklege bzw. pendele, schwierig macht. Grund dafür ist die Vertrautheit, die langsam auf das Alltägliche oder Gewöhnliche abfärbt und die nicht zwangsläufig eine spezifische Erinnerung hervorruft, sondern eher eine vorsichtige Ahnung, die von Zeitstempel, Ort und Datum ausgelöst wird. → ∞ Darauf bezieht sich die Video-Arbeit *Narrating Our Lines* (2010) von *plan b*, in der wir auf Grundlage einer Animation der von uns seit 2007 zurückgelegten Wege versuchten, uns daran zu erinnern, was wir an einem bestimmten Tag gemacht haben: Uns fällt es oft schwer, zu ‚wissen‘, auf was die Datenbank mit Leichtigkeit verweist; wir ringen darum, das ‚wieder zu lesen‘, was wir geschrieben haben. Die GPS-Geräte, die Zivilpersonen nutzen,

∞ Die Frage nach der ‚Lesbarkeit‘ unserer Kritzeleien/Kartierungen/Zeichnungen ist für uns als Künstler*innen von großer Bedeutung. Wir bevorzugen es, Zeichnungen aus Berlin in Berlin und solche aus London in London auszustellen, sodass es den Betrachter*innen, durch die Wiederholungen unserer Spuren, möglich ist, die Stadt, in der sie sich befinden, wiederzuerkennen, sei diese bestimmt durch einen großen Fluss wie die Themse oder den S-Bahn-Ring oder die gerade Achse der Straße des 17. Juni in Berlin.

∞ Vgl. <http://planbperformance.net/works/narrating-our-lines/> (13.02.2018).

7 *All of our
Traces in Berlin
2011*, see [http://
planbperformance.
net/works/acrylic/
\(13.02.2018\).](http://planbperformance.net/works/acrylic/)

Image 1

the streets that I regularly traverse become thick troughs of use; in the case of the printed maps dark lines become impossibly larger than the actual streets. Michel de Certeau in *The Practice of Everyday Life* (1984) makes the distinction between *place* founded by “inert bodies” and *space* as “a practiced place,” where his work specifically deals with “the uses of space [...] the ways of frequenting or dwelling in a place” (De Certeau 2011: 117–118). In this way, I move through places with the GPS making traces and when I materialise these traces, they become a space created through use.

In another GPS map based work, → ↗ we wanted to show how another topography is created through this repeated movement by engraving into plexi-glass each journey we made over a year. In terms of reading the GPS drawing it is the ‘one-off’ journeys to a lesser known part of town that are more easily recalled through being out of the ordinary and represented by a single solitary line. It is perhaps worth noting here that, as an artistic practice, it is less about a ‘filling in’ of a city with journeys to cover unknown terrain, but rather a kind of ‘rubbing’ of where my daily journeys lead me in the given structure of a city, as if my repetitious action across the city reveals the structure of streets, buildings, park etc. However, cities are not ‘finished’ but in flux, and Berlin is even more of a building-site than other major European cities. There are journeys in my maps that are now impossible, e.g. learning to ride a tandem on a central waste-ground that is now a huge shopping centre (a large concrete structure does not allow for GPS reception) close to Alexanderplatz.

Already I am speaking in ‘diary terms,’ annotating the journeys taken. Perhaps it is the conscious act



Abbildung 1

sind im Kontrast zu denen des Militärs gekennzeichnet durch eine Ungenauigkeit in der Lokalisierung (derzeit beträgt die erzielbare Genauigkeit drei Meter, während sie im Militär im Zentimeterbereich liegt). Durch diese Ungenauigkeit zeichnen sich die Straßen, die ich regelmäßig entlanggehe, als dicke Mulden in der Zeichnung ab, sodass im Fall der ausgedruckten Karten die dunklen Linien viel breiter erscheinen als es die tatsächlichen Straßen sind. In seinem Buch *Die Kunst des Handelns* (1988) unterscheidet Michel de Certeau zwischen *Ort*, bestimmt durch das Dasein unbewegter Körper, und *Raum*, der durch Handlungen geschaffen wird. De Certeau beschäftigt sich hierin vor allem mit den „Umgangsweisen mit dem Raum“ (De Certeau 1988: 222), den Weisen des Aufsuchens und Verweilens an einem Ort. Auf diese Weise erzeugt das GPS Spuren, wenn ich mich von Ort zu Ort bewege, und wenn ich diese Spuren materialisiere, verwandeln sie sich in einen Raum, der durch seine Nutzung überhaupt erst entsteht.

In einer anderen, auch auf einer GPS-Kartierung basierenden Arbeit wollten wir zeigen, wie sich durch wiederholte Bewegung eines Lasers über eine Plexiglas-Platte, der all diejenigen Wege nachzeichnete, die wir im Laufe eines Jahres zurückgelegt hatten, eine andere Art von Topografie materialisierte. → ↗ Mit Blick auf die Lesbarkeit sind es die einmaligen Fahrten in weniger bekannte Teile der Stadt, an die man sich leichter erinnert, da sie aus dem Gewöhnlichen herausragen und durch eine einzelne dünne Linie markiert werden. Hier ist es vielleicht wichtig zu erwähnen, dass unsere künstlerische Praxis weniger darauf gerichtet ist, eine Stadt ‚auszufüllen‘, indem man durch Wege und Fahrten unbekanntes Terrain erkundet, sondern vielmehr als eine Art des ‚Abreibens‘ dessen verstanden werden kann, wohin mich meine täglichen Wege in der gegebenen Struktur der Stadt führen, so als ob meine wiederholten Handlungen quer durch die Stadt die Struktur von Straßen, Gebäuden, Parks usw. sichtbar werden lassen. Städte sind jedoch keine ‚fertigen‘ Gebilde, sondern beständig in

↗ *All of our
Traces in Berlin
2011*, vgl. [http://
planbperformance.
net/works/acrylic/
\(13.02.2018\).](http://planbperformance.net/works/acrylic/)

∞ This is distinct from aligning the work with ‘The Quantified Self’ movement (by Gary Wolf and Kevin Kelly) that began in 2007, both on aesthetic grounds of not enough care taken with the slick visualisations as well as on economic and legal grounds because the methods of data collection/observation and analysis/feedback are often reliant on proprietary hardware and software where the data itself is often uploaded to the company and therefore in their possession before showing it to the user (like fitness trackers or smartphone applications). The work of *plan b* is critical of big data mis/uses and prefers to use self-written software (that is made and shared with the open source community through Github) as well as locally stored data rather than assigning it to some corporate server network in the ‘cloud.’

∞ An artist project called “Paris Souvenirs” (2009–2010), initiated by Mayumi Okura and Dominique Cunin, refers to this editing out of certain features on streets and then renders 3D drawings of the things they could remember encapsulated in snow shakers. See <http://mayumiokura.acronie.org/paris-souvenirs/> (13.02.2018).

of recording that allows another kind of awareness when stepping outside, always prepared with a GPS attached to my handbag and extra batteries in my pocket. Yet I have lived, and continue to live, with a piece of technology (the GPS data downloaded to a computer) that can recall in very different ways than I can, and that can store large amounts of data that can be quickly accessed, as opposed to my slow and intermittent recall. I think of the GPS data as also acting as a trigger for memory or a memory prosthesis if you like, albeit one that is reliant on military systems (currently we have access to the set of satellites put in place by the American and Russian military) and human maintenance—recording, downloading, cleaning, storing and materialising. I can find out through our database where I was on this day for the last 10 years, or how long I spent outside over a year, or how much time I spent in which place, or how fast I walk, or the speed I cycle. → ∞

I can also see the difference between a ‘felt’ journey and its physical-geographic representation using GPS. To give an example of this: if I try and draw in pencil on a sheet of paper a representation of the journey from my flat to the studio, I lose the proportions of streets, the ‘correct’ angles of the lines, and the scale. My felt experience of this journey expands parts of roads that ‘feel’ long perhaps due to monotonous architecture or a lack of physical feature in a landscape. → ∞ If I then compare my version to that which the GPS renders with the use of a pen-plotter, the difference is clear. Perhaps one could argue that my rendering of this journey has a personal flair, that it is like a kind of handwriting, whereas the text I am typing now is like the GPS rendition—clear, mechanical and precise, it pays heed to the

Veränderung begriffen; und im Kontrast zu anderen europäischen Hauptstädten ist Berlin eine einzige große Baustelle. So finden sich in meinen Kartierungen vergangener Jahre Wege und Durchgänge, die heute nicht mehr möglich sind, wie etwa das einstige, in Nähe des Alexanderplatz gelegene Brachland, auf dem ich das Tandemfahren lernte und wo heute ein großes Einkaufszentrum steht, dessen massive Betonstruktur keinen GPS-Empfang erlaubt.

Ich schreibe bereits in einem Tagebuch-Modus, indem ich die zurückgelegten Wege kommentiere. Vielleicht ist es der bewusste Akt der Aufzeichnung, der eine andere Form der Wahrnehmung und Aufmerksamkeit erzeugt, sobald ich das Haus – mit dem an meiner Handtasche hängenden GPS-Gerät und Ersatzbatterien in meiner Tasche – verlasse. Bis jetzt habe ich und werde ich weiterhin mit einer Technologie leben (den auf einem Computer gespeicherten GPS-Daten), auf ganz andere Weise, als ich es könnte, Dinge erinnert und große Mengen an leicht zugänglichen Daten speichert, im Gegensatz zu meinem langsamen und lückenhaften Gedächtnis. Für mich fungieren die GPS-Daten auch als eine Art Trigger, die Erinnerungen wachrufen, oder, wenn Sie so wollen, als Erinnerungstützen, wenngleich diese von einem militärischen System (derzeit haben wir Zugang zu einer Anzahl von Satelliten, die vom US-amerikanischen und russischen Militär ins All gebracht wurden) und menschlicher Verwaltung abhängig sind: aufzeichnen, herunterladen, reinigen, speichern und materialisieren. Durch unsere Datenbank kann ich herausfinden, wo ich in den letzten zehn Jahren an einem bestimmten Tag war, wie viel Zeit ich während eines Jahres draußen verbracht habe, wie lange ich mich wo aufgehalten habe, wie schnell ich gelaufen oder mit welcher Geschwindigkeit ich Fahrrad gefahren bin. → ∞

Mithilfe des GPS ist es mir auch möglich, einen Unterschied zwischen einer ‚gefühlten‘ Wegstrecke und ihrer physisch-geografischen Darstellung zu erkennen: Wenn ich also versuchen würde, mit einem Bleistift auf einem Blatt Papier eine

∞ Hier gibt es jedoch einen Unterschied zu der 2007 von Gary Wolf und Kevin Kelly gegründeten „Quantified Self“-Bewegung, zum einen in ästhetischer Hinsicht (Fehlen einer Hochglanz-Visualisierung), zum anderen in ökonomischer und juristischer Hinsicht, insofern als ihre Methoden der Datensammlung/-beobachtung und der Analyse/Feedback auf firmeneigener/geschützter Hard- und Software beruhen. Die Daten werden

hier oft in Firmendatenbanken geladen (und sind damit in ihrem Besitz), bevor sie den Nutzern zur Verfügung gestellt werden wie im Fall von Fitnessuhren oder Smartphone-Anwendungen. Die Arbeiten von *plan b* dagegen sind geprägt durch eine Kritik an der Nutzung und dem Missbrauch von Big Data. Wir bevorzugen es, selbstgeschriebene Software (die von uns produziert und via Github mit der Open-Source-Community geteilt wird) und lokal gespeicherte Daten zu verwenden, statt sie in der ‚Cloud‘ in das Servernetzwerk einer Firma einzuspeisen.

☐ I was touched when reading Tim Ingold's
 Preface and Acknowledgements for *Being Alive*.
Essays on Movement, Knowledge and Description
 (2011) where he says: "Why do we acknowledge
 only our textual
 sources but not the
 ground we walk,
 the ever-changing
 skies, mountains
 and rivers, rocks
 and trees, the
 houses we inhabit
 and the tools we
 use, not to mention
 the innumerable
 companions, both
 non-human animals
 and fellow humans,
 with which and
 with whom we
 share our lives?"
 (Ingold 2011: xii)

= This is
 borrowed from
 the Situationist
 International and
 documented in Guy
 Debord's *Society of
 Spectacle* (1967).

☒ Wilfried Hou
 Je Bek instigated
 this as a walking
 practice inspired by
 computing systems;
 he called it PML
 (Psychogeographic
 MarkUp Language).
 We added the
 GPS to record the
 results in order to
 make maps and
 animations.

shapes of letters or streets, whereas handwriting can lose
 precision through the desire to be faster or, in the case
 of my drawing of a journey, through the imprecision of
 my memory.

This ability of the GPS to trace paths walked,
 cycled, driven and travelled over-ground, I would argue,
 makes a new kind of reading of an 'urban text,' one that
 De Certeau felt was impossible to read when he ob-
 served the people 'down below' from the World Trade
 Center, "whose bodies follow the thicks and thins of an
 urban text they write without being able to read it" (De
 Certeau 2011: 93). What that 'urban text' expresses is
 another matter. For me, it is often a trigger to annotate
 other stories of places and spaces, it is a series of lines
 that allow me, often with additional information such as
 time and place, to tell the story of my relation to a place
 through my telling of how I use it. → ☐

When we share our techniques and experi-
 ences of working with GPS with others, we often use
 techniques borrowed from psychogeography as other
 ways to generate new experiences or journeys within a city.
 A simple way is the drift or *dérive*, → = a wandering with-
 out intent or goal, but rather following one's own 'desire.'
 One can clearly compare what the contrast between the
 lived feeling or sensation of that journey was in relation
 to the mapped journey represented with a GPS trace and
 reduced to a line. Or an algorithm walk → ☒ taken using
 very simple instructions: first right, second left, repeat,
 but the real-world translation, defining what constitutes
 a 'left' or a 'right,' can sometimes be complex: does one
 include 'desire paths' created by pedestrians in parks? Or
 entrances to industrial estates? We often then animate
 these journeys to show the synchrony of several people, or

Darstellung meines Weges von meiner Wohnung zum Atelier aufzuzeichnen, gehen die Proportionen der Straße, die ‚korrekten‘ Winkel der Linien und der Maßstab verloren. Meine gefühlte Erfahrung dieses Wegs verlängert bestimmte Teile der Straßen, die sich aufgrund monotoner Architektur oder einem Fehlen markanter Eigenschaften in der Umgebung lang anfühlen. → ☉ Wenn ich meine Zeichnung mit der Darstellung vergleiche, die das GPS mithilfe eines Zeichenstift-Plotters liefert, wird der Unterschied deutlich. Man könnte vielleicht einwenden, dass meiner Darstellung des Weges etwas Persönliches anhaftet, dass sie eine Art Handschrift ist, während der Text, den ich jetzt gerade tippe, wie eine GPS-Darstellung funktioniert: klar, mechanisch und präzise. Letztere beachtet die Form der Buchstaben, während die Handschrift durch den Wunsch schneller zu schreiben an Präzision verlieren kann oder, wie im Fall meiner Darstellung des Weges, durch die Ungenauigkeit meiner Erinnerung.

Diese Fähigkeit des GPS, die Wege, die man gehend, Fahrrad fahrend, Auto fahrend oder reisend oberirdisch zurücklegt, nachzuvollziehen, ermöglicht eine neue Art und Weise des Lesens des ‚urbanen Textes‘. Dieser bleibt gemäß De Certeau dann unlesbar, wenn der Beobachter aus der Position eines Beobachters auf dem Dach des World Trade Center die Bewegungen der Fußgänger verfolgt, „deren Körper dem mehr oder weniger deutlichen Schriftbild eines städtischen ‚Textes‘ folgen, den sie schreiben, ohne ihn lesen zu können“ (De Certeau 1988: 182). Was dieser ‚städtische Text‘ ausdrückt, ist nochmal eine andere Sache. Für mich ist dieser oft ein Impuls, andere Geschichten von Orten und Räumen zu erzählen; er ist eine Abfolge von Linien, die es mir ermöglichen, unter Bezug auf weitere Informationen wie Zeit und Ort, die Geschichte meines Verhältnisses zu diesem Ort zu erzählen, indem ich davon berichte, wie ich diesen Ort nutze. → ☉

Wenn wir unsere Techniken und Erfahrungen der Arbeit mit dem GPS mit anderen teilen, beziehen wir uns oft auf

☉ Ein von Mayumi Okura und Dominique Cunin initiiertes künstlerisches Projekt mit dem Titel „Paris Souvenirs“ (2009–2010) bezieht sich auf dieses Aus-

blenden bestimmter Eigenschaften der Straßen. Dabei fertigen sie 3D-Zeichnungen – in der Form von Schneekugeln – der Dinge an, an die sie sich erinnern konnten.

☉ Die Lektüre des Vorworts und der Danksagung in Tim Ingolds Buch *Being Alive. Essays on Movement, Knowledge and Description* hat mich berührt. Hierin schreibt er: „Warum erkennen wir nur Texte als Quellen an und nicht den Grund, auf dem wir gehen, den sich ständig verändernden Himmel, die Berge und Flüsse, Steine und Bäume, die Häuser, in den wir wohnen und die Werkzeuge, die wir nutzen, ganz zu schweigen von den unzähligen Begleitern, sowohl nicht-menschliche Tiere als auch andere Menschen, mit denen wir unsere Leben teilen?“ (Ingold 2011: xii).

Of course, cities try to dictate where one can and cannot go and there is an increasing risk of losing public space to corporations and private companies/entities. Adventurous artists and psychogeographers Heath Bunting and Kayle Brandon in their project *Borderxing* explore 'hacking' areas often through trespassing. See <http://www.irational.org/heath/borderxing/> (13.02.2018).

This is also the way that the artist Jeremy Wood thinks of his GPS drawing practice (see O'Rourke 2013: 134). This is particularly clear in his large-scale campus wide drawing *Traverse Me* from 2010. See http://www.jeremywood.net/artworks/traverse_me.html (13.02.2018).

The researcher and artist Simo Kellokumpu in his year-long project *Seasons as Choreographers: Where Over the World is Astronaut Scott Kelly?* (March 2015–2016) not only plays with time and scale,

mirroring the orbiting that the astronaut Scott Kelly undertakes as Kellokumpu takes daily walks around the block considering himself a 'silent duet partner.' Here the seasons on earth also play a large part of the piece which presumably were not an issue for Scott Kelly. See <https://simokellokumpu.org/2016/03/02/seasons-as-choreographers/> (13.02.2018). As *plan b* we have often thought about how the seasons change our movements patterns—with time spent outside noticeably increasing as warmer weather comes as is evident in the project *Knotted Time*. See <http://planbperformance.net/works/knotted-time/> (13.02.2018).

groups of people, undertaking the task at the same time.

In those abstract lines devoid of other information such as street names and physical features, a kind of rubbing or revealing of the city occurs as it is written by putting one's body through those spaces and places: just as a charcoal rubbing of an engraving or grate creates a 'facsimile' or 'copy' of its form. So, too, does the body, over countless daily journeys, reveal the (in our case urban) structure of the places one lives. → So we wait to see, after years of collecting traces of movements, what gets revealed, concealed, built up or written between the city and us, knowing that the city is not a set score, but an ever-changing set of variables.

The tool that allows this writing is the 'geodetic pencil' or a 'cartographic crayon'. → Carrying a simple Garmin GPS eTrex receiver is more precise and reliable as a device than what smartphones currently offer. I think of these as rough, thick, dried-up markers in comparison to our fine pens. The orbiting → of GPS satellites writes large 'O's twice a day like a series of overlapping rings mapping the wonky rock that we are held to by gravity. Down here on earth, I wait to catch the signal from at least four satellites in order that my text may start to be written. This triangulation from the fast orbiting bodies using atomic clocks allows me to write the drawing of my life: an elaborately expensive scientific feat for a small gesture of everyday action. Fast, accurate, and hugely expensive cosmic bodies move at alarming speed so that I may track my body at relatively slow speeds on ground level. These discrepancies in distance and speed so that one may ascertain time and place haunt me: as privileged members of the western elite with devices in our pockets who are able to re-write the

☐ Diesen Begriff haben wir von der Situationistischen Internationalen entliehen; er ist dokumentiert in Guy Debords *Gesellschaft des Spektakels* (1967).

☐ Wilfried Hou Je Bek initiierte diese Gehpraxis, die von Computersystemen inspiriert war, die er PML (Psychogeographic Markup Language) nannte. Wir haben zu dieser Praxis die Nutzung

des GPS hinzugefügt, um die Ergebnisse zu dokumentieren und Karten sowie Animationen anzufertigen.

☐ Natürlich versuchen Städte, den Menschen vorzuschreiben, wo sie hingehen dürfen und wo nicht; zudem nimmt das Risiko immer mehr zu, dass öffentliche Räume an Kapitalgesellschaften und Privatunternehmen verkauft werden. In ihrem Projekt *Borderxing* erforschen die experimentierfreudigen Künstler*innen und Psychogeografen Heath Bunting und Kayle Brandon ‚Hacking‘-Areale in der Stadt durch unerlaubtes Betreten. Vgl. <http://www.irational.org/heath/borderxing/> (13.02.2018).

☐ So beschreibt auch der Künstler Jeremy Wood seine GPS-Zeichenpraxis (vgl. O'Rourke 2013:

134). Deutlich wird dies insbesondere am Beispiel seiner großangelegten, einen Uni-Campus umspannenden Zeichnung *Traverse Me* aus dem Jahr 2010. Vgl. http://www.jeremywood.net/artworks/traverse_me.html (13.02.2018).

Techniken, die der Psychogeografie entliehen sind – als Möglichkeit, neue Erfahrungen oder Wege in einer Stadt zu generieren. Ein einfacher Weg ist das Umherschweifen oder *dérive*, → ☐ ein Gehen ohne Intention oder Ziel, das vielmehr inneren Impulsen und Anregungen aus der Umgebung folgt. Das gelebte Gefühl oder die Empfindung, die dieser Weg ausgelöst hat, lässt sich in seinem Kontrast zu dem durch GPS-Spuren kartierten und auf eine Linie reduzierten Weg klar beschreiben. Oder ein Algorithmus-Spaziergang, → ☐ der einfachen Anweisungen folgt: Erste rechts, Zweite links, wiederhole – wobei die Übersetzung dieser einfachen Anweisungen in Handlung im Gehen manchmal komplizierter sein kann: Was genau bedeutet ‚rechts‘ oder ‚links‘? Zählen auch die von Passanten geschaffenen Abkürzungen in Parks? Oder Zufahrten zu Gewerbegebieten? Oft animieren wir diese Wege, um die Synchronie zwischen verschiedenen Personen oder Gruppen aufzuzeigen, die gleichzeitig an diesen Spaziergängen teilnehmen.

Was sich in diesen abstrakten Linien ereignet, aus denen Informationen wie Straßennamen und materielle Eigenschaften getilgt sind, ist eine Art von Durchpausen oder Ent-Deckung der Stadt, die dadurch geschrieben wird, dass sich ein Körper durch diese Räume und Orte bewegt. Ähnlich wie das Durchpausen einer Gravur oder einer Oberfläche mit Kohle ein ‚Faksimile‘ oder eine ‚Kopie‘ der Form herstellt, legt auch der Körper in unzähligen täglichen Bewegungen und Wegen die (in unserem Fall urbanen) Strukturen der Orte offen, an denen man lebt. → ☐ Nach so vielen Jahren des Sammelns der Spuren unserer Bewegungen ist es spannend zu sehen, was sich zeigt, was sich verbirgt, was sich zwischen der Stadt und uns ereignet und schreibt, immer mit dem Wissen, dass die Stadt kein fixer Handlungsplan ist, sondern eine sich permanent wandelnde Ordnung von Variablen.

Das Werkzeug, das uns dieses Schreiben erlaubt, ist der ‚geodätische Bleistift‘ oder die ‚kartografische Kreide‘. → ☐ Gegenüber einem Smartphone bietet ein einfacher Garmin GPS

scales and proximity of movement on earth. A new stage is emerging beyond the page or the studio, but expanded to a borough-, a city-, and country-wide performance of sorts. Currently, there is not an audience that can watch me track my journeys ‘live,’ however there are plenty of devices and apps that allow this already. If this daily action is a performance in ‘real time,’ it is documented live but re-animated in its many material manifestations from past events.

What difference does it make if I call this practice writing or drawing? Interestingly, the point that Tim Ingold makes is that although “Drawing is fundamental to being human—as fundamental as are walking and talking, [...] contemporary western society attaches little value to drawing. [...] With writing, of course, it is the other way about, since the inability to write—so called illiteracy—is considered a shameful deficit that should be at all costs rectified” (Ingold 2011: 177). The quest for a literate practice—one that communicates beyond one’s own experience feels at stake, therefore, in the naming of it as ‘drawing’ or ‘writing.’ It is worth noting that Ingold is deeply engaged with practices that favour material processes and craft rather than digital techniques. However, I continue to relate to, and am seduced by, the assertion that “as they make things, practitioners bind their own pathways or lines of becoming into the texture of the world” (Ingold 2011: 178). In that way he speaks of a practitioner being in a process of ‘gathering’ rather than ‘projection’ that is more analogous to weaving or sewing. → 16

If writing is, however, ‘verbal composition’ performed with either a keyboard or pen, then Ingold points out that James Clifford emphasised that

Image 1

¹⁶ The artists Jen Southern & Jen Hamilton made in 2006 a tapestry map called *Running Stitch* translating the GPS journeys of gallery visitors into sewn pathways. See <https://www.fabrica.org.uk/running-stitch> (16.02.2018).



Abbildung 1

eTrex-Empfänger mehr Möglichkeiten und ist als Gerät zugleich präziser und verlässlicher. Für mich entsprechen diese Geräte – im Vergleich zu Finelinern – eher den groben, dicken, ausgetrockneten Filzstiften. Die erdumkreisenden Bewegungen → ¹⁵ der GPS-Satelliten beschreiben zwei Mal am Tag große Os, vergleichbar mit einer Reihe von einander überlagernden Ringen, die unseren wackeligen Planeten umschreiben, der von der Gravitationskraft gehalten wird. Hier auf der Erde warte ich auf Signale von mindestens vier Satelliten, um mit dem Schreiben meines Textes beginnen zu können. Diese Triangulation schneller, die Erde umkreisender Körper, die auf atomischen Uhren basieren, erlaubt es mir, eine Zeichnung meines Lebens anzufertigen: eine enorm teure wissenschaftliche Tat für eine kleine Geste im Alltag. Schnelle, exakte und ungeheuer kostspielige kosmische Körper bewegen sich in einer Besorgnis erregenden Geschwindigkeit, damit ich die Bewegungen meines Körpers in relativ geringer Geschwindigkeit auf der Erde aufzeichnen kann. Diese Unterschiede hinsichtlich Entfernung und Geschwindigkeit, die nötig sind, um Zeit und Ort zu bestimmen, verfolgen mich: Als ein privilegiertes Mitglied der westlichen Elite können wir mithilfe von Geräten, die wir in unseren Taschen tragen, die Maßstäbe und Distanzen von Bewegungen auf der Erde neu schreiben. Damit ist eine neue Ebene – jenseits des Blatt Papiers oder des Ateliers – im Entstehen begriffen, eine Ebene, die Performances auf so etwas wie Stadtteile, Städte und Ländern ausdehnt. Im Moment gibt es noch kein Publikum, das meine Wege ‚live‘ mitverfolgen kann; es gibt jedoch eine Vielzahl an Geräten und Anwendungen, die dies bereits möglich machen. Wenn alltägliche Handlungen eine Performance in Realzeit darstellen, wird diese ‚live‘ dokumentiert, reaktiviert in ihren unterschiedlichen materiellen Manifestationen aber vergangene Ereignisse.

Welchen Unterschied macht es, ob ich diese Praxis als Schreiben oder Zeichnen definiere? Interessanterweise hat Tim Ingold argumentiert, dass, obwohl „Zeichnen grundlegend

¹⁵ In seiner einjährigen Performance *Seasons as Choreographers: Where Over the World is Astronaut Scott Kelly?* (März 2015–2016) spielt der finnische Forscher und Künstler Simo

Kellokumpu nicht nur mit Zeit und Maßstab, wenn er die erdumkreisenden Bewegungen, die der Astronaut Kelly durchläuft, spiegelt, indem er tägliche Spaziergänge ums Haus unternimmt und sich auf diese Weise als ‚stiller Duett-Partner‘ Kellys begreift. Auch die Jahreszeiten auf der Erde spielen eine große Rolle in der Performance, die für Kelly selbst wohl nicht von Bedeutung waren. Als Künstlerduo haben wir oft darüber nachgedacht, wie die Jahreszeiten unsere Bewegungen verändern, insofern als man deutlich mehr Zeit draußen verbringt, wenn das Wetter wärmer wird. Dies zeigt sich im Projekt *Knotted Time*, vgl. <http://planb-performance.net/works/knotted-time/> (13.02.2018).

description involves “a turning away from dialogue and observation towards a separate place of writing, a place for reflection, analysis and interpretation.” (Ingold 2011: 241) For me, that is what occurs in the moments when I look back on the tracks made over time and ask myself what kind of things can be understood or ascertained—perhaps I draw first and write later. Unlike skilled draughtsmen and women, I cannot ‘improve’ my mark-making. I will not become a better GPS tracker, but rather, what I hope to develop, further explore and reflect upon, is the means of bringing the data into material processes and form, whilst searching for the appropriate interpretation that can open up the daily practice of recording movement for myself and others.

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Abbildung 1

zum Menschsein dazugehört – so grundlegend wie Gehen und Sprechen, [...] die westliche Gesellschaft ihm dennoch nur einen geringen Wert zuschreibt. [...] Mit dem Schreiben ist es natürlich genau andersherum, da die Unfähigkeit zu schreiben – der so genannte Analphabetismus – als ein beschämendes Defizit betrachtet wird, das um jeden Preis korrigiert werden muss“ (Ingold 2011: 177). Die Suche nach einer schreibkundigen Praxis, die jenseits der eigenen Erfahrung kommuniziert, scheint mit der Frage nach dem Unterschied der Zuschreibung als Zeichnen oder Schreiben auf dem Spiel zu stehen. Es muss jedoch angemerkt werden, dass sich Ingold weniger mit digitalen Techniken als vielmehr mit Praktiken auseinandersetzt, die besonders materielle Prozesse und Handwerk favorisieren. Dennoch beziehe ich mich weiterhin auf seine verführerische Behauptung, dass „Praktiker, wenn sie Dinge herstellen, ihre eigenen Pfade oder Linien des Werdens in die Textur der Welt einbinden“ (Ingold 2011: 178). In diesem Sinne spricht er von Praktikern, die sich in einem Prozess des Sammelns (statt der Projektion) befinden, der eher dem Weben oder Nähen analog ist. → ¹⁶

Ingold verweist mit James Clifford darauf, dass, wenn Schreiben als verbale, mit einer Tastatur oder einem Stift realisierte Komposition begriffen wird, der Akt des Beschreibens auch eine „Abwendung von Dialog und Beobachtung hin zu einem separaten Ort des Schreibens, einem Ort der Reflexion, der Analyse und Interpretation“ (Ingold 2011: 241) impliziert. Dies passiert für mich in jenen Momenten, wenn ich auf die bereits gemachten Fährten zurückschaue und mich frage, welche Dinge verstanden oder ermittelt werden können – vielleicht zeichne ich erst und schreibe später. Anders als geschickte Zeichner*innen kann ich meine Produktion von Linien nicht verbessern. Ich werde keine bessere Leserin der GPS-Spuren, aber ich hoffe, die Mittel der Übersetzung der Daten in materielle Prozesse und Formen entwickeln, weiter zu erforschen und reflektieren zu können, während ich nach einer adäquaten Interpretation suche, die die tägliche Praxis der Aufzeichnung von Bewegung für mich und andere erschließt.

¹⁶ Im Jahr 2006 stellten die Künstlerinnen Jen Southern und Jen Hamilton eine Wandteppich-Karte mit dem Titel *Running Stitch* her, die die GPS-Wege der Galeriebesucher in genähte Pfade übersetzte. Vgl. <https://www.fabrica.org.uk/running-stitch> (16.02.2018).

Mapping Mortality

plan b reflect on their lifelong mapping practice

Sophia New and Daniel Belasco Rogers

Sophia New and Daniel Belasco Rogers have been working together as the artist duo plan b since 2002 after moving from England to Berlin. Since 2003 (Daniel) and 2007 (Sophia), they have gathered every journey they make, every day with a GPS, a practice they continue to this day. This text was produced on an etherpad collaborative writing platform while Daniel was in Mainz and Sophia was in Berlin in February 2018. They produced the map Every Journey in Berlin 2007-2017 for this article [opens from contents page as an animated GIF]. It shows their traces in Berlin between 2007 and 2017.

Dan (D): My first question is, can you see the blue and red buildup gif?

Sophia (S): Yes and I'm interested in how much it looks like veins—very apt for *Livingmaps*!

D: So you are arterial blood (red) and I am veins.

S: Bodily images are often so associated with the city.

D: Are people living maps then?

S: I guess it is a symbiosis between the changing places and where we can go and the element of time—maps being a temporal and spatial representation. You once said the buildings and street furniture are the hardware of the city and us fleshy beings are the software aren't we?

D: I was sort of making a pun at the time, talking about accidents where we fall hard against the surfaces of the city (iron lampposts, kerbstones) and hurt ourselves.¹

S: I think your point was that cities often leave their marks on us but how do we leave marks on the city?

D: Wilfried Hou Je Bek also talks about humans as software in reference to his psychogeographic markup language.² Our 'marks' are often transient, or made on our own memories, our soft tissue.

S: Do you also mean our GPS marks are transient?

D: Yes, I think of them as soft, not hard.

S: When we materialise them into artworks do they remain hard or become soft?

D: I think of materialisation as hardening. This is also a term that is used in future proofing or security aspects of software development. The tracks are soft, transient, digital, (im)material. Making them granite or acrylic or wool, as we have done, is making them hard, for me, regardless of the actual hardness or softness of the material.

S: We harden our future with materialising seemingly immaterial digital data?

D: I don't think you can do anything to the future!

S: What about ideas that you look to maps of the past to predict where we will be going?

D: But we are always free to not do the things we did in the past. Or we think we're free. . .

S: Do you think our mapping practice is freeing? I think a lot of people see it as very restrictive and makes us captive to our GPS devices and you say you can no longer get lost which seems to make you sad as sometimes. It can be a beautiful thing to get lost.

D: Yes, it's quite hard for me to get lost, independently of whether I have a GPS or not. I'm not sure that has changed much about my ability.

S: Ah, in a way lucky you—I don't enjoy getting lost much and it can happen easily and can be quite stressful—the mapless GPS devices we have are a small indicator of where I was but not where I need to go. Still thankfully there is good old openstreetmap!³

D: Exactly—I consider you lucky. Even though it sometimes messes up your life a bit.

S: I was looking at the watery corner where you do your route to Qigong it is so visible on the map and do you feel it has also had a huge impact on your body too?

D: What do you mean by 'watery corner'?

S: There is what looks like a defined lake in the bottom left corner of the map. It is clearly a place I do not go to. I like how the places we have both been are dark purple-black as if combined journeys deepen a shared experience. . . or am I being too romantic?

D: I thought the purpose of this is to be romantic! That's only half a joke. I mean that the knowledge produced by musings / poetry / aesthetic reflection is as valuable as 'scientific data'. I wanted to ask you a question: You always said you'd do it for a year to find out how you were moving as Ruby, our daughter, was learning to walk. Now you've continued for a decade from that initial year, why do you keep going?

S: We also said we'd move to Berlin for a year and we have been here 17 years! But weirdly, I don't see a reason to stop. I find it oddly more satisfying to see the accumulation defining the place that I live in—it is not the summation of all of my experience in Berlin but it is a portrait of sorts.

D: And so the decision to keep going is actually a decision not to stop?

S: Yes.

D: If the accumulation is a portrait, do you recognise yourself?

S: I now recognise my most frequented places like the W of Wedding in North Berlin—without this practice I would not know its shape well enough. I do not have the bird's eye perspective ability that you do.

D: Do you think about the W shape you're making in Wedding on your way from Osloer Strasse or Nauener Platz to the Uferstudios?⁴ I mean actually as you're walking that route?

S: Honestly no, I need the distance from the act of making it. What do we know now by recording our journeys for 10 years? I am repeatedly asked why do you do that?

D: 15 years for me!

S: We often say to have a 'Drawing of our Lives'—now I wonder what difference does it make to call a map a map or a drawing?

D: And what sort of map is the carpet? What I mean is that if we take the same data and rather than represent the geographical relationships, but rather represent when we recorded rather than where. Is that a map? Is that a drawing?⁵

S: I think of it more as a new storage format, only we might need to leave some mode of decoding otherwise it remains enigmatic.

D: Is it not also (or primarily?) a way of visualising / materialising an aspect of the data? Rather than a simple storage format.

S: Yes, and naturally it is embedded with all sorts of aesthetic decisions the monochrome—the wool the method of knotting. But back to the more geographic map is it now a mortality practice? I mean an act of leaving traces till we can no longer move. What I know we both think about a lot is the excess of information we are generating and how we might need to delete stuff. I wonder what the difference is between forgetting and deleting?

D: Forgetting is what humans do, whether they like it or not. Deleting is what you can do with a machine. I guess the ethical question is, should we delete things from stores of data so that we parallel the human 'ability' to forget? There is evidence that forgetting is a necessity, intimately connected to learning. Could there be a right to be forgotten? On the other hand, if someone dies leaving a hard drive with their files on, how do we feel about deleting this? We wouldn't have Kafka's *The Trial* if his wishes about burning his work had been carried out.

S: I thought about writing software to 'undo' our lines when we die—unwrite them or erase them but is that too much like eradicating someone's existence?

D: I immediately think of what Ruby would think about that: our life's work autodestructing when we die. Wouldn't that be quite traumatic for her? Maybe these traces we leave have some resonance or meaning in a future we currently have no idea about. I'm remembering the Mass-Observation project, started in the 30s and revived in the 80s that was set up to record the general population's thoughts on daily life.

S: I guess that is the problem of tying a mapping practice so clearly to a living practice: they are un-entangleable. Is that a word?

D: The disentangleable practice of life and art?

¹ This was during Daniel's solo performance lecture *Unfallen*, commissioned by the Arnolfini in 2004

² In 2003, Wilfried Hou Je Bek was nominated for a software art prize for his '*Generative Psychogeography*' project.

³ The map that everyone can edit and use: <https://openstreetmap.org>

⁴ *The Uferstudios in Berlin* is the location (among other institutions) of the HZT, where Sophia has been teaching on the Solo Dance Authorship MA and where plan b regularly give workshops.

⁵ plan b's latest outcome from the GPS data is a series of carpets they call '*Knotted Time*', exhibited at the time of writing in the Villa Merkel gallery in Esslingen, Germany.

All Watched Over...

In the future I imagine that we will rise up and rebel against our devices.

We will be irritated that they know so much about us, things we cannot remember, actions that we can only speculate about, places that are now mysterious to us. To bring them into line with human fallibility we will have to force them to forget. We will program algorithms that create deliberate holes, deleted lacunae of nothingness, a comforting gap.

We will be freed from searching for bits of data for hours, as we will receive a message that simply says 'I am no longer able to retrieve that information'. In its stead we will be offered some other long-forgotten file to contemplate. The message might say: 'Alternatively I can offer this jpeg, shall I print it now or delete it?'.

We will remember that books last so much longer than the scratched CDs, flash drives and floppy discs that don't even make good coasters to stand our herbal tea on. Instead we print that grainy nondescript picture we were offered as a distraction from the email overload. Then a message appears that you have too many unread files and it will take too long to compress them all and seriously compromise the working of the machine, and therefore they have to be deleted now.

Finally we will have more time to roam with deer in the cybernetic forest whilst quietly and slowly (we will have slowed them down of course), the algorithms work their magic of relieving us of personal data. Data-deleting machines of loving grace, compassionately giving us our humanity back. Finally we'll learn that if it is important we'll write it down and if it's really important impress it in clay or carve it in stone. If it's more important than that we should write a song about it that children can sing for centuries, curious about what an email overload is or why people became slaves to their machines. And in the clutter of material things we'll become more ruthless. Only the precious things will remain. Some of them may be half-formed memories of us humans.

