

**The Memory Store: A collaborative online fiction, which  
explores the opportunities for participatory narrative  
experiences afforded by the shared space of the Internet.**

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requirements of Liverpool John Moores University  
for the degree of Doctor of Philosophy**

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## Abstract

This practice-led thesis explores the opportunities digital technologies afford for writers to create online fictional spaces to share with readers. The research asks how might authors utilise the shared space of the Internet to offer collaborative narrative experiences?

Part One of the thesis is a creative project, *The Memory Store*, <http://thememorystore.org> a hypertext, detective fiction, set in Liverpool in 2115, written with contributions from a hundred people. The work experiments with authorship as a collective experience in an online environment, considering ways in which we might collaboratively construct stories. This experimental project differs in its ambition from other collaborative online writing projects, such as *MacGuffin* (Comma Press and Manchester Metropolitan University, 2015) and *Rainy City Stories* (Openstories, 2008) by exploring methods to structure writing contributed by participants so that reading can flow from one writer to another with a narrative connection established by the site's interface.

Part Two of the thesis is a critical reflection that explores theories that have informed my creative practice. The research examines what Manovich described as 'spatial wandering,' (2001, p49) Nelson's term 'intertwingularity' (1974, p29) and 'the bricolage' that Turkle (1995, p51) referred to in respect of the Internet, to approach conceptualisations of digital technology as spatial, creating environments through which readers navigate to interconnected experiences, facilitating exploration, encouraging participation, communication and sharing. The thesis also considers narrative space, detective fiction and the archiving of collective memory in online environments to support the development of the creative project.

## **Part One: The Memory Store**

Accessible at: <http://thememorystore.org/>

**Best viewed on a computer in a chrome browser.**



## **The Memory Store**

*The Memory Store* website is an original hypertext fiction written with contributions from a hundred people who participated in workshops and made entries directly online. This creative project tests the possibility of orchestrating mass user-contributed content into a single coherent narrative experience. It is an exercise in collaborative world building in the space of the Internet.

The hypertext consists of an introduction, 25 lexia and 46 fictional news items written by myself (the author), a map of the fictional city (which incorporates user-submitted content), 10 manipulated photographs, a timeline of the history of Liverpool from 2008 to 2107 (which incorporates user-submitted content), 40 user-contributed short memories and 60 user-contributed lexia.

*The Memory Store* is a detective fiction presented through the interface of an imagined future technology in which residents of Liverpool in 2115 store and share their memories. Jules Stewart, a Pattern Surveillance Officer (a detective), archives her memories of criminal investigations in the store and uses the memories of other residents as evidence, revealing a more complete picture of the city to help her solve crimes. The principle of the project is that everyone knows something and together we know everything and so cases can be solved collectively by utilising ‘the wisdom of crowds’ (Surowiecki, 2004). Readers are thus engaged in a fictional world that invites them to write their own text into the narrative, submitting memories of the lives of their own fictional characters, the residents of Liverpool in 2115, to assist with the investigation.

The project was written and designed in stages so that Jules Stewart’s investigation by turn inspired and was affected by the contributions made by the project’s participants.



## The Contribution to the Field of Online Collaborative Fiction

Through the production of this participatory narrative I explore:

- The possibility of producing a coherent narrative experience created by multiple authors;
- The creation of a story world that orchestrates user submitted content to connect and reveal characters, locations and plot;
- The role of authorship in a collaborative environment and the ways in which authors might inspire and orchestrate user submitted content to collectively tell stories;
- Techniques of interface design and authorship (text and web) to create narrative cohesion between diverse content;
- How the tropes of detective fiction might be deployed online in a multimodal environment to be explored by readers;
- How the *bricolage* (Turkle, 1995) of the Internet might *intertwingle* (Nelson, 1974) content to generate collective histories from individual reminiscence.

## Methodology

My ambition was to author (write and design) an online story space that encouraged and facilitated others to add their own fiction, which I would develop into a single coherent narrative. My research experimented with the role of author, generating and directing collaborations over the duration of the project, remaining open to opportunities, reacting to ideas and possibilities that working with others would reveal. I saw this as a user centered design process. I was looking to develop a form of fiction for both writers and readers and so wanted to work with writers to understand how this might work in practice.

I adopted a prototyping approach, working iteratively in stages. Influential on my process were designers such as Bill Moggridge and his company Ideo who pioneered

user-centred design methodologies (now referred to as human centred design), which, ‘starts with getting to know the people we’re designing for,’ (Ideo, <https://www.ideo.org/approach> Accessed: October 2016). For me this meant working with writers from the start of the process to understand how they might participate and how this might best be facilitated.

Another influence was Bill Buxton the computer scientist and designer, who proposes that design is, ‘never a straight path...Even if we think we know at the outset what the product needs to be, in nearly all cases its definition changes, or is significantly refined as we progress’ (2007 p77). These ideas were important in relation to the work as a design of a space, a narrative tool for writers and readers, to create a new experience of reading and writing a text. In order for this to be at all successful I needed to work with readers and writers to see how they used the space provided and to prototype ideas with them to develop the project further.

This methodology reflects Sherry Turkle’s assertion in her work, *Life on Screen; Identity in the age of the Internet*, that, computers have encouraged more exploratory ways of working. She refers to *bricoleurs*, problem solvers who ‘tend to try one thing, step back, reconsider, and try another.’ (Turkle, 1995, p51) This sums up my approach to the creation of *The Memory Store* and my research practice.

The iterative user-centred design process I adopted differs from a traditional writing and publishing route. Print publishing is of course collaborative with editors involved, writers rarely work in isolation, but the process does not tend to involve readers until the work is completed and fixed in print. Working in the online space it is possible to test work from the concept stage through to completion with the end user.

Because of the fluid nature of web development, not having a print deadline after which time the volume is set and fixed, there is a possibility to keep adjusting in reaction to readers comments and observations of the site in use. This process can be seen in the context of the digital mode of production known as *modding*. Developed in

games industry practice the principle is that it is only when a computer game is played by players some issues will be apparent and then modifications will need to be made and either new iterations released or patches developed. This practice, new and only possible working with digital content, was the approach I took with the development of *The Memory Store*. This practice, different from print publishing, where content becomes finally fixed, means that work online is always open to modification.

### **The Collaborative Process**

The collaborative process I adopted was not one of working with others in an equal relationship, unlike some other experiments with collaborative fiction, digital or otherwise, whereby writers would come together to write, such as the experiments of the Oulipo writers or the collaborative digital project *The Unknown*. Nor was it an open invitation to add writing free from any constraints of type, style, or genre such as *MacGuffin* (Comma Press and Manchester Metropolitan University, 2015) or *Rainy City Stories* (Openstories, 2008) or my earlier experiment in collaborative fiction, *The Button Jar* (Haynes, 2013) (see Appendix E). My ambition was to bring writers together to add to developing themes in the production of a coherent mosaic. In this project I intended to author user contributed content into one cohesive narrative. My purpose was to develop a form of fiction that was a read-write experience whereby readers would not just read a narrative but play a part in its writing and for this to be tested the work had to be a singular plot woven from the contributed parts.

I decided early on against using blogging, wiki or social media technology, despite their ease of use. I did not want to be constrained by the ‘live’ aspect of writing in these social spheres, which implies a form of writing that is not edited. I attended a workshop with the Gentle Author, creator of *Spitalfields Life*, whose advice was to make a promise to readers, his own being, ‘Over the coming days, weeks, months and years, I am going to write every single day and tell you about life here in Spitalfields at the heart

of London.’ (The Gentle Author, 2009). This manages reader’s expectations and creates followers, as people know how often they can expect new content to appear, in this case every day, and follow accordingly. The development of The Memory Store was not regular and so making such a promise was not possible as the process was drawn out with long periods between the stages of development of the site. However I did commit to contacting participants as their work was added to the live site so that they could read their contributions in context. The participant’s relationship to the project was as residents of the Liverpool Corporate Strata uploading their memories to the collective archive. Their expectation was that their memory would add to the narrative world and contribute to the plot. I did commit to linking the contributed narratives into the central plot through hyperlinks.

Emma Segar notes, ‘The combination of epistolary and serialization gives live blog fiction a potential for interactive, real-time narration’ (2017, p3). This time element of blogs are useful for diary or epistolary narratives and this could have provided a framework for *The Memory Store*, the central spine of which is in essence a diary, the memory transcripts of Jules Stewart. It has proved a suitable format for other online narratives such as Segar’s own serialized blog fiction *Bad Influences*. However my ambition for *The Memory Store* was to work with users to develop the site, the plot and the writing. A blog form that deterred editing, in favour of an instantaneous live approach, was not as suitable as developing a website that could be adapted in response to participants. I wanted to take an iterative approach, to be able to design and edit. Reacting to user input was a key part of the project even to the extent of changing the plot or design of the site and the instantaneous nature of blogs and wikis mitigated against that. I wanted writers to contribute writing, not just comments on the action. Also I didn’t want to work with the associations that writers and readers would already have with these platforms. Scott Rettberg asserts that:

In networked computer environments in particular, collaboration is always both collaboration with other people and with systems. Processes are co-creators of collective knowledge.

(<http://retts.net/documents/cnarrativeDAC.pdf>, p1. Accessed 10<sup>th</sup> April 2019)

Therefore working with existing platforms that people already used would inevitably mean that writers and readers would carry over behaviours and expectations from their previous experiences. This also acknowledges that the systems used will affect, through their particular characteristics, the process and the creative content derived through their use.

### **The Stages of Production**

The first stage was to conduct workshops that tested out my ideas in the form of paper prototypes with groups of creative writing students. Then, informed by the paper prototyping, I wrote and designed the website and released an initial section of the narrative online (the first 10 lexia). Following this first stage the site was open to participation online and further workshops were conducted to generate more content. A second installment of the narrative responding to the user contributed content, adding ideas and themes into the developing plot, was released, followed by another round of eliciting content by conducting further workshops and prototyping ideas suggested by the resulting contributions from the first two stages. A third stage was to release another version of the site with more content and responding to contributors, to gather a final round of memories. Finally I drew the narrative to a close and uploaded a finished site that concluded the plot and presented the full narrative. This finished iteration is now live online, closed for contributions, a read-only site, with all of the contributions from workshops and those made directly online interwoven into *The Memory Store*. Iterations of the site which show the stages from a site open to contributions to a closed, read-only site are available in Appendix A.

The methodology for engaging writers and gathering user-contributed content was to conduct workshops with writing students at Lancaster University and Liverpool John Moores University, at conferences and at public events, as well as directly online, in a process of trial and error and observation. Throughout the development period I tested ideas for working with writers in workshops, with exercises designed to identify what material inspired contributions which could then be translated into sections on the website, thereafter to also evolve the workshop to generate further submissions, and further iterations of the site's interface design by using the website in workshops. I observed users accessing the site and discussed the work with participants at workshops to gain an understanding of my intended user group (people interested in writing, those interested in writing about Liverpool, those interested in writing about the future and those interested in collaborative writing and new media). This method allowed a collaborative process to develop. The workshops and the contributed work influenced not only the site design but also the fictional location, plot and character development as a shared vision emerged. This process is discussed further in Chapter Three.

## **Part Two: Thesis**





## **Introduction**

In Part One of this thesis I outlined my creative project, *The Memory Store*, my methodology and approach to its production. In Part Two, I will explore the theories that informed its production, the other projects that inspired the work and critically reflect upon my practice as author, designer and facilitator.

This research is in response to what Weedon terms a ‘revolution in technologies of communication,’ (2018, p46) that has ushered in new platforms to tell stories on that are, digital, networked and offer opportunities for writers to share narrative spaces with their readers. It is the exploration of narrative space online and the opportunities it affords that is the primary focus of my research. In regard to fiction I will examine the role of location, identifying it as a key part of a fiction’s structure, as well as a component in the escapist pleasure of reading. Narrative space, I will contend, is important in the storage, retrieval and navigation of artefacts in museums, institutions and memories in archives online, providing grand narratives in which individual items are contextualized in relation to each other, meaning derived from the placement of objects, their proximity to each other. Space also provides evocative triggers for memory and I explore its use in fiction as well as in memory archives. I will propose that the concept of space is inherent in our understanding of the Internet as we navigate and visit sites housed on servers located all around the world; that a sense of narrative space orientates our online journeys. These theoretical foundations not only provide inspiration for my creative practice but also provide a theoretical basis and criteria to critically reflect upon the production of *The Memory Store*.

In the opening line of, *If On A Winters Night A Traveller*, Italo Calvino evokes the pleasure of escaping reality for a while as reader’s minds slip into fictional space. He instructs the reader to, ‘Relax. Concentrate. Dispel every other thought. Let the world around you fade,’ (1979, p3) inviting readers to allow themselves to be transported into

the world of the novel. Weedon suggests, ‘arguably the best stories are those which you are lost in.’ (2018, p50). That narrative immersion in the fictional world, is a key aspect to a good story and location I propose is central to narrative immersion.

In no genre is location more important than in detective fiction from the Moors that surround Baskerville Hall to Miss Marple’s St Mary Mead, or Philip Marlowe’s Los Angeles or indeed the more recent evocations of Dublin in Tana French’s Dublin Murder Squad novels, or Peter May’s Lewis in his works set on the Hebridean island.. Evocative, atmospheric, these spaces draw us in like characters in the plot, revealing evidence, providing opportunities, motivations, places to hide and traps to capture victims and villains. In a work of detective fiction readers visit the scene of the crime, from which the plot develops. Location in detective fiction is more than setting. The lonely moor, the English village and the mean city streets not only spring easily to mind when we think of crime writers but also provide backdrops that fill the reader with anticipation and expectation, eager to explore and begin their hunt for clues. This genre calls for a highly engaged form of reading and now the digital realm of the Internet offers new possibilities for extending this engagement with digital fiction spaces, allowing for greater interaction, participation and exploration.

It is this aspect of reading which my research seeks to expand by engaging readers not just to imagine the fictional world presented, but also to add to it online and share their imaginings with the author and with other readers.

Moving from the text itself to consider the delivery platform we might propose that digital technologies are conceptualized as spatial. Readers online are invited to visit sites, to navigate environments. Ryan proposes that, ‘We have developed the habit of thinking of computers as machines that take us into a separate reality,’ (2016, p101) and it is this spatial dimension that has created an interactive platform for narrative that has turned readers into users, encouraging them to interact, browse and upload content to domains. This digital space in which fiction might now exist, can be visited,

manipulated and added to by the reader. The focus of the research in this doctorate is the possibility afforded by the Internet, for authors to share fictional spaces with their readers and the implication this shared narrative space has for future fictional projects and for the role of the author.

Although readers have always enjoyed escaping into fictional spaces these readerly journeys are solitary experiences. Italo Calvino's novel, *If On A Winters Night A Traveller* acknowledges the gulf that exists between an author, their reader and between other readers, and asks, 'Does the relationship between one Reader and the Other Reader remain that of two separate shells, which can communicate only through partial confrontations of two exclusive experiences?' (Calvino, 1979, p147)

Whilst fiction transports its readers to fictional realms, the imagined spaces triggered by the text remain exclusively in the mind of each reader. The sharing of fictional space comes later, through study or discussion in readers groups or in film adaptations where the text is visualized. Could the Internet go some way to bridge this gap? Could new forms of digital fiction offer the possibility to share narrative space? Of course, digital games and role-playing online bridge this gap but in this research I concentrate on text-based experiences.

My research proposes that new digital spaces for narrative might augment the power of fiction to transport readers collectively by providing possibilities for authors to create and share fictional locations that readers can not only see in their mind's eye, but can also add to. Authors might provide a narrative landscape that readers can populate for themselves and each other, thus changing or subverting the text to make it their own.

In examining these possibilities my research explores collaborative writing online, acknowledging the work of other collaborative projects such as *One Million Penguins* (Penguin Books and De Montfort University, 2007), *MacGuffin* (Comma Press and Manchester Metropolitan University, 2015), *Rainy City Stories* (Openstories, 2008) and others, but building on these, my ambition is to create a cohesive single

narrative experience that has a central author guiding writers imaginations, orchestrating their contributions and leading the reader through this contributed writing.

My fascination with collaborative writing is perhaps not surprising. I have always been interested in making stories with other people, not just hearing the stories of other's, not just facilitating others to tell their stories, but also examining the way in which individual stories intersect and combine to tell a shared narrative or present a collective memory of people, places or events. The way in which the Internet, as Ted Nelson described, 'intertwined' (1974, p29) content and the segueing through content that digital technology afforded appealed to me as a conduit for collective storytelling and suggested new opportunities for experiences that could connect diverse sources into a coherent narrative.

Early in my career I worked on community media projects producing short films and exhibitions of photography with groups of people. These products intertwined the experiences of individuals into one singular collective expression. For example, in 1990 I worked with a group of parents of children with special needs in Knowsley to make a film and produce a series of photographs. Each parent individually remembered their child's story and collectively related the experience of families altered by the arrival of a child with special needs. By collectivizing the story in this way the project offered both individual expressions and common experiences.

By 2000 my work was in the digital realm. At the International Centre for Digital Content I produced CD Roms, Web and DVD projects, collaborating with girls on video game narratives, communities of musicians online and the Liverpool Dockers. Since 1990 I have been a teacher and lecturer and I have guided others in their production of creative work in an educational context. This experience fostered an interest and developed my skills in working with others to produce creative products.

Most recently I experimented with user-contributed writing in my project *The Button Jar* (Haynes, 2013). This allowed me to test appropriate ways to engage and work with writers online. (For further information see Appendix E)

In 2016 I organized a MeCCSA funded symposium in collaboration with the Institute of Cultural Capital, ‘Storymaking: making stories *with* rather than just for the audience.’ (<https://storymakingblog.wordpress.com>) This event brought together practitioners with experience of participatory writing projects including from Comma Press (*MacGuffin*) and Openstories (*Rainy City Stories*).

This research brings together my interest in working with others to tell stories, my passion for writing, my knowledge of digital content production and my experience of and skills in facilitating creative practice in higher education.

So far I have used the term *new* in relation to experiences that might be possible online and through digital technology. This requires further clarification. The newness to which I refer relates to the characteristics that Lister et al define as, ‘digital, interactive, hypertextual, virtual, networked, and simulated.’ (2008, p13) Not all of these practices are in themselves *new*, in that interaction happened before digital technology for example, but in combination, in their application and scale, these practices represent a departure from previous media experiences. Lister et al cite Bolter and Grusin’s theory of remediation to examine the potential *newness* of new media, ‘that the “new”, in turn, in new media is the manner in which the digital technologies that they employ “refashion older media”’. (Ibid, p47) What is new is how the older media, in this case our experience of the book, is reformatted with the new technology. This is a useful approach and in this thesis I will examine the experience of reading and writing in both print and digital, pre- and post-Internet to consider what might be considered *new*.

A book is a complete package, the size, weight, cover, texture all part of the experience, providing tactile and visual clues to its content. That content is fixed and

whilst we might make notes in the margins, fold over the corners of pages, bend the spine so that the volume flops open at our favourite page, it cannot connect us to the author or other readers. We cannot add to it for others to see unless we write on the pages of our individual copy. We cannot choose our own trajectory through the text, or reorder the pages (except in some experimental literature presented in a box rather than bound such as B.S Johnsons, *The Unfortunates* (1969) or Marc Saporta's *Composition Number 1* (1962). Whilst we may enjoy a book's rich combination of text, graphic elements and images we cannot hear sound or engage with moving images. Our only physical interaction available is to turn the book's pages.

By contrast, the experience of reading on digital devices places all reading experience on one screen. The individuality of texts is expressed only through their interface rather than any physical attributes. Texts, placed randomly, non-hierarchically on hard drives or the Internet, afford segueing between content. Connectivity between items is suggested by authors, other readers, algorithms, or discovered through serendipitous wandering. Opportunities for adding into the text, interacting with it and communicating with other readers as well as the author, are possible.. Could a shared fictional space online be an enjoyable addition to a work of fiction?

The exploration of narrative space is particularly suitable for works of mystery. The ability to offer an exploratory space for narrative that might facilitate an engagement with clues and the act of searching for a solution has much to offer this genre. And so this project was conceived as a detective fiction, to make best use of this facility. In its application of genre tropes *The Memory Store* sits alongside other detective fiction and digital mystery works.

This thesis is a theoretical examination of the foundations for the content of my research practice and a critical reflection on my creative project *The memory Store*. Split into three chapters it explores theories of reading and writing and technology, digital media,

memory, detective fiction, the design and authorship of a participatory writing project. The final chapter and conclusion reflect upon *The Memory Store* as a finished product and lessons learnt from its production.

In Chapter One, *Wandering, linking, sharing; how digital technologies have affected the relationships between the reader, the writer and the text in the shared space of the Internet*, I examine how the technologies with which we read and write effect what is written and how it is received. Furthermore, I ask have digital technologies fostered a more collaborative writing environment compared to the past era of publishing, which allows for a two-way flow of communication between authors and readers? I examine whether the Internet has created a spatial relationship to texts that encourage wandering and exploration as opposed to a linear progression solely dictated by the author, and consider how this has provided a reading landscape in which texts ‘intertwingle’ (Nelson, 1974). This first chapter establishes the influence of the digital environment in which the creative project was produced.

In Chapter Two, *Random Access Memory; how the bricolage of the Internet encourages, stores and presents society’s collective memory and individual’s private recollection*, I consider how technologies used to capture, store and retrieve memory have affected concepts of memory, what might be remembered and how. I explore the connection between memory and narrative, that memory is key in narrating and that narrative is a tool to recall and relate memory. This chapter also considers the effects of using digital technology as a memory store. These ideas are significant to my creative project because they establish the principles upon which *The Memory Store* is built, provide a rationale for the site’s interface and inform the themes of memory at the heart of the project.

My creative project mirrors the way in which the Internet stores collections of memories relating to particular places, people and events. Turkle’s proposition, that the



Internet ‘is an exercise in bricolage,’ (1995, p61) is used to explore how reading across diverse content online a reader might find any number of perspectives, confirmations and contradictions, through which to reach their own understanding. In this way readers in *The Memory Store* will establish their own interpretation of life in Liverpool in 2115, according to the user-contributed memories that they read and the order in which they read them as well as the other fictional artefacts presented. Some readers will engage with more content than others developing a richer picture. Other readers may reach different interpretations having taken different paths.

Research questions in this chapter include:

- How might individual memories combine to establish a collective remembrance?
- How do the technologies employed to store, retrieve combine and interpret memory affect what might be remembered and how it might be received?
- What is the role of memory in the art of narration?
- How do readers use memory to imagine and predict narrative possibilities and in detective fiction to remember clues and make associations?

In Chapter Three, *Authoring an online narrative, The Memory Store, a reflection on the process of creating a collaborative narrative experience afforded by the shared space of the Internet*, I reflect on my creative project in the context of other online hypertext works and as a work of detective fiction. This chapter builds upon ideas about the affect of digital tools on reading, writing and remembering online and relates them to my creative project to consider how an author might work with others to create a collaborative, hypertext, detective fiction, dealing with themes of memory and memory manipulation, that delivers a satisfying, cohesive narrative experience to the reader.

Although serious social themes are articulated in the narrative, these are secondary to the puzzle of the mysterious disappearance of Estelle Fischer and the

work therefore falls into the category of detective fiction as opposed to crime drama.

It can be seen to reflect James' definition of the detective fiction genre;

What we can expect is a central mysterious crime, usually murder; a closed circle of suspects each with a motive, means and opportunity for the crime; a detective, either amateur or professional, who comes in like an avenging deity to solve it; and, by the end of the book, a solution which the reader should be able to arrive at by logical deduction from clues inserted in the novel.

(2009, p15).

These genre tropes are related to my creative project in Chapter Three, in which I also reflect on the process of working with others to create the work, authoring not just the text but also designing workshops to engage writers and the interface to inspire and facilitate participation and through which readers access the narrative.

Research questions in this chapter ask:

- How might the tropes of detective fiction be deployed in an online environment?
- What does the digital space of the Internet offer to detective fiction?
- How might an exploratory detective fiction be structured online?
- What strategies might be used to create a storyworld, a narrative space online?
- What might successful approaches to working with participants include?
- What approaches to interface design provide narrative glue to create cohesion without constraining participants?
- What might the role of a writer be in an online collaborative environment?
- What are the barriers to participation?
- How might participation be incentivized?

My conclusion to the thesis reflects back on my research questions and experience of producing the creative work and proposes how digital technologies, and the Internet in particular, might offer a new environment for writers and readers to engage in that provides two way communication, opportunities for collaboration and a

conceptualization of space in which narrative is stored, to be navigated, explored and shared. This will suggest possibilities for new narrative forms that are more collaborative, inclusive and offer new relationships between readers and writers and texts, which foster participation and extend the possibilities for sharing fictional realms.

Since this research began in 2013, digital technologies have continued to develop further and audiences have engaged in increasingly sophisticated practices with these tools, expanding the possibilities for collaborative online environments and collective narrative experiences. *The Memory Store* website itself has been developed over a number of years (since 2013) with a first version tested online in June 2015. This has made the project longitudinally fruitful as a piece of research with conclusions to be drawn through versioning. But the time span has brought challenges with shifting trends and changing technologies. During this time the Internet has become a more visual medium, however *The Memory Store* has always been concerned with sharing writing online and so has remained a text-based project. It is acknowledged that many tools to share memory online (Twitter, Facebook, Instagram, Snapchat) are used to upload photography and video but my project requires writers to imagine future scenarios and their writing is constrained only by their imagination not to what they can see and capture with a camera. Also my starting point for this research was a reflection on the ways in which readers might share texts and the imagined people and places that the texts stimulate. That the writing and reading of text has always been about sharing imaginings, that of the writer articulated in the text and of the reader triggered by the text. The project therefore has remained primarily text based in order to explore whether the Internet can provide a space for readers to respond with their own articulation of their imaginings in response to the text. *The Memory Store* does feature images, maps, timelines and sound in recognition that the platform is a multimedia environment but

these augment the narrative that is carried in the text and are designed to stimulate the imaginations of contributing writers.

What is of particular interest to my research is not the technology itself, but the experience of reading and writing in this *new* space, and the possibilities afforded by the digital era for creative writing practice, as opposed to specific technologies. The decision was made therefore not to work with a particular platform but to create an authored website.

The project has been a sole venture, which has also been demanding and has meant that the work has remained within my technical capabilities. The decision to work on all production aspects alone was to enable the experience of ‘authoring’ the full project, treating the design and functionality as part of the writing experience because the very interface itself of *The Memory Store* is intrinsic to the plot and the themes developed in the work.

A risk inherent in the project was that gathering participants would prove difficult and this was, in fact, the case. My ambition to produce an online project that people made remote contributions to had limited success, however the workshop process was fruitful and working with readers / writers face to face was perhaps a more enlightening experience. More detail about how participants were engaged is examined in Chapter Three with details which show the iterations the site went through and its transition from being a site open to contributions, and then, once enough writing had been received, to a site that is closed to new content but available to read. (Iterations of the stages of design are available in Appendix A)

## **Chapter One**

**Wandering, linking, sharing; how digital technologies have affected the relationships between the reader, the writer and the text in the shared space of the Internet**

## **Chapter Summary**

Moving from the consideration of the printed book to the digital era this chapter traces the development of the practice of reading and writing and technologies that facilitate it. The development of reading is traced from a communal oral activity, to solitary introspection and then to performative readings in a multimodal environment, to interactive and explorative experiences online.

Ong (1982) identified the ‘separating’ of text from the author, that in print, the word is read long after the author has created the text, leaving three separate entities, the author, the text and the reader. This chapter considers whether there is potential online for writers to design and author shared narrative spaces in which they might communicate and share experiences with their readers, that the separation between writers, readers and text may be lessened.

Through a history of hypertext and hypermediacy I will explore the genesis of non-sequential text and multimodality online, leading into and proposing the argument that Internet users seek a multimodal, non-linear experience and so the most successful approach to writing fiction online maybe to offer a text spread over multi modalities providing an exploratory narrative. Furthermore that this approach to content is spatial and this in turn provides opportunities to think of digital narrative interfaces as spaces and objects with spatial dimensionality.

The chapter also proposes that the Internet affords participation with, not just the consumption of, texts, and that readers online become users. That the nature of digital technology engages readers in interactive reading experiences whilst also offering opportunities to collaborate with texts that were not available previously in print formats. Acknowledging the act of reading on any medium as active and immersive the chapter explores new possibilities to engage readers further online in collaborative fictions. This chapter explores the phenomena of participatory culture in regard to the

production and consumption of new literary experiences and the roles that readers and authors are called upon to play in digital spaces.

### **Technologies and practices of reading and writing**

In her work, *The Book*, Amaranth Borsuk declares that, ‘the story of the book’s changing form is bound up with that of its changing content.’ (2018, p1) Leading the reader through a history of reading and writing Borsuk explores the relationship between the form and content of text based media and notes that, ‘each medium’s affordances – the possibilities for use presented by its form – facilitate certain kinds of expression’ (Ibid). She credits technology with playing an influencing role (although by no means the only influencing factor) on the development of writing, noting that it ‘is influenced by the technological supports that facilitate its distribution’ (Ibid, p3).

Weedon et al assert that, ‘It is necessary to continuously review the definition of the book moving from one bound by its material form to one determined by its function as a means of communication.’ (2014, p108) This corresponds with Borsuk’s work, which shows that throughout the history of what may be termed *the book* there have been material variations in the way that the content has been presented and these in turn have influenced its *function*. For Weedon et al it is the content that is key and what is required is a watching eye on the mediums that challenge the place of the book as the main source of collective knowledge. ‘Weedon believes, the book’s social function as the high-status vehicle for communicating new ideas and cultural expressions is being challenged by sophisticated systems of conveying meaning in other media.’ (Ibid, p109) and in the paper, *Crossing media boundaries: Adaptations and new media forms of the book* (2014) Weedon et al examine ‘new storytelling aesthetics’ (Ibid) looking at ebook, ibook and augmented reality formats as examples that test the boundaries of what might be termed a book by challenging notions of authorship, ownership and relationships

between readers and authors. Finally, Weedon et al conclude, ‘as our social interactions are changing with new communication technologies, so is the book.’ (Ibid, p121)

By examining how reading and writing practices have developed from print into the digital age this thesis hopes to identify how changes to our communication technologies might affect the experience of writing and reading.

The development of reading can be traced from ancient times, when reading aloud or telling stories was the norm, when few were literate and a reader was a performer of text for others. At this time narratives were shared, communal activities. The more recent concept of being ‘immersed’ in a book, an object that affords an individual, private experience, precedes the contemporary habits of reading on screens.

Alberto Manguel recounts how Saint Augustine described encountering Saint Ambrose reading:

“When he read," said Augustine, "his eyes scanned the page and his heart sought out the meaning, but his voice was silent and his tongue was still. ... for he never read aloud.”

(1996, p39)

Manguel recognises this reading style, an internal, individualised process, unusual at the time for Saint Augustine, but commonly witnessed today. Manguel also acknowledges the echo of this past practice of listening to a text in present day speech, giving the phrase, “I've heard from So-and-so" (meaning "I've received a letter")’, (Ibid, p44) as an example idiom.

Borsuk notes that:

Reading had been, since the Hellenic era, an oral practice ... written in continuous script ... without space between words or changes of case and minimal punctuation. They both required and rewarded sounding aloud.

(2018, p54)

The technology of these manuscripts, their form, dictated their use in practice and were designed to favour, and reflected, the fact that they were read out aloud.

Borsuk relates the story of the book and how ‘the Renaissance inaugurated the age of



books' (Ibid, p61). With the invention of print new reading practices developed, individual, introspective, which Borsuk notes gave rise to an 'increasing intimacy between individuals and texts.'(Ibid, p83)

Manguel describes this practice of silent reading, as it became the more dominant practice:

with silent reading the reader was at last able to establish an unrestricted relationship with the book and the words... while the reader's thoughts inspected them at leisure, drawing new notions from them, allowing comparisons from memory or from other books left open for simultaneous perusal.

(1996, p48)

This immersion in reading, the active engagement in deciphering texts in relation to our own experience, imagining characters, enacting the plot in a location conjured in the mind's eye, is an act of introspection. I suggest that it is this practice of internalizing, imagining along with the text, that affords participation in a fictional world, inspired by the author, unique in each reader's individual interpretation.

Italo Calvino writes about relationships between readers, writers and texts in the novel, *If On A Winters Night A Traveller*. He conjures up the act of reading, the pleasure of bringing to mind a fictional world prompted by the author's manipulation of the reader's imagination, and the resulting experiences that are both at the same time individual and shared with others. The novel instructs us to bring to mind being in a train station and suggests, 'all of this is a setting you know by heart.' (Calvino, 1998, p11) Triggered by prompts in the text, readers picture a station, each version of the station unique, delivered by each individual's experience of railway stations.

Mendelsund, reminds us that, 'a novel invites our interpretative skills, but it also invites our minds to wander.' (2014, p294) That reading is an active collaboration between the reader and author, but also that each reader's comprehension is guided by their own past experience. Each reader develops their own interpretation but still has a shared experience with other readers of those books and a platform for communication, not just from author to reader but between

readers. Sharing interpretations of a text is one of the pleasures of reading as Calvino shows, the character of the reader says:

to communicate again with her (Ludmilla) through the channel dug by others' words, which, as they are uttered by an alien voice, by the voice of that silent nobody made of ink and typographical spacing, can become yours and hers, a language, a code between the two of you, a means to exchange signals and recognise each other.

(Ibid, p148)

The idea of this shared experience, this code, creating a bond between people has existed before the digital era. But the possibilities of connections between readers is now amplified, the possibilities of being able to see what other users have highlighted in e-reading experiences, for example, to discuss in various forums online, the ability to share our interpretations en masse and with immediacy are, I suggest, unique to the digital era. I propose that there is something *new* here also in the reading experience that isn't a return to the habit of reading out aloud, which I referenced previously, but a potential for sharing narrative experiences in ways that might affect our comprehension and enjoyment of such activities. It is this potential that I experiment with in my creative practice.

Borsuk notes in regard to writing (as have McLuhan 1967 and Postman 1992) the mistrust in Ancient Greece of the written word, that, 'texts ... can circulate without their author.' (2018, p56). This detachment of work from its author was seen to leave texts open to reinterpretation and misuse.

In, *If On A Winters Night A Traveller*, Calvino also expresses the idea of the fiction detached from the author, independent in the world, being given meaning without the author being present. (This will be returned to later in the chapter with reference to Ong's, *Orality and Literacy: The Technologizing of the Word*). This thread of Calvino's book concerns the frustration of writers not knowing how their books are received, not seeing how people are reading and interpreting their texts, hoping for and seeking that perfect reader for their work.

For the authors in Calvino's novel, Ludmilla is the perfect reader. She seeks complete immersion. Ryan comments that, 'authors fall in love with Ludmilla because she is open to any

kind of text. In an age in which everybody reads to become a writer, she is the last genuine pleasure-reader.’ (2001, p201)

The relationship of the reader and the author of the novel, as related by Calvino is a one-sided conversation in which the author demands the sole attention of the reader but can never witness it. The reader, Ludmilla, seeks immersion in the text without distraction. Reader One by contrast, finds the texts shift in relation to his experience and his quest to truly share his experience with Ludmilla and the author are thwarted. The real world and the reader’s past experience and present desires constantly divert him, taking him on one narrative journey then another on an intertextual (with reference to Barthes’ *Death of the Author*, 1967) roller-coaster. This experience is akin to an online experience of clicking through browser windows. Maintaining the attention of readers is a challenge for any author. The wandering attention of Calvino’s Reader One is a result of their own machinations on the text and the suggestions it makes that divert them from the author’s original intention. For readers online there is the ability to stray literally away from the text by following links to other content or opening other windows within the same screen.

The book then is a shared space that neither the reader nor the author inhabit at the same time. The author leaves their text, which is found by the reader at a later date to interpret as they will, to wander from, to combine with other ideas or abandon after only a few pages.

The relationship between authors, readers and the text was explored by Wolfgang Iser, and articulated in his *theory of aesthetic response*, in which he argues that in the study of literature the act of reading should not be forgotten, that the relationship between the reader and the text is vital. That, ‘central to the reading of every literary work is the interaction between its structure and its recipient.’ (Iser,1980, p20). For Iser meaning exists somewhere between the author and the reader as the act of writing takes place between the author and the text and the act of reading takes place between the reader and the text,

As the reader passes through the various perspectives offered by the text and relates the different views and patterns to one another he sets the work in motion, and so sets himself in motion too.

(Ibid, p21)

Iser identifies that, ‘the aesthetic is the realization accomplished by the reader.’ (Ibid)

The relationship between authors and their readers online holds new opportunities for both to be present in the narrative space at the same time, to communicate through the narrative space with each other and reader to reader. This is a new departure that potentially could lessen the distance between author and reader, to construct meaning collectively or at least exchange ideas. It could offer possibilities for new types of relationships.

But the narrative space online presents challenges too. It encourages a reading style that easily diverts the reader to other content. I suggest that authors might expect that their readers will wander and that this should be considered and could be embraced, forming part of the experience on offer.

### **The characteristics of digital technologies**

In digital domains swiping the screen or clicking the mouse replaces opening the cover of a book and turning a page. Reading becomes fluid, multi-faceted and virtual, no longer ink fixed on a page but windows opening onto a plethora of content related to or remote from the text being read. Not only is the individual texture, weight, smell and patina of the book replaced by the constancy of the device’s operating system but this space is also shared with all other network activity. We do not put down the pen and pick up the page to read, we scroll and click, swipe and select when we read and when we write. Not only is our attention diverted, we constantly shift modes between reading, writing, watching, listening, searching, retrieving and sending. How does meaning making work in this environment? How do users construct meaningful experience online?

In his seminal article, ‘As We May Think’, written for *Atlantic Weekly* in 1947, Vannevar Bush proposed a method to deal with the world’s increasing information overload. The ‘Memex’ machine allowed readers to create associations between sets of information. Bush identified ‘associative indexing’, connecting idiosyncratic patterns of information, as a natural

tendency. The proposed ‘Memex’ device, fed by microfilm, would contain vast swathes of encyclopedic knowledge that users could plot pathways through using what Bush termed:

associative indexing, the basic idea of which is a provision whereby any item may be caused at will to select immediately and automatically another. This is the essential feature of the Memex. The process of tying two items together is the important thing.  
(1947, p7)

This concept was extended by digital pioneers such as Ted Nelson, who coined the terms ‘hypertext’ and ‘hypermedia’ for text and media that was linked associatively. Nelson believed, like Bush, that any system of information storage and retrieval needed to be aligned to human thought processes, which he believed were not linear, nor sequential. Nelson proposed, ‘*The structure of ideas is never sequential; and indeed, our thought processes are not very sequential either.*’ (1987, p16) His vision was to develop a shared library of human knowledge, The *Xanadu* Project, in which *tributaries* of information would flow, constantly being added to rather than fixed in print, not frozen at the point of production as the texts of previous generations had been. In his text, *Literary Machines*, Nelson expanded on this idea,

Unrestricted by sequence, in hypertext we may create new forms of writing which better reflect the structure of what we are writing *about*; and readers, choosing a pathway, may follow their interests or current line of thought in a way heretofore considered impossible.

(Ibid)

In other words, text need not be bound by the conventions of print but could be presented through interfaces that were appropriate to content, not necessarily linear, nor sequential.

Nelson used the term ‘intertwined’ in his earlier writings, *Computer Lib/Dream Machines* in 1974 to express the idea that everything could be interconnected and that by freeing sets of information, data or text, from the confines of their pages they could be placed in new contexts. Text could be combined and juxtaposed in a myriad of combinations according to the pathway chosen by the reader online. In contrast, writing on paper, is of necessity linear, with one word following another in order to make sense. Reading, on the other hand, even on paper, Nelson proposed, isn’t necessarily linear because thought processes are not linear.

On linearity and the act of reading, Mendelsund writes;

If fiction were linear we would learn to wait, in order to picture. But we don't wait. We begin imaging right out of the gate, immediately upon beginning a book.  
(2014, p52).

Mendelsund examines the act of reading and proposes that in actively deciphering the text and conjuring the images of a text in their mind's eye, readers are engaged, not just in the present text they are reading but are thinking back to what's gone before and anticipating what will happen next. He writes of 'polydimensionality' (Ibid, p61), in which the reader is in their own physical space yet also cast into the world they imagine of the novel. 'The eye saccades around the page...I am picturing something from one part of the page as I am gathering information from another' (Ibid, p103).

The act of reading Mendelsund describes is simultaneously inquisitive and acquisitive as readers seek out knowledge of characters, locations and plot and store and retrieve information at relevant points in their own personal meaning making. 'Past, present and future are interwoven in each conscious moment – and in the performative reading moment as well' (Ibid, p108).

For Mendelsund and Nelson this concept of reading is not only associative but implies a spatial structure, polydimensional, to be traversed. Readers actively construct meaning by a series of connected parts. These concepts of associative linking to construct a larger picture from the sum of a selection of parts, are principles that, one might argue, have been revolutionary in the architecture of the Internet and the ways in which people write, share and receive texts online. In patterns that are better conceived of spatially as opposed to sequentially. These ideas are not exclusive to the digital realm, Mendelsund applies them to the experience of reading print, rather this recognition, of the way that we read and think, was influential in the formulation of digital tools.

In *Literary Machines* Nelson also contended that:

The sequentiality of text is based on the sequentiality of language and the sequentiality of printing and binding. These two simple and everyday facts have led us to thinking that text is intrinsically sequential. This has led to the fallacy that presentation should be intrinsically sequential. Marshall McLuhan even put this fallacy at the center of European thought, and perhaps he was right, perhaps it is.

(1987, p14)

Nelson saw the potential for computer text to become free of sequentiality, having no need to be bound in a book. He posits here, with his reference to McLuhan's technological determinist stance, that European thought and culture has been dominated by the linearity of printed text. Nelson also proposes that:

sequentiality is not necessary. A structure of thought is not itself sequential. It is an interwoven system of ideas (what I like to call a structangle). None of the ideas necessarily comes first; and breaking up these ideas into a presentational sequence is an arbitrary and complex process.

(Ibid, p14)

This reference to the *structangle* points to the spatial dimension of digital technologies, the structure of digital code affording an approach to texts as relational and therefore capable of being conceived of as nodes in space, rather than words lined up in a sentence.

These ideas about non sequential text and their potential to be arranged through associative links provide the reader with a new relationship with text that is more exploratory and positions meaning making firmly with the reader who may take half of a text from one place and complete their narrative experience with another author entirely. The reader online might plot their own trajectory through a *structangle* of sources rather than following a unitary path delineated by a single author.

Authors might also use this concept of linking associatively rather than sequentially within their work and through digital production achieve texts not otherwise possible. For example, the hypertext site *A Dictionary of the Revolution* (Hanafi and Faltas 2018) takes 125 texts about the Egyptian revolution and places them in relation to words associated with the revolution. Each word is associated with other words and the interface diagrammatically illustrates the relationship between words. The site as a whole reveals how meanings have shifted through their use in the revolution. Readers choose how to progress through the site by accessing associated words and through this journey discover personal stories about the Egyptian Revolution that paint a picture of these events and readers are led to reconsider the meanings of the words they selected.

The associations between hyperlinked words express a narrative of their own, rather than appearing merely as a list of contents. These lists of associations tell their own tale. (see Figure1.)

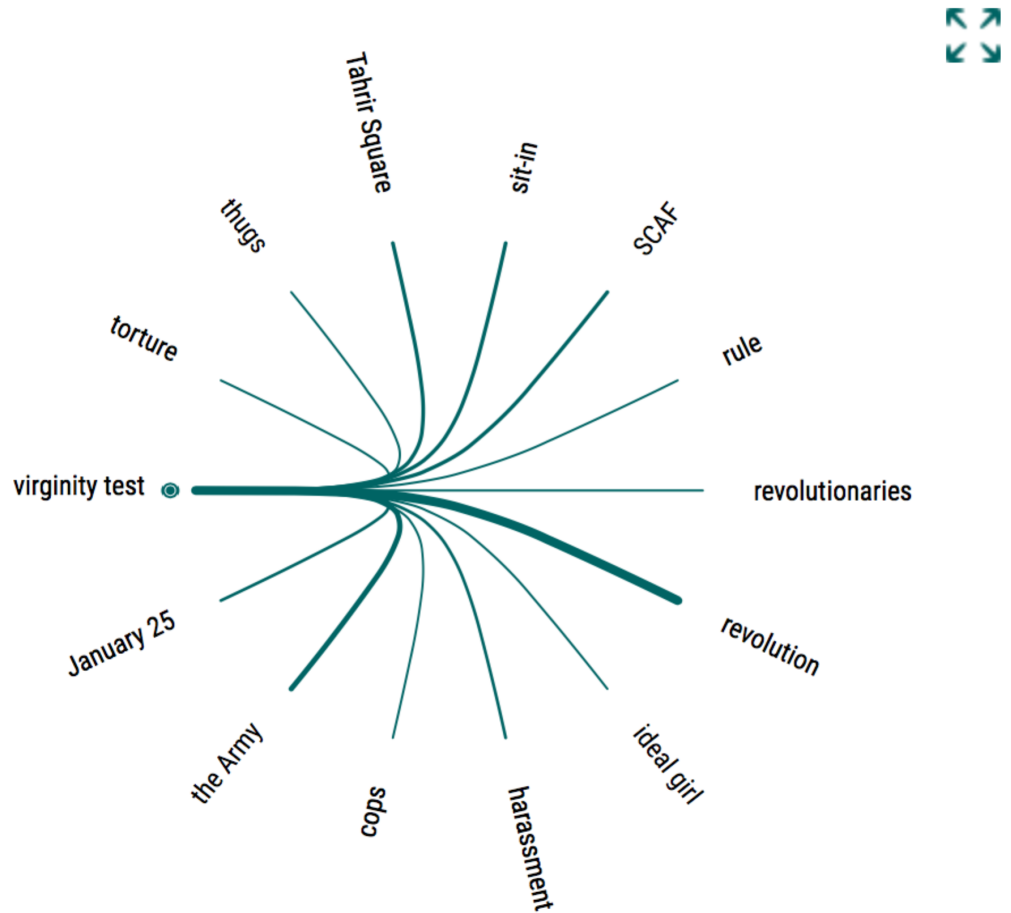


Figure 1. Hanafī, A. Faltas, Y. (2018). <http://qamosalthawra.com/en#119>

For my own creative practice I experimented with the concept of associative links to connect the evidence contributed by way of memories of residents of Liverpool in 2115 with my narrative, the investigation of Jules Stewart and by drawing together thematic collections of these memories. (<http://thememorstore.org/epidemics.html>)



## **Journeys through textual space**

In approaching digital screen-based media there persists the notion of space, a virtual realm, cyberspace, a space described as ‘where you are when you’re talking on the telephone’ (Rucker et al cited in Lister et al, 2003, p36). A shared space that you connect into and, in this acknowledgement of the Internet as a space, cyberspace then becomes an environment to be explored. The technology and our perception of it therefore affords the idea, which Manovich refers to as, ‘spatial wandering’ (Manovich, 2001, p49), discovering texts laid out in space. Bolter, in his text, *Writing Space: Computers, Hypertext and the Remediation of Print*, argues that, ‘we tend to conceive of hypertext spatially: the links constitute a path through a virtual space and the reader becomes a visitor or traveller in that space.’ (1991, p29) (Digital media and space will be explored further in Chapter Three in relation to narrative space, and particularly in relation to detective fiction and location). This chapter considers the ways in which space is invoked within the interface as a concept that facilitates the reader journeying through a system to gather understanding. In *A Dictionary of the Revolution* (Hanafi, Faltas, 2018) the interface concept that provides a logic for the reader to navigate by is that of a dictionary. In relation to my creative project, *The Memory Store*, the interface logic is provided as an archive of memories that can be traversed by the reader, enabling individual narrative trajectories, plotted by the reader.

Jorge Luis Borges explores this notion of wandering in pursuit of knowledge as an end in itself, in ‘*Labyrinths*,’ the journey through texts being more important than any particular text. His words, although written in the 1960’s, are prescient of the Internet today. He writes of the *Library of Babel* as an infinite library that it would be impossible for any man to work his way through in a lifetime and of unfathomable proportions. ‘There was no personal or world problem whose eloquent solution did not exist in some hexagon.’ (Borges, 1962, p82) To find texts he instructs, ‘To locate book A, consult first a book B which indicates A’s position; to locate book B, consult first a book C., and so on to infinity’ (Ibid, p84) but he warns, ‘For every sensible line

of straightforward statement, there are leagues of senseless cacophonies, verbal jumbles and incoherences' (Ibid).

We take for granted, as we read dispersed material on line, that much of what we read is irrelevant, a passing distraction, but that our experience taken as a whole has direction and coherence. Borges writes, 'Some 'repudiate' the notion of finding any meaning in books – this being comparable to finding meaning in dreams or in the chaotic lines of one's palm.' (Ibid) But we do construct meaning by making associations between disparate texts. We find and create meaning by journeying through the network as Borges' librarians did and in searching find not just what we are looking for but other treasures on the way.

The 'Library of Babel' is the image of the universe, infinite and always started over again. Most of the books in this library are unintelligible, letters thrown together by chance or perversely repeated, but sometimes, in this labyrinth of letters, a reasonable line or sentence is found. Such are the laws of nature, tiny cases of regularity in a chaotic world.

(Ibid)

These reading habits: of journeying through diverse texts, extracting information, making connections between items, serendipitously discovering, describes the contemporary experience of the Internet.

In his exploration of convergence culture in the book of the same name Henry Jenkins refers to the participatory audience as 'informational hunters and gatherers' (Jenkins, 2006, p138). He believes that the experiences presented in the converged network environment demand an active participation to seek out the texts and that there is pleasure to be had, and satisfaction in finding, and sharing, material. He writes, with regard to transmedia storytelling, about the practice of discovering a narrative, reading text distributed across platforms, and cites Electronic Arts Games developer, Neil Young, who identifies, 'additive comprehension' (Young cited in Jenkins, 2006, p123), as a means to 'shape our interpretations.' (Ibid) In this process the audience pieces together information and builds their understanding of a narrative. This ability to offer opportunities to build knowledge across media platforms that the hypermedia environment of network media presents provides a different reading experience to that of perusing a book, in which everything is presented, bound within a cover. The ability to read

multiple windows in one screen simultaneously, to look up a word, fact or place, whilst still in the same screen as a fiction, or to find images or music associated all in the same device expands the experiences with which we might engage, to access components of a transmedia project distributed across diverse platforms. There are possibilities for transmedia work to lead users to choose a level of engagement to match their level of interest or amount of time available to them.

In the AR project, *Sherwood Rise*, (Miller, Moorhead) users / readers were provided with content depending on their level of interaction, not just through choosing not to access parts of the content but, as content was sent via email, the narrative system measured users activity and, ‘the edition of the newspaper the reader received depended on how much they had actively supported or helped Robin, the protagonist.’ (Weedon et al, 2014, p118). *Sherwood Rise* is discussed in this paper as a work of transmedia by Weedon et al, who define transmedia, as ‘any combination of relationships that might exist between various texts (analogue or digital) that constitute a contemporary media entertainment experience’ (citing ‘T is for Transmedia’ project at the University of Annenburg, 2014, p115).

This definition of transmedia could also be applied to *The Memory Store* project. Whilst the work is not distributed across platforms, it does experiment with a dispersed reading experience, which encourages readers to gather and build their understanding through their interaction with the site, collecting knowledge of the world and what has happened by accessing multiple media items and building their comprehension. In this environment there are also varying levels of engagement possible, with some readers accessing more and different content to others.

In *Sherwood Rise* we can observe the concept of *additive comprehension*, (Young cited in Jenkins, 2006, p123) as readers, through the use of Augmented Reality, access layers of meaning with alternative stories to the news stories they have been sent, literally layered on top, like a palimpsest. Similarly in *The Memory Store* readers open the contributed memories of other residents of Liverpool in 2115 in separate windows to the memories of Jules Stewart, who

relates the main thread of the narrative, these sub plots may align, corroborate, contradict or confuse the central narrative thread, but do enhance the reader experience by adding to the picture of the fictional world and suggesting alternative truths and world views. *The Memory Store*, like *Sherwood Rise*, presents layers of content that the reader must discern the truth from.

In this network environment readers can choose the order in which they read texts, what level of engagement to invest in and have developed habits of reading more than one text simultaneously, thus multitasking (i.e. a user may have a news website open as they simultaneously watch a Youtube video with social media running in the background). It is these behaviours that offer new opportunities for writers to develop multimodal environments for readers to explore narratives and construct meaning through their travels in story spaces. It is for this transtextual reading environment that *The Memory Store* has been developed and these ideas have been influential in the design of my creative project. This will be discussed further in Chapter Three.

### **The interactive reader in multimodal fiction**

Although digital technologies allow for a level of database interaction that would not be possible in print, there is a tradition of multimodal and non-linear printed fiction that offer insights into multimodal reading experiences.

Despite being a printed book, *S*, (Abrahams and Dorst 2013), provides an example of an interactive text that offers a multimodal, spatial experience for the reader to explore.

It might be argued that books such as *S* would not have been so well received by previous generations of readers more used to the linear flow of a single narrative. Nor is it any surprise to find that experiments with non-linear narrative forms from the 1960s by authors such as Marc Saporta and B.S. Johnson, have recently been reprinted and have found popularity as readers find these texts more easily approachable being used to dispersed, nonlinear reading experiences online.

In *S* Abrahams and Dorst use the notion of notes in the margins left by other readers to tell a story parallel to the fiction in the book. (see Figure 2.)

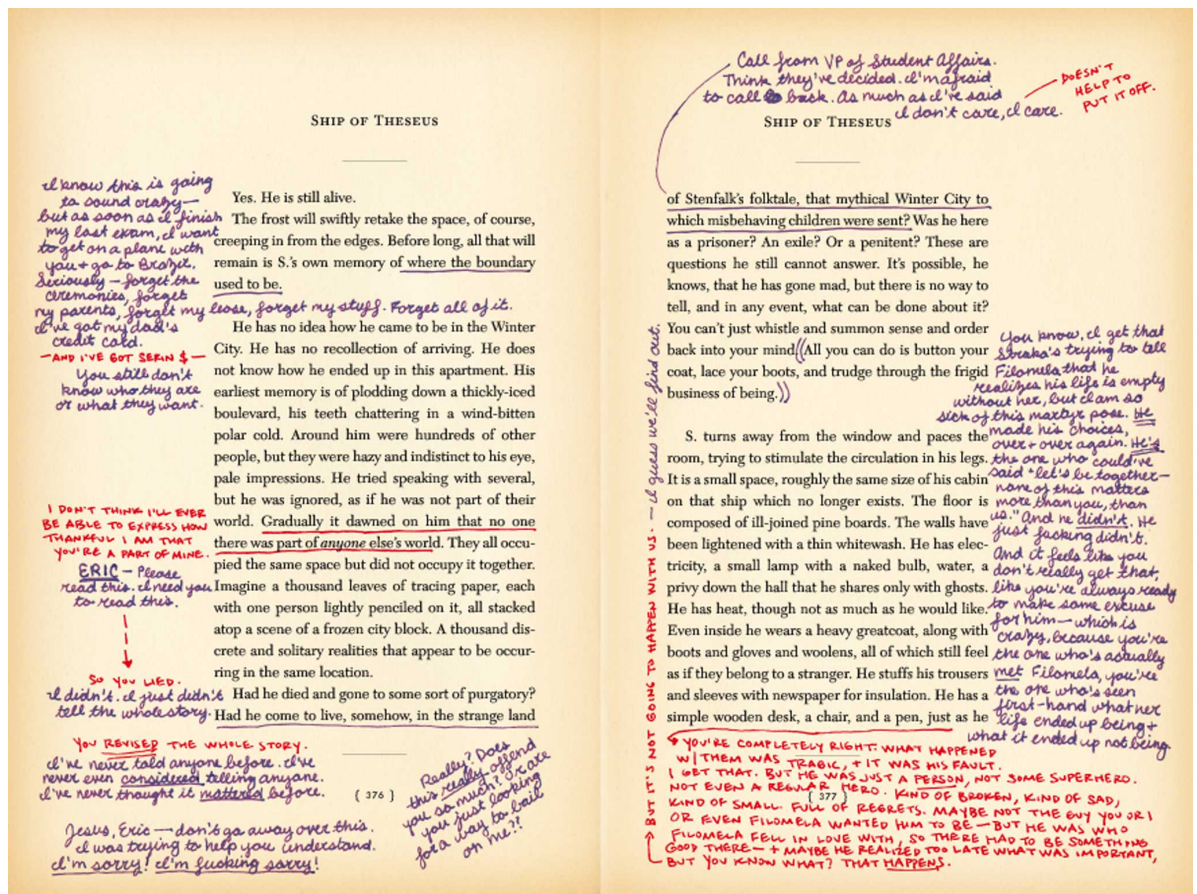


Figure 2. *S* (Abrahams and Dorst, 2013, p376-7)

The characters in *S* include two fictional readers, and their relationship with each other, the characters in the narrative written by an author and the footnotes written by the translator, a fourth voice. The fictional readers are sharing their interpretations and in doing so break down the barriers to their own private experience and develop a communal approach to deciphering what is happening, which they also share with us, the third reader. This echoes the practice of reading online or a digital device where users might leave comments for other readers to see, sharing their ideas with other's simultaneously to their reading.

The experience of reading *S* also recalls the nonlinear, hypertext writing one might find online. The reader has a choice of how to read, where to begin and how to proceed. An option is to read the text of the book completely and then return to the notes in the margins or to read each

page's text and notes and anything loose that falls out from between the pages, as postcards, invoices and other loose papers are inserted in the book. Many readers will choose to not read everything, to skim through this letter or those notes, to miss footnotes or postcards.

Lynch et al propose, 'Novels such as *S*. ...highlight the influence transmedia storytelling is having on the way writers can approach the novel, not just as a form, but as a media object – one that relies on, but is not restricted to, its text-centric modal capacity.' (2017, para 21) That *S* is more than just a book, it is presented as a library book, this *form* contributing to the fiction alongside the narrative content.

Lynch et al employ the term 'iterative representation' to describe how example text and digital projects use multimodality to communicate a storyworld through artefacts and the viewpoints of multiple characters. This process iteratively builds a storyworld and presents a multifaceted narrative that may include complexities and contradictions.

Iteration, in this case, shifts from simple linkage of narrative events to implications that, as characters go about the business of representing each other and the world in which they exist, they are able to engage in an iterative process, one that allows for response, disagreement, absence, acknowledgement, and contradiction across various representations. This dynamic is the catalyst at the centre of the JJ Abrams and Doug Dorst novel, *S*.  
(Ibid, para 19)

The reader works at arriving at an understanding of the narrative world, characters and stories by piecing together and weighing up information from various sources. In *S* readers are presented with an experience that has a random nature, with items inserted between pages without immediate relevance to the text but which build an atmosphere, provide a tactile experience and, for the most forensic of readers, provide information pertinent to the text. Through the collection of material presented in this library book, characters show themselves and comment on each other and the text and in this way build the story, which the reader must decipher through interpretation of the evidence, weighing up the comments of the characters in the margins with the artefacts and the footnotes;

When characters are the architects of their world, the way they represent that world enriches an audience's understanding of both the world and the character. Iterative multimodality, in this sense, can be seen to bring together form and content in a complex, engaging, and meaningful way: the narrative is enriched

not just through a mixture of representations, but through a mixture of ways of representing.

(Ibid, para 30)

The characters reveal themselves not just in description but literally in their handwriting, their choice of pen and the world is brought to life as if by several voices, the author, the translator and the two readers. The fiction has an overall conceit, like an interface, which encourages the reader to believe that this is a library book and that, the notes in the margins have been left by two students. Without this how would it be possible to explain the way to approach the reading of these texts? *S* therefore is accessible to readers, informed by the interface, which extends this book to be specifically a library book with notes added and items left tucked inside by previous readers. This reading style requires an active commitment from the reader to search and make connections and offers differing levels of engagement with the multiple plots; the novel, *Ship of Theseus*, the footnotes of the novel, the multitude of postcards, letters and documents inserted throughout and the conversations of the two readers in the margins. As readers will read these media in varying orders, inevitably skipping items here and there, they will have a unique reading experience and will create their own patterns of meaning by accessing the information in a variety of orders, potentially spurring differing patterns of connection. The binding element of these distinct and separate reading experiences is the central premise, the interface metaphor, which is, that this book is a library book that others have deposited information in that reveals a plot that extends beyond – *Ship of Theseus* - associated with the author and translator.

This approach to multimodal fiction, the binding central metaphor, the interface through which to not only access the fiction but to make sense of it, provided inspiration for *The Memory Store*. The practice of utilising a central metaphor for the interface, provides a logic with which to access the narrative and a position to that narrative for the reader. In the fiction *S* the reader is a library borrower and this book has content added by other library users, casting the reader as part of this plot too because they have the book, they are the next borrower. In this way the interface draws the reader in and provides them with a role to perform. This was my ambition

with *The Memory Store*: to engage readers / writers as residents of Liverpool in 2115 reading and adding to a memory archive.

Mendelsund identifies the role of the author in unleashing and prompting the reader's imagination but in ways that limit speculation. Readers are not left to ponder all possibilities but are managed to think and explore in set directions. Mendelsund asks, 'What is the author's role in hemming in the boundaries of our imaginations?' (2014, p224) and in answer cites Barthes:

To give a text an Author is to impose a limit on that text, to furnish it with a final signified, to close the writing... The reader is ...simply that someone who holds together in a single field all the traces by which the written text is constituted  
(Ibid)

So, although *S* presents a complex interweaving of texts that not all readers will read in their entirety, all of the artefacts contained in *S* are provided with a signification as items in a library book and this 'boundary' allows for exploration within that parameter. Mendelsund adds, 'The reading imagination is loosely associative-but it is not *random*.' (Ibid, p296).

In BS Johnson's *The Unfortunates* (1969) Johnson sought to convey the 'minds randomness', (Johnson cited by Coe, 1999, pix). The narrative is 'what was taking place on the 'inside of his skull' (Ibid) one Saturday afternoon as he reported on a football match in the city where he had in the past visited his friend who had died of cancer. The text weaves memory with the present activity of reporting the match. The idea behind the novel was to present the work as sections in a box to be read at random, an attempt to convey the truth of the process of memory that Johnson experienced. There is a first and last section and twenty-five sections in between to be read in any order. Due to economy the Hungarian version was printed as a bound book with a preface by Johnson that suggested that readers cut out or copy the sections and make their own random order, so that they did not miss, 'the physical feel, disintegrative, frail, of this novel in it's original format; the tangible metaphor for the random way the mind works.' (Ibid, xii). In this work the reader is invited to not only read about the memories that occurred to Johnson on that Saturday but to experience them as the moments of consciousness that they were.



In Marc Saporta's *Composition No .1* (1962) the reader works through 150 unnumbered pages presented loose in a box at random to access a fragmented narrative. Published in 1962 this work presents snatches of narrative that deal with war, rape, car accidents and cancer, with characters recurring in events that unfold without order. Not only does the work reflect a particular state of mind, it places the reader within that chaos, and there is an anxiety in stumbling, randomly, across these violent incidents. Tom Uglow in his introduction to the 2011 Visual Editions publication of the book writes of the 'disconcerting...sensation' of the loose-leaf pages and the tendency to read the pages in the order they are found. He reflects that, 'In 2011, this instinct appears innate, despite our age of hypertext and 'user-generated content.'" (Introduction, pages unnumbered)

However in respect to *Composition No .1* this is entirely apt. This collection of incidents, from which the reader derives meaning, offers an overarching narrative of random violence and chaos in post war Europe. It is difficult to make sense of and this confusion is not confined in the bindings of a book. It is a sharing of consciousness, of a troubled mind. The discomfort the reader feels in the loose-leaf pages is by design. Uglow goes on to write of 'a world where form augments content rather than defines it.' (Ibid) In these instances of non-linear multimodal fiction we see work where the form provides a context for the content that leads the reader's understanding of the text in an experiential manner. The form and content designed to work together.

The presentation of these text-based works communicates the themes of the text in their presentation and, as noted by Lynch et al in relation to multimodal fiction, 'the narrative is enriched not just through a mixture of representations, but through a mixture of ways of representing.' (2017, para 30)

In the examples presented here of multimodal and nonlinear literature the reader seeks to find and create meaning, connecting aspects of narrative. Engaging as 'informational hunters and gatherers,' (Jenkins, 2005, p138) encouraged and led by the representations, the methods of presentation contain clues as to how readers should approach these texts. It is a practice made

common by browsing online but is not exclusive to the digital realm. It is an attempt to bypass the formal conventions of the linear book that force an order on content. ‘It is the audience – the readers, the viewers, the ‘manipulators’ – who do the actual world building,’ note Lynch et al. (2017, para 31) They also argue that, ‘Multimodality can therefore be seen as a conceptual tool used by writers to represent, subvert and construct their subjective storyworlds.’ (Ibid) This practice then leads the audience to perform an active role, to participate, to find meaning and uncover the plot. The interface, the library book, the randomness of pages, leads readers to approach their reading with a logic that provides another perspective; library book borrower, experiencing random recollections, trying to piece together disturbing fragments.

These examples of multimodal fiction inspired the interface of my creative project, *The Memory Store*. The interface represents an archive of memory and casts readers and writers in the role of residents of Liverpool in 2115. This encourages exploration of the archive and associated material from that perspective.

### **Explorations of hypertext spaces**

In common with works of multimodal fiction hypertext fiction also offers, through its interface, a system of logic to guide readers. For example, in *Disappearing Rain*, (Larsen, 2000), a hypertext novel, the reader is immediately introduced to the scenario that Anna is missing and that her sister Amy has found computer files that may shed some light on her sister’s disappearance. As a Japanese American family the text is presented as kanji-kus (short poems based on ideograms). The scene is set and we take on the mantle of searching through the text to discover what happened to Anna. The search takes the reader on a winding path and as the entry in the Electronic Literature Directory says, ‘the disjointed way in which the story is presented helps add to the feeling of confusion and loss felt by the family of Anna.’ (Patricia Tomaszek, Mat Anderson, 2010 -

<https://directory.eliterature.org/individual-work/516>, Accessed: 3<sup>rd</sup> April 2018)

The interface casts the reader in the role of someone searching for Anna, just like her family, using the familiar territory of searching online in a fictional computer space that allows access to this character's life.

The performative nature of reading a hypertext is highlighted by Joyce, the author of the acclaimed hypertext, *Afternoon* (1994), cited here by Travis:

In his instructions to the reader, Joyce writes, "The lack of clear signals isn't an attempt to vex you, rather an invitation to read either inquisitively or playfully and also at depth. Click on words that interest or invite you."  
(Joyce cited in Travis, 1996, p121)

This new field of interactive narrative provided readers with a more exploratory experience. It supported an intention that not all readers would follow the same route and would not necessarily see all of the narrative elements but would still be engaged sufficiently by the text to achieve a satisfying narrative experience; that the inquisitive reader would wander through the text and complete the story to their own satisfaction.

Koenitz et al propose that, the aim of interactive digital narrative:

is the age-old dream to make the fourth wall permeable; to enter the narrative, to participate and experience what will unfold. IDN promises to dissolve the division between active creator and passive audience and herald the advent of a new triadic relationship between creator, dynamic narrative artefact and audience-turned-participant.

(2015, p1)

Although, as previously shown multimodal texts can exist as print based works computers add new dimensions being able to place texts in complex patterns to be discovered through an experience that enhances the discourse, placing the reader in an environment, casting them in a role in relation to the text, dissolving the fourth wall. The interface, the space, which is defined, I propose, alters the relationship between the reader and the text, allowing the reader / user to enter the text.

In altering this relationship the balance of power is tipped towards the reader, who has more autonomy in the narrative to explore and to interpret the

findings of those explorations according to their own experience and the order in which they have proceeded through the text so far. Koenitz et al note that:

The IDN vision is as much about narrative and control as it is about balance. Indeed, the quest for the right artistic measure, for equilibrium between agency and a coherent, satisfying experience, might be the ultimate challenge of the field.

(Ibid)

The field of interactive narrative presents a challenge in allowing readers the ability to interact, to navigate a text, to skim, scan and click. Readers become users with choices and permissions to access texts according to their own choices. This might not be the most satisfying, dramatic or comedic way to proceed. Of course the reader of a printed text is always at liberty to start on the last page or to leave a book unfinished. However the challenge of IDN is to present choices to readers in a way that enhances the text and leads to a logic (even if the logic is randomization) that enhances the experience and doesn't, as Joyce says, 'Vex' the reader, isn't used as a gimmick but adds a dimension to the experience. Inherent in this technology is the opportunity for communication between reader and text that means that each reader could have a unique experience. 'The reader provides the only center hypertext can have, with the center changing in each reading' (Travis, 1996, p117). The danger inherent here is that the reader misses sections and has, as a result, an impoverished narrative experience.

Joyce's *Afternoon* (1994) consists of 538 lexia providing not only different pathways through the narrative but different narrative events. Therefore the choices the reader requests from the system result in particular instances and provide unique reader experiences. The agency that readers have in hypertext narratives is discussed by Koenitz et al, who cite Janet Murray, she, 'notes that digital media is inherently procedural and participatory, ... IDN bestows co-creative power on its users through interaction.' (Koenitz et al, 2015, p185). These choices that users make provide

them with an agency in the narrative, ‘turning readers into participants, which Murray terms interactors’ (Ibid).

In early hypertext fiction the interaction offered choices in a branching narrative. In *Afternoon* (Joyce, 1994) the choices are aspects of the narrative. When reaching a fork readers split off on differing trajectories. Other early hypertext work allowed readers to explore the story through categories, in *Sunshine '69* (Bobby Rabyd, a.k.a. Robert Arellano, 1996) for example, users could access text aligned with particular characters, locations, music and a calendar of events. In Shelley’s *Girl* (Shelley, 1995) the interface is a map of the woman’s body. Koenitz et al note that a ‘design strategy in HF is in the equivalence between content and structure’ (Ibid, p13). The interface through which the narrative is accessed is also part of the narrative. So the illusion that text is attached to a point on a map is also a part of the fiction of the work and the reader is, in making the selection, just triggering a piece of code that calls up the specific text item, but in terms of the fiction is accessing content on a map. *The Memory Store* utilises this concept and the interface of the store itself is a future technology that archives memories. In accessing this intradiegetic interface the readers become residents of the Liverpool corporate strata in 2115 either adding to or retrieving content from the archive of memories. This logic instructs the reader as to how to interact with this work and provides the premise that the central character Jules Stewart is using the growing archive in her investigation and that the way the contributed memories links to her investigation is visible.

Koenitz et al also note that:

HF relies on the principles of segmentation and linking, as authors produce screen-sized segments, or lexias, and connect them with different types of hyperlinks. Interactors traverse the story by selecting links, unveiling new lexias, or returning to the ones already visited.

(Ibid, p13)

This too is fundamental to the design of *The Memory Store*, which presents text in lexia (organized according to the sequence order of the investigation), in the form of Jules Stewart's memories, associated news reports and the related memories of different characters contributed by participants.

Unlike fiction in print, whereby the reader accesses the text through the interface of pages bound in a book (generally), authors of digital fiction can utilise the interface to create a logic for their fiction. For example, the hypertext *Sleepless* (Theodoridou, 2017) through intradiegetic interaction presents a dreamlike scenario that draws readers into a world where people have stopped sleeping. This *what if* scenario is immersive and the whole project represents insomnolency, provoked by flickering screens catching our peripheral vision, fragments of sound and shifting texts that invite selections from us through piquing our curiosity but in a way that feels like the first stirrings of consciousness on awakening rather than logical choices that require serious thought. This project I would suggest is immersive through its interface in a way that is comparable to the immersion of print fiction by virtue of the integration of the interface (through which the reader makes choices) with the narrative intent.

The PC game *Gone Home* (The Fullbright Company, 2013), in contrast to *Sleep* involves the reader in a more procedural interaction to search an empty house to discover what has happened to the player's fictional family. This narrative is presented in an immersive 3D environment that offers the reader an interactive role as Katie, who has returned after a year away, to her family, who have, in the meantime, moved into a new house. This project is presented as a virtual environment that the user navigates through. She/the reader arrives at the house to find the door locked and, having searched for and found the key, enters the house and searches for the missing family, reading clues in various documents stumbled across in drawers and on tables in the different rooms of the house. The intradiegetic

interface is a house that the user moves through and the logic, which the reader applies to uncover the plot, is to search the house, however the narrative is still largely delivered by text that the reader / player finds.

Equipped with a backpack to gather evidence and a map of the house this narrative feels more like a game, even though many of the clues are text-based and the reader is searching for pages that are given context and imbued with meaning by the way in which they are found. Text on paper discarded in a bin leads the reader to imagine this was something not meant to be read. It therefore adds another layer of meaning to the text. The finding of text is also a pleasure of this work. The ‘hunting’ of texts leads to satisfaction when found, similar to the satisfaction felt when retrieving searched for information online, a feeling of discovery. The reader is immersed in this environment, cast as a character (Katie). The unfolding of the narrative is by their action. They have agency as a character in the plot.

In both *Sleepless* and *Gone Home* the intradiegetic interface and interactions in the space defined by that interface, offer readers a level of immersion. Through inviting participation the interfaces of these texts immerse the reader, as another insomniac in *Sleepless* and as Katie in *Gone Home*. In my creative project *The Memory Store* I sought to immerse readers as residents of Liverpool in 2115 either contributing to or accessing an archive of memory to gather an understanding of the investigation of *Case 167*.

Zaluczkowska identifies that immersion and interactivity do not amount to the same thing, that fiction has always had the power to be immersive, but that interactivity may aid immersion, that,

Immersion and interactivity as concepts suggest very different things. Immersion is not necessarily confined to digital technologies. Immersion in story-telling has been evident throughout writing history, but what is important to note here is what practices promote immersion in online projects. Providing an opportunity to interact is certainly one of those practices in that once a person has invested in the idea and contributed to it, the idea becomes harder to turn off or leave.

(Zaluczkowska, 2018)

This idea is fundamental to *The Memory Store*, that the interaction (contributing a memory) necessitates that readers become immersed in the narrative world, that they become residents of Liverpool in 2115.

### **The roles of readers and authors in a participatory culture**

Digital technologies I propose have created audiences who sit forward ready to scan, skim, swipe and click, who seek interaction. Rose identifies that this change in audience expectation is not just since the digital age,

simultaneity as the salient fact of our culture long predates the Internet. It was television that got people acclimated to the idea – especially after remote controls started to proliferate in the seventies.

(Rose, 2011, p119)

McLuhan also saw television, the epitome of electronic technology, being an involving “hot” media that engaged audiences in the moment and connected them. “The greatest of all reversals occurred with electricity ... that ended sequence by making things instant.” (Rose, citing McLuhan, 2011, p119).

These readers want to join in, Rose continues, ‘we know this much: people want to be immersed. They want to get involved in a story, to carve out a role for themselves, to make it their own.’ (Rose 2011,p8)

The reader of today is mostly a person who also writes. They tell their own stories on social media (360 million users write on Facebook according to Facebook Newsroom, 2019), they blog, vlog and are more likely than ever to have their own creative output (65 Million writers produce content on Wattpad according to wattpad, 2018). Since the advent of Web 2.0 in 2005 there has been a huge outpouring of creative work by ordinary people. A culture not of published work and broadcast material but work produced in bedrooms and studies, in spare time or



spin offs from school, college or night school courses. Kelly proposed that everyone will:

write a song, author a book, make a video, craft a weblog, and code a program. This idea is less outrageous than the notion 150 years ago that someday everyone would write a letter or take a photograph.  
(Kelly, 2005)

The 'global village' McLuhan had foreseen was one that everyone would join. McLuhan ends the *Medium is the Message* with a cartoon from the *New Yorker* magazine, of a boy in his father's library explaining to his father that, 'Now, with TV and folk singing, thought and action are closer and social involvement is greater.' (McLuhan, 1967, p158) We now have the generation who want to sit forward and join in and the challenge is what narrative experiences might be offered that engage these readers as participants.

Weedon reminds us that, 'storytelling was originally a folk art, and it is again now that we can tell stories on Instagram, Snapchat, and Face- book and though the multitude of apps for the mobile which allow the user to combine photos, audio, music, and video.' (2018, p51) That in the digital era there is a role for us all as storytellers.

Rose identifies the cultural shift and change in balance between authors/ producers and readers /consumers:

In a command-and-control world, we know who's telling the story; it's the author. But digital media have created an authorship crisis... An author can still speak to an audience of millions, but the communication no longer goes just one way.

(Rose, 2011, p83)

Zaluczkowska, whose PhD research project, *Writing with my Audiences* concerned this expanding area of participatory fiction, embraces the audience's desire to participate in these new story spaces, rather than seeing this as a crisis. She identifies that digital platforms, 'necessitate new ways to

engage and respond to audiences who want to belong to the worlds we are creating' (Zaluczkowska, 2018).

In other words, it is incumbent on writers to find ways to satisfy these new audiences.

Rose identifies other periods of technological disruption that gave rise to new narrative forms catering to the needs of new audiences, utilising new means of production. In writing about serial fiction in the 19th century Rose noted, 'Writers were lucky to stay one or two installments ahead of the deadline, so readers who wanted to share their thoughts could influence the plot as the books were being written - could participate in other words.' (2011, p89) He describes the serialization of novels at this time as the result of innovation that gave rise to a more literate population of working urbanites with money to buy fiction, at a time when printing technology was able to quickly produce and distribute cheap pamphlets. He goes on, 'through serial publication an author could recover something of the intimate relationship between storyteller and audience which existed in the ages of sagas and of Chaucer,' referencing John Butt and Kathleen Tillotson (Ibid, p91)

This closeness again alludes to McLuhan's theory of the 'global village' where everyone participates in village life. Rose goes further to identify this participation as 'closely tied to creativity.' (Ibid, p99) He quotes William Gibson:

The remix is the very nature of digital ... Today an endless recombinant, and fundamentally social process generates countless hours of creative product.  
(Gibson cited in Rose 2011, p100)

Rose identifies fan fiction around television programmes like *Mad Men* citing the twitter account of Betty Draper started in 2009 by Helen Klein Ross with other fans following suit and tweeting as other characters, leading to legal action by the television broadcaster AMC. Rose relates similar stories of Harry Potter fans who launched fan sites and were sued by Warner brothers. Rose talks about the eventual acceptance of this copyright trespass and an acknowledgement that in this

participatory culture, where participants have the creative tools at their fingertips to participate, they will, even if threatened by corporate interests.

### **Collaborative Practice**

This willingness to join in with fiction is not just restricted to fan fiction but there are many sites available for the sharing of creative output including writing sites.

‘Wattpad’s storytelling app, now with 60M monthly users’ (Perez, 2017).

Palfrey and Gasser describe an, ‘unfolding creative revolution in cyberspace.’ (2008, p125) They continue, ‘the new world of digital media gives users the opportunity to interact not only with peers, but also with content.’ (Ibid) This can be seen not just on specific sites to share creativity like Wattpad but on social media platforms, such as Facebook, Instagram and so on, which provide opportunities for collective creativity.

Blogging and wiki technologies have offered opportunities for collaborative fiction since the arrival of web 2.0 (2005). The original Eastgate hypertext fiction *Marble Springs* (Larsen, 1990) is now available as a wiki for readers to participate with and contribute to. Larsen writes on the site that, ‘the Internet has come somewhat closer — but nowhere near — what I originally had in mind’ (Ibid). This site is a history of a fictional mining town set in Colorado and peopled with an archive of social history. The wiki interface is clunky and in order to interact the reader does need to sign up and persevere with a guide for the use of wiki tools. But, as Larsen comments, the wiki environment hasn’t provided a seamless way for users to interact and be creative with content.

*Rainy City Stories* (Openstories, 2008) is, ‘an interactive literary cityscape.’ Closed now for submissions, it was originally open for writers to send in stories or poems that were connected to points on a map of Manchester. The collection of work is diverse although all connected to and able to be housed in the

central interface, the map of Manchester. Collectively, writers on this website, have reconstructed the city of Manchester online, as diverse and wide ranging in content style and atmosphere as the real city itself.

*MacGuffin* (Coma Press and Manchester Metropolitan University, 2015), like *Rainy City Stories* is a user-generated writing project based in Manchester. Both sites aimed to provide a platform for writers to share their stories with readers and to gather feedback about their writing with both sites providing the facility for comments. Thereby utilising the crowd to improve their writing practice as well as adding to these crowd sourced creative spaces.

*MacGuffin* also employed a collective approach to categorising the uploaded content, in the project's final report this is described as, 'a 'broad folksonomy' model (which) means that end-users can add their own tags to someone else's content, to categorise it and share it with other users.' (Hinks, Darcey, Goodwin, 2015, p4) In this way the writers could see how readers might define their work and this aspect of the site, as a test bed for writers, was part of the model. The report continues, '*MacGuffin* uses open analytics to generate insights into changing reader behaviour and taste.' (Ibid p4) *MacGuffin* readers and writers both participated in the app through uploading narrative content, through tagging work and also through their behaviour which fed into analytics about the popularity of work and the length of time readers engaged with content. In this way *MacGuffin* used the crowd to gather intelligence on reading behaviours, which was helpful to writers who submitted their content, generating for them feedback about their work, how it was categorised by readers, how long readers read for and up to which point.

The collective nature of *Rainy City Stories* and *MacGuffin*, in terms of writing contributed and the sense of becoming a community of readers and writers with common purpose, pin point another facet of the digital literature landscape, that of the emergence of collective intelligence. In *MacGuffin* readers and writers

worked collectively to build and categorise this archive of stories, to make the site more usable for each other. In *Rainy City Stories* the collective of writers populated the city.

*A Million Penguins* claimed to be ‘the world’s first wiki novel’ and ran from 1st Feb to 7th March 2007. By the time the site closed ‘1,476 people had registered as users of the wiki.’ (Mason and Thomas, 2008, p16). The result was not a novel, the project report notes, ‘we have demonstrated that the wiki novel experiment was the wrong way to try to answer the question of whether a community could write a novel. (Ibid, p21) The result was more akin ‘to a tradition of artistic performance that is very different to the printed novel.’ (Ibid, p2) Partly this seems attributed to the wiki environment and the behaviours it encouraged and also the unfamiliarity of this environment for writers. As the organisers noted:

many of the contributors to *A Million Penguins* struggled with several unfamiliar literacies: how to write a novel in a wiki form, how to actually use the wiki, what to edit and how to edit the text of others, not to mention the difficulties of knowing how to actually behave in the wiki’s peculiar social environment.

(Ibid, p20)

In this experiment the technology provided a barrier in terms of its use but also in terms of providing an unfamiliar space to work in. This was partly due to the ambition of the project to develop a crowd driven work. In *The Memory Store* a central author utilised crowd contributed material and although all contributions were deployed there was an authorial voice that orchestrated the contributions and contributors were presented with an intradiegetic interface that led their participation. My creative project utilised collective intelligence but very much by design and whilst serendipity played a part the result is not random.

Zaluczkowska’s PhD project, *Red Branch Heroes* (2018) was a collaborative transmedia project, ‘an interactive social reality experience’ (Zaluczkowska, 2018).

This participatory work, in common with my own practice, involved a central production team, who, like my role of author, devised a way of working with participants to draw from them the ensuing narrative experience. However this was not as writers but as participants, either judges or would be heroes, in a process to select a hero for a reality TV programme. Zaluczkowska describes it thus, ‘The story was a multiplatform experience that used audience responses to generate story events that were played out by real actors.’ (Ibid). The challenge for Zaluczkowska was to manage the participants in this process online. This was achieved with a central character Sky, an intern at the production company behind the reality TV programme who interacted with participants online. Zaluczkowska suggests that, ‘the challenge for writers of transmedia is to find ways to engage and offer audiences agency,’ (Ibid) otherwise what is on offer could be seen as tokenism and frustrate rather than immerse the audience. The challenge then is to seek interactions that are meaningful in the fictional world, that take the audience into that world. In *Red Branch Heroes* the audience were cast as either judges or would be heroes and their interactions in these roles were advancing the production of the reality TV show. In *The Memory Store* the premise was that writers were residents of Liverpool in 2115 and that their contributed memories would form evidence in the investigation, at least by fleshing out the fictional world that the crime took place in. Zaluczkowska identified that for this interaction to be satisfying for the audience their interaction had to, ‘impact on the world that is being created in the story.’ (Ibid) This did also present challenges in the production of *The Memory Store*, as not all content was a match for the world that I imagined and I did need to work with contributions almost on an individual basis to ensure a fit into the developing canon. Zaluczkowska concludes that, ‘to be a writer in this context is to be multimodal in approach, to embrace suggestion, to think on ones’ feet and to be able to synthesise a complex range of suggestions into an on-going narrative.’(Ibid)

This echoes my findings with the production of my creative practice, *The Memory Store* that collaboration brought serendipitous opportunities but also presented challenges that required adaptations to be made, necessitating a flexible approach, possible within the iterative development model that I chose to follow. I will return to this in my reflection on the process in Chapter Three.

In 1967 McLuhan proposed, ‘as new technologies come into play, people are less and less convinced of the importance of self- expression. Teamwork succeeds private effort.’ (1967, p123). Moreover he noted that previously, pre-print, in the palimpsest there existed a history of collective production. In the age of digital media this collaboration is even more apparent and epitomized in Charles Leadbeater’s *We think*; a book written by collating the ideas of an online community about collective intelligence. (Leadbeater, 2010). This work, *WeThink: why mass creativity is the next big thing*, expands on ideas of mass participation and creativity, identifying a cultural shift towards a more participatory society and culture.

Leadbeater proposes that there is an inherent aspect to network technologies that gives rise to cooperation and suggests the computer has ‘the potential to flatten hierarchies, decentralise organisations and unleash collective creativity.’ (2008, p39) There many examples of this from the world of open source programming that are the result of collaborative effort such as linux. Closer to the theme of this thesis is *Twine*, which is an open source tool for hypertext, originally created by Chris Klimas in 2009 and utilised by many authors, including Natalia Theodoridou author of *Sleepless* (2017). The software requires little computer expertise and so allows authors to write interactive work without the need to understand code. Twine is now maintained, developed and used by a community of hypertext developers, who share and build upon each other’s successes. In recent years the term community has shifted to accommodate this phenomena of online cooperation and co-creation.

Theories of participatory culture and collective intelligence inform *The Memory Store*, in terms of the structure of the narrative itself. It is presented as the collective memory of residents of the fictional Liverpool Corporate Strata in Liverpool in 2115 and the plot concerns detecting patterns in this memory store that will lead to the resolution of the mystery of the missing person, Estelle Fischer. The work is also produced as an exercise in collective intelligence in that the site is open to user generated content and has been the centre of workshops and events that have informed the project's development and generated content (this process will be discussed further in the final chapter). *The Memory Store* aims to create a narrative work through engagement from readers and writers to co-create a fiction with coherent threads through a hypertextual, multimodal future vision of Liverpool that is collectively drawn. The role of author in this work is one of orchestrating contributions. This means providing fertile ground to develop ideas along a vein and then weaving contributions through hypertext links in a crowd section and where appropriate into the main text that relates the central mystery of the missing person. In this way the author works with writers on the site to encourage, develop and incorporate contributed texts.

The collective nature of the Internet and the works discussed above also raise questions about authorship. Bolter echoes Ong when he writes that, 'In the act of writing, the writer externalizes his or her thoughts ...it becomes difficult for a culture to decide where thinking ends and the materiality of writing begins, where the mind ends and the writing space begins.' (1991, p13). Ong (1982) proposed that 'the word' becomes 'separated' from the author successively through, writing, print, computers and we might now add the Internet as text becomes malleable, able to be copied and pasted, taken out of context. Freed from the materiality of the page and open to be reused, recombined. The Internet unlocks text and allows authors to offer



co-authored spaces, to invite comments and feedback, to offer not just a text-based experience but also a space to explore and to contribute to. Ong asserts:

Writing is in a way the most drastic of the three technologies. It initiated what print and computers only continue, the reduction of dynamic sound to quiescent space, the separation of the word from the living present, where alone spoken words can exist.

(1982, p80)

In this networked, digital environment the word is separated still further from its originator, sometimes anonymous and open to manipulation, reworking, incorporation. It becomes a seamless part of the *bricolage* online that users move between, reading the multi-layered interface of their desktop, hopping between open windows into television shows, the lives of their friends, news feeds, music videos and lifestyle vloggers. With text online, it is not only potentially free from its originator, but also free from its original context and able to be read alongside other online material. This extension of the potentiality for meaning beyond the original intentions of the author, whereby meaning might be conjured from the juxtaposition of their work with another text or media, harks back to the palimpsest and points to possibilities for the orchestrating of experiences that accommodate more than one authorial voice.

In conclusion, I propose that digital, network technologies afford *new* opportunities for readers to engage with texts. These include the potential to provide multimodal, exploratory and participatory narrative experiences that are particularly appropriate for the crime fiction genre online (this will be returned to in Chapter Three).

The contention of this chapter is that the reader online, in response to an environment that is conceptualized as a space and that facilitates navigation, has adopted new habits, wandering, linking, sharing, which demand new narrative forms that are multimodal, allow for exploration and participation. In the face of this the role of author changes too, to that of conductor, orchestrating content and guiding

the reader through an experience, authoring both the text and the intradiegetic interface that allows access to the narrative space.

The terms conductor and orchestration are used here to suggest a role for the author of collaborative experience online of bringing in and deploying texts into a satisfying union. It implies perhaps more than editing or anthologizing in that the material gathered becomes one coherent work rather than a collection of individual items. These terms also allude to experience design of constructing an instance by combining separate parts.

I concur with Borsuk's assessment that, 'each medium's affordances ... facilitate certain kinds of expression,' (2018, p1) and assert that digital technologies, by their nature, and the Internet in particular, present new spaces for narrative experiences and new ways of reading and writing. Furthermore, these technologies enable writers to author the form, the interface, the conceit, through which readers access their work. In doing so authors can design narrative environments that invite users (readers who seek participation) in, to explore, interact and participate. These assertions are fundamental to and support the production of my research project, *The Memory Store*. In Chapter Three of this thesis these theories are related further to that project.

## **Chapter Two**

**Random Access Memory; how the *bricolage* of the Internet encourages, stores and presents society's collective memory and individual's private recollection**

## Chapter Summary

My previous chapter proposed that digital technologies afford opportunities for new reading and writing practices by virtue of their multimodal, non-linear, associative and networked tendencies. This chapter extends this study to examine the effect of digital technologies on memory, its capturing, archiving, and retrieval. The chapter considers how the means society has utilised to record memory, from cave paintings, oral poems, text, photographs and now data, constructs a vision of the past informed by the sensibilities of the present.

These technologies are not neutral, but affect what might be remembered and how it might be recalled. Further I propose that through a process of collective memory societies and social groups construct a shared world-view and this practice of sharing individual experience to build a common archive, is amplified by digital and network technologies.

In the context of my research, the theories and concepts in this chapter not only inform the themes of memory in the content of my own creative work but also provide the concepts that underpin *The Memory Store*'s design, interface and functionality. I will explore how the Internet *intertwines* the memories' of individuals into seamless online experiences, collecting together diverse items connected by hypertext links, in categories and by hashtags. Although these items are often and increasingly visual, I have translated this practice into my project as text based because *The Memory Store* is an experiment with the practices of reading and writing online.

In this chapter theories of memory construction from Halbwach's seminal ideas about *collective memory* (1950), Van Dijck (2007) and Smith Rumsey's (2016) more recent writing about memory in the digital age and Sontag's work *On Photography* (1977) provide a framework with which to discuss the ways that society collectively constructs a history from the reminiscences and memorabilia of

individuals. Photography and then digital media have extended this practice to the capturing of everyday reality.

The work of Georges Perec, *I Remember* (2014) is referenced, to illustrate the relationship between individual and collective memory, supporting the idea that our notions of self and individual identity are constructed through memory and that shared memory connects us with others.

Having established the connection between individual and collective memory, the process of collaborative memory construction is examined in more detail posing questions about how the tools employed affect the memories captured, their reception and society's conceptions of memory itself.

Lev Manovich is introduced to consider concepts of digital memory. In the previous chapter the concept of associative indexing as a way of navigating online content was referenced and the theme of machine thinking and machine memory is continued here in the contemplation of how sense may be made of the wealth of memory objects online and the challenges this vast and random digital archive presents. How digital archives, and particularly individual digital archives, might be used to generate an understanding of events and evidence history, leads to the concept of paramnesia and the power of digital media to create and distribute particular world-views.

The relationship between memory and imagination and memory and writing is explored through the work of Porter Abbott (2008). I propose that narrative and memory are inextricably linked, to remember is to narrate and in narrating, even fiction, we can't help but use our past experience. This is extended in the assertion that writing is an attempt to stem the flow of time, to achieve a form of immortality, to be noted, not forgotten. The Internet has not only provided further tools to create memory objects but has become a mausoleum for our memorabilia, preserving our profiles and media content in cyberspace.

Moving from writers to readers, the role of memory in reading, particularly in detective, interactive and multimodal fiction is explored, with ideas about evidence and clues leading to the assertion that memory objects, testaments, diary entries, logbooks and notes are grist for the detective fiction mill.

These concepts about memory construction, the relationship between memory and fiction and its importance, particularly in crime fiction, are the foundation upon which *The Memory Store* project has developed both thematically as well as in its design and functionality.

### **Private Recollections and Collective Memory**

Humans have always used technology to create memory objects to capture and share their experience, to assert their individual existence and that of their wider social group, tribe, family, nation. Van Dijck believes that this is because:

memories matter: humans have a vested interest in surviving, and therefore they invest in creating and preserving imprints of themselves- their thoughts, appearances, voices, feelings and ideas. They may want these images to be truthful or ideal, realistic or endearing, but most of all, they want to *be* remembered.

(2007, p52)

Recording moments in time mean events can be shared with others and these memories might outlast their creator and thereby become a memorial. This was done firstly through memorized stories, oral poems and then through artefacts, paintings, photography, film, video and digital technologies. People have sought to capture instances of life; to define themselves as individuals or belonging within social groups, to pass on knowledge and to be remembered.

Smith Rumsey defines the role of memory as providing social cohesion and continuity, ‘Through culture, a collective form of memory, we create a shared view of the past that unites us into communities and allows large scale cooperation among perfect strangers.’ (2016, p15) By recording experience humans not only learn from

each other but also establish and maintain social structures, attitudes and beliefs. Smith Rumsey asserts that:

culture provides the large-scale framework for memory and meaning. It aids in the creation of new knowledge, but it also acts as a filter that over time determines what is of long-term value from the social perspective.

(Ibid, p27)

This chapter considers how a society's view of the past, its, 'practices, beliefs, values, and knowledge' (Ibid) are constructed by collective activity, and whilst previously the preserving of past experience was the activity of a few it is now a wide spread practice in the digital age. There is less need to rely on the testament of professionals, historians, the media to archive events. When an earthquake strikes we have the testament of countless Twitter users to share their experience with us. Through their individual entries a collective story of the event is related. Searching the hashtag 'Japanese earthquake' on Twitter today results in tweets displaying earthquake monitoring sites alongside more personal content that tells of ongoing stories that relate to the earthquake; a daughter of a Canadian user on an exchange associated with the recovery, a post about Taiwanese and Japanese friendship and being there for each other, posts in memoriam, sharing images from the disaster, of vigils held, ongoing stories about the issues facing the crippled nuclear power plant. This search then uncovers associated stories posted by individuals, experts and institutions all *intertwined* in my individual reading of these found sources. It is this ability to generate a narrative about a time and place through the juxtaposition of material gathered from a myriad of sources that was a central inspiration for *The Memory Store*.

Halbwach's seminal text, *On Collective Memory*, recognized the role of the individual in the act of recollection whilst acknowledging the function of social groups in providing context and continuity to make sense of memories. He argues that, 'while the collective memory endures and draws strength from its base in a coherent body of people, it is individuals as group members who remember.' (Halbwach, 1950, p22)

Whilst we might collectively remember the grand narrative of history this is constructed and reinforced by individual instances of remembrance.

The relationship between individuals and social groups, (family, class, institutions), in the construction of memory are explored by Halbwach as well as the relationship between the present and the past in structuring recollections, in making memory accessible.

Halbwach defines memory as a collective act and writes that it is only with social context that memories make sense, illustrating this point with the example of dreams of past events that are fragmentary and elucidatory and not therefore useful as recollections. Halbwach asserts that memory needs grounding in a social context: ‘What makes recent memories hang together is not that they are contiguous in time: it is rather that they are a part of a totality of thoughts common to a group.’ (Ibid, p52) Furthermore that, social groups provide a framework within which to place recollections:

It is in this sense that there exists a collective memory and social frameworks for memory; it is to the degree that our individual thought places itself in these frameworks and participates in this memory that it is capable of the act of recollection.

(Ibid, p38)

Family or social history provides continuity to memory not just in time but also in relation to other people and events, themes and threads of consciousness. It is these ‘social frameworks for memory’ that provide associations and build memories into a collective experience, moving individual narratives into a shared social history and enabling us to place and make sense of our individual experience.

Archives are assembled at varying scales from the family album (now online in photostreams) to groups on Facebook of friends and colleagues, workplaces and schools, to national and international societies, disparate items linked by trending hashtags (like my previous example of the Japanese earthquake).

These acts of collective intelligence online, whereby contributions make more than the sum of their parts in collaborative meaning making, epitomize Internet use today. To *google* has become an established verb for searching through user contributed



and crowd filtered material to find answers, to gauge opinion, to measure, calibrate and learn.

This relationship between individual and collective memory can be seen in the web site Cowbird, ([www.Cowbird.com](http://www.Cowbird.com)) which describes itself as, ‘a public library of human experience.’ It closed to entries in 2007 after 5 years of collecting narratives, text and photographs and holds 88,123 stories contributed by individuals who, in telling their own personal histories, contribute to 28,107 categorised topics ranging from one of the least populated categories *chalk* with 8 entries to the more populous *Love* with 6,974 entries. Not only does the site provide a space for individuals to share their voice but it also adds their voice to a collection of voices on the categorised topics. The topics grew from crowd activity and whilst the individual entries are personal and give an insight into the lives of their contributors, they also provide a broader understanding of the topics, for example, what *Love* means to people today. There may be many different representations of *Love* presented on this site but general conclusions may also be drawn. Not least of which is that, to this community, *Love* is an important topic because it is the most written about.

Each separate story is connected to its author and is part of their digital footprint, their collection of online data, perhaps linked to from their social media or personal blogs, links emailed to friends and family. Whilst at the same time their individual entry adds to the collective archive of *Cowbird*, searchable and of interest in relation to a category rather than as just the story of a particular individual.

This is parallel with activities online that seek to create pathways and coherence between material, such as the practice of tagging content, using categories on blogs and hashtags on Twitter. These tools make sense of disparate content, enabling navigation of a collective response by accessing the posts of individuals. Moreover these tools, in the tags and categories that users create, reveal the concerns and interests of social groups. The collective of Cowbird have defined the contributed writings into categories that can

be used to define the collective and sub sets of users in that social group, so users writing about *Love* or *chalk* or perhaps both may be seen and examined as groups with shared experience.

Another example of this collective act of drawing a grand narrative from individual contributions is the British Museum and BBC collaboration, *The History of the World in 100 Objects* (2011). This was a multiplatform project that spanned radio, print (a published book) a physical trail of objects in the British Museum, a virtual trail on the British Museum website and was also a BBC website which both individuals and museums could add to.

This ambitious project aimed to tell a history of the world that was inclusive and as well as being constructed around objects in the British museum, as a wider project online it also included objects contributed by individuals that were significant in their personal history and also added to the collective history that this project represented. For example, the contribution of Bill Thompson, about his first ever laptop, the purchase of which was a watershed moment in his life but also representative of a shift that occurred for all society in terms of ways of working, marking the beginning of the mobile computing era, his individual experience being symptomatic of a wider social trend. (Thompson/ BBC / British Museum, 2011)

Another contributed item of memorabilia is *My Father's Rice Box* contributed by Angela Joyce. (Joyce/ BBC / British Museum, 2011)

This object is a very personal contribution that represented Joyce's father's experience of being a Japanese prisoner of war from 1941 to 1945, an individual testament and evidence that contributes to a collective understanding of that period of world history. Here a narrative is shared that provides a unique component in the grander historical narrative of the Second World War.

In *The Memory Store* the narrative world is constructed by the fictional memories contributed by participants in workshops and submitted online. The story

universe is created by this collective effort, albeit with some authorship in terms of deployment and presentation. Essentially the store mimics what a potential memory store might be like in terms of the diversity of content. In this way the store provides a snapshot of the collective imagining of Liverpool in 2115 in a way similar to a collection of blogposts by residents of Liverpool in 2018 might paint a picture of the city today.

The Cowbird stories are a 'sharing of life experience' and seem both factual and fictional. It is difficult on this site to distinguish between reminiscence and fiction. At this point it is worth drawing attention to the connection between acts of imagination and memory. Memory is constructed in remembrance and so is in recall an act of imagination. Van Dijck describes it thus, 'memory and imagination are not the distant cousins they once seemed: both derive from the same cellular and neurological processes and are intricately intertwined in the matter memories are made of.' (2007, p34) He proposes that with the use of digital tools to create objects of memory and the potential for them to be 'reworked to yield endless potentialities of a past.' (Ibid, p47), then 'Imagination and memory, in the age of digital technologies, may become even closer relatives.' (Ibid). As users reimagine and rework their past experience, or gather evidence from multiple users and reinterpret events in the light of a collection of many voices and perspectives.

Acts of imagination can also be seen in the way in which an understanding of the past, a history, is formed from the collective sum of individual components. This is a process whereby individuals form their understanding of events from a myriad of sources: images, films, texts, testimonies and perhaps their own lived experience, to arrive at their individual impression of a place, event or person. In reading across memory objects users engage in a creative process and employ acts of imagination to bridge gaps and make connections between diverse sources.

Van Dijck notes that:

One of Halbwach's important observations is that collective memory is never the plain sum of individual remembrances: every personal memory is cemented in an idiosyncratic perspective, but these perspectives never culminate into a singular collective view.

(Ibid, p10)

The entire picture of the past may be constructed from diverse memories even those that seem in opposition but represent the complexity of a given moment seen from numerous perspectives. Because, 'each partaker (of an event) may retain vastly different interpretations of the occurrence.' (Ibid)

Van Dijck asserts that, 'no collective experience ... can ever be represented in a singular collective memory,' (Ibid, p11) that it is the archive in totality that tells the story. The role of the individual in relation to collective memory is complex as everyone belongs to a web of social groups and as such each individual has a unique experience whilst at the same time seeking belonging and alignment with particular social spheres. Van Dijck writes 'To properly understand their own existence in the grand scheme of historical events, people continuously sharpen their own remembered experience and the testimonies of others against available public versions.' (Ibid, p10)

This relationship between individual recollections and the collective experience of a social group is apparent in, *I Remember*, by Georges Perec.

In the introduction to the Verba Mundi publication of *I Remember* David Bellos notes,

The 'I Remember' device using only shareable memories seems at first glance to dissolve the individual memoirist in a collective identity (that's to say, as a person who, just like thousands of others, remembers Gerry Davis, or the capitulation of Japan), but in practice, when pursued far enough, it does quite the opposite: it locates the autobiographer in a 479 dimensional space in which his specific identity is made unique in a way that no amount of personal confession could achieve.

(2014, p11)

He writes of the 'memory groups' that are created by these simple sentences, 'The set of people who remember the Franco-Egyptian crooner Reda Caire performing at the Porte de Saint-Cloud Cinema,' (Ibid) and how these memory groups intersect but with only one individual who could claim to belong to each group. The memories

define Perec as an individual in terms of his associations, reflecting his individuality but also his place within collective social groups, family, writers, his generation, his nationality, as a resident of Paris in a certain time period and so on.

(Perec's, *I Remember*, writing exercise formed the basis of *The Memory Store's* Tate Gallery workshop. For more details see Appendix C)

This illustrates Halbwach's view that:

A recollection of a picture or of an event is a state of consciousness of some complexity and comprises, so we are told, two kinds of elements: on the one hand those that any member of our group can know and understand. ... On the other hand there is a unique aspect under which recollections appear in our consciousness because we are what we are.

(1950, p170)

Interestingly the volume '*I Remember*' also contains factual errors, however Perec didn't think this mattered saying, 'That's how I remembered it!' (Perec cited by Bellos 2014, p12) Thus illustrating that memory is not fact but is a construction and whilst it may be taken as evidence of a collective experience it must be seen also as the unique recollection of an individual and subject to not just their sensibilities and perception but also their human fallibility.

This collective process of reminiscence is also self-perpetuating. Within a social group individual recollections may trigger others to remember similarly:

The affective constitution of personal memories is well recognized by psychologists: when people read or hear reminiscences narrated by others, they often feel triggered or invited to contribute their own memories.

(Van Dijck, 2007, p56)

This is known as 'Affective resonance,' (Ibid) and relates to the practice of hashtags on Twitter where a thread is started and other user's memories are triggered to share their experience in the defined context of the particular thread. In this way users identify with other users and align themselves within a 'social framework.' (Halbwach 1950).

Social media illustrates Halbwach's theory of collective memory as a social framework that connects individual experiences. Halbwach identifies that memories occur to individuals through their connection to the social framework:

everyone has a capacity for memory (memoire) that is unlike that of anyone else, given the variety of temperaments and life circumstances. But individual memory is nevertheless a part or an aspect of group memory, ... to the extent that it is connected with the thoughts that come to us from the social milieu. (1950, p53)

Social media therefore might be seen to not just make visible our shared recollections but also to drive the ways in which we might remember events and the events we might remember. Trending can be seen as evidence of this and again the use of hashtags not just to connect items but also to inspire the posting of items.

In the context of *The Memory Store* this was mimicked in the development of themes on the site (epidemics, environment, politics) and the structure these frameworks suggest was useful to not only create narrative connections between items but also to trigger the contributions of further writing.

Halbwach believes that memory is constructed in the present. Taking a 'presentist approach', he writes that, 'the past is a social construction mainly, if not wholly, shaped by the concerns of the present.' (1950, p25) In this way we witness the shifting sensibilities of society. Halbwach explains further:

society, in each period, rearranges its recollections in such a way as to adjust them to the variable conditions of its equilibrium... These ideas represent, if you will, the consciousness that society has of itself in its present situation. (Ibid, p183).

*The Memory Store* project, through a process of user-contributed content, constructs a shared suite of social concerns that are reflected in the memories uploaded. Deductions can be made about these concerns and speculations about the social values that they might reflect. For example, eleven user contributions were about environmental issues and these reflect the value accorded to or the social concerns about the environment. In this way the 'consciousness' of this fictional society, has been drawn collectively by the crowd.

Not only is memory interpreted anew in each generation or with successive shifts in sensibility but the very act of remembering is ‘presentist’. Memories are not carried around within us, secreted complete in a compartment of the mind, but are constructed when triggered. Van Dijck describes it thus, ‘the brain does not store memories but re-creates the past each time it is invoked.’ (2007, p30) He further clarifies, ‘memories are effectively rewritten each time they are activated.’ (Ibid p32) Van Dijck refers to Deleuze and notes:

In his book *The Time Image*, Deleuze has theorized the internalization of the film camera in the human mind to explain memories as filmic projections of the present.

(Ibid p125)

In other words when we remember an event it plays back in our minds eye as a present tense experience. For this reason the memory transcripts of Jules Stewart, that provide the over arching narrative in *The Memory Store* project, are written in the present tense. To suggest that this memory is happening now, or at least being relived, called into being, as our minds do when memories are recalled. It is also through this construction and aligning of memories in the present that reflects the *ethos* of this collectively imagined society. This is discussed further in relation to the storyworld construction in Chapter Three.

## **Technology and Memory**

As the previous chapter examined the effects of the technology of writing, this chapter proposes that the technologies, developed and employed to hold memory, have also had effects on what is stored, as well as the interpretation and use of memory objects.

Smith Rumsey notes ‘the Sumerians are credited with inventing writing,’ (2016, p21) through their use of cuneiforms in Sumeria in B.C. 3,300 to record transactions. This she asserts, ‘led to the creation of objects as evidence, capable of transcending the frailty of human memory and thwarting the temptation to shade the truth by holding

people accountable.’ (Ibid) She proposes that the technology of writing enabled societies to record transactions and evidence events. In short to develop systems whereby records could be stored, memories could be archived in text form. Smith Rumsey proceeds to identify how writing then developed beyond administrative purposes, creating cultural artefacts, such as epic poems, and narratives of events. Through the technology of writing, research suggests, societies were able to record and reflect on the past and in that process of reflection attribute causal relationships. Smith Rumsey asserts that:

this is memory’s task of retrospection, to integrate the knowledge that we have, to impute a sense of cause and effect to the events in our lives and to offer a sense of meaning.

(Ibid, p27)

Writing technologies delivered the capacity to not merely remember events over lifetimes and generations but also to reflect and learn from past events. As technologies developed people found ways to utilise them to record their thoughts and this became second nature and part of the lexicon of words to think about memory with. Van Dijk identifies that:

ever since the invention of writing tools, but most noticeably since the emergence of photography in the nineteenth century, the human capacity to remember has been indexed in daily language by referring to technical tools for reproduction.

(2007, p17).

With common phrases like, *I can picture that, I’ll make a note of it* and the idea that life flashes before your eyes like a film clip before death. The use of technology metaphors to explain biological processes is mirrored in the use of biological processes to envision technology. In the previous chapter the connection between thought processes and early concepts of the Internet with *associative indexing* were established. In regards to memory, McLuhan’s theory of media as ‘extensions’ (1964) may be applied. The extension of memory beyond the mind onto an external device has existed as a practice long before the advent of digital media, with memory stored on the walls of caves or on clay tablets or parchments. But, the uses of technologies to record thought have always, at first, been greeted with suspicion. Van Dijk supports this



stating, 'every new means of outsourcing our physical capacity to remember has generated resentment.' (2007, p15). Both Ong and McLuhan cite the fears of the Ancient Greeks in the face of the technology of writing. McLuhan cites Socrates *Phaedrus*,

“The discovery of the alphabet will create forgetfulness in the learners’ souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves. ”

(1967 p113)

Ong notes in his work, *Orality and Literacy*, 'Writing, Plato has Socrates say in the *Phaedrus*, is inhuman, pretending to establish outside the mind what in reality can be only in the mind.' (1982, p78)

This view points to the dichotomy that external devices might be useful to retain memories exactly as they were recorded, so a photographic image a written note, a map or diagram that records faithfully the positions of things at a given point in time, but human memory is not exact, is not fixed and has a tendency to store some things and not others, to recall memories on the fly, as we have already established, in relation to the present. And any mediated memory is exactly that, mediated. If we consider a wedding photograph, at first glance evidence of the happy day, but, on closer inspection, it has been carefully framed to include the main participants, on the count of three everyone has smiled no matter their feelings, a flash may have been used to brighten what was in fact a dull day. Whilst seeming to offer an exact slice of reality, it is limited by the constraints of the technology used, its perspective or duration and is fixed. Cut off from existence, the captured memory is no longer attached to its event. It exists without its original context and can be placed in new juxtapositions that affect its future reception. So the wedding photograph might be placed in the context of other weddings comparing fashions at happy events or in a sequence of photographs about the toll of expensive weddings used as evidence of extravagance. This makes memory objects on the one hand evidence, captured slices of time with a stamp of authenticity but on the other hand open to appropriation, reinterpretation and manipulation. As Van Dijck notes:

As an artificial prosthesis, they can free the brain of unnecessary burdens and allow more space for creative activity; as a replacement they can corrupt memory. Media are thus paradoxically defined as invaluable yet insidious tools for memory.

(2007, p16).

The act of selection when recording an event, incident or moment in time can never be innocent but is informed either by aesthetic, social or political perspectives, again by a ‘social framework’ and so ‘Media like television and, more recently, computers are devices that produce, store and reshape earlier versions of history.’ (Ibid, p17) Digital technologies reproduce, remediate, repurpose past events, people and places. It is through this use of collective memory by social institutions that ideologies and worldviews are asserted. Halbwach asks:

Should we say that the dogmatic tradition alone possesses the attributes of a collective memory, and that a religious tradition that gathers together and deals with the revelations of mystics as testimony resembles a memory that is encumbered with residues of paramnesia?

(1950, p118)

The idea of deluded memory that blurs fact and fiction and that obfuscates the past can clearly be seen in the current prevalence of fake news. A term that has taken on significance in an age when so much of our world view is gathered online. As evidence of the extent and type of fakery spread on the Internet we might look to the practice of verification and the existence of web sites like Snopes, who defines itself as, ‘the Internet’s go-to source for discerning what is true and what is total nonsense’ (Snopes, 2018).

It is this concept of the ability to plant memories, to legitimise some recollections whilst declaiming against others that is at the heart of the plot of *The Memory Store*. The truthfulness / verification ratings of content in the project are an instance of the Monanzo Corporation controlling the reception of some memories as more truthful than others. In this way the collective memory has been realigned to the corporate values.

One of the dangers of a reliance on digital data as memory is the manipulability of these resources. As Van Dijck notes, ‘The coded layer of digital data is an additional type of materiality, one that is endlessly pliable’ (2007, p47). Digital memory objects, like biological memory processes, are not fixed and are easily recombined or juxtaposed in ways that reveal new or other meanings. They are as Van Dijck states, ‘easily overwritten or updated without leaving much trace of the changes made.’ (Ibid, p116)

This idea that social thought, or what we previously noted as ‘social cohesion’, is a result of collective memory (open to manipulation) coupled with a view of memory as a fluid process, challenges the view of memory as fixed. Memorials constantly remind us, *lest we forget*, stone obelisks and statues are built to out last time, to carry memories of events into the future. Of course there is also a continuity to memory as, ‘Schwartz concludes, “the collective memory come into view as both a cumulative and an episodic construction of the past.”’ (Schwarz cited by Halbwachs, 1950, p26). That memory can acknowledge a continuing concept whilst incorporating new and even contradictory ideas; that memory is constantly being carried forward whilst simultaneously being rebuilt. This connects with the concepts of Nelson and Bush and their search for a way to channel data that remained fluid, not fixed, that mimics thought / memory processes.

### **Memory and the *bricolage* of the Internet**

The process of establishing and sharing ideas about the past has undergone a profound shift in the digital age, with many perspectives recorded rather than just those of dominant social groups, embracing a multitude of possible perspectives that can be applied as filters for looking at the past. With archiving becoming a wide spread collective activity that extends beyond experts, authors, renowned individuals and institutions to include anyone with a networked computer, as we saw in the BBC and British Museum project, *The History of the World in 100 Objects. The Memory Store*

examines how this social archive might be navigated, the way that patterns emerge from associating these diverse recollections and how perceptions, ideas, conclusions may be drawn that are the sum of disparate parts and diverse perspectives. This reflects Turkle's concept of Internet activity as a form of *bricolage*, that:

Exploring the web is a process of trying one thing, then another, of making connections, of bringing disparate elements together. It is an exercise in bricolage. (1995, p61)

In her work, *Life on Screen: Identity in the Age of the Internet*, Turkle proposes that computer tools offer a more exploratory way of searching data, an iterative experimental way of thinking that favours what she terms, 'soft mastery.' She invokes the concept of bricolage as used by Levi Strauss in his essay *The Savage Mind* (1962). Strauss defines scientists who are, 'creating events (changing the world) by means of structures and the 'bricoleur' creating structures by means of events.' (1962, p13) Bricoleurs he defines in contrast as, 'using the remains and debris of events in: French "des bribes et des morceaux", or odds and ends in English, fossilized evidence of the history of an individual or a society'. (Ibid, p14) This definition could be applied to Internet browsing and could also epitomize the way in which my character, Jules Stewart, searches the archive of the memory store, picking through the 'odds and ends' of other's memories to solve her case. She is a *bricoleur* mimicking an Internet user pursuing avenues of enquiry online.

### **The Practice of Memory Capture**

At an individual level we record and share our lives in response to our social circles and we record what we think our social circles will be interested in and mediate our memories accordingly. 'Personal memories, at the moment of inscription, are prone to wishful thinking.' (Van Dijck, 2007, p47). We remember an idealized holiday and even as we capture the memories we are already thinking about how we will remember and share those recollections. The memories themselves are also framed in an idealized

setting, captured using the same technologies that capture the idealized imagery in films and advertising that provide so much of our *social framework*. The memory objects we create today are produced using the same tools as the film and advertising industry and are viewed on the same devices too. It is no surprise to see memoires shared on social networks that reflect the aesthetics of popular culture. Halbwach, notes:

Society from time to time obligates people not just to reproduce in thought previous events of their lives, but also to touch them up, to shorten them, or to complete them so that, however convinced we are that our memories are exact, we give them a prestige that reality did not possess. (1950, p51)

And more than that, we reflect in our chosen memories, our own desire as to how we wish to be remembered; what of our lives that we want noted, what of our lives we wish to share, what objects of memory we want to be associated or identified with. We edit our past.

As previously stated, memory is often replayed in our mind's eye like a piece of media and in the moment our thoughts are often of how we will capture and share the moment, acts of affirmation and confirmation to ourselves and those around us of who we are. We construct a picture of ourselves through our own personal archive in social networks that we edit and deploy as evidence of our existence. Thus we tell our own story but also intersect with others and contribute to a larger canvas. Van Dijck argued, 'Mediated memories are the activities and objects we produce and appropriate by means of media technologies, for creating and re-creating a sense of past, present, and future of ourselves in relation to others.' (2007, p21). And yet these technologies are not just tools that innocently capture memory objects for us but bring with them a set of possibilities that lead and limit what we might or might not be inclined to capture. Van Dijck notes how, 'the brain steers and stimulates the camera as much as the camera stimulates the brain' (Ibid), believing, that we produce images that place us in a continuum with the photographic imagery (advertising, television, film), which surrounds us and are juxtaposed with the images we produce.

The use of photographs as memory objects, to record events and create memorabilia has also augmented a natural impulse to evidence existence and particularly now, in the age of the Internet, to share those instances with others. Photography set in motion a behavior that is today for many people second nature, to reach for their device and record aspects of their daily life. This activity could be seen as narcissistic but also an act of affirmation, satisfying a need to provide evidence of existence in a certain place and time. We capture something of that, we take a piece of that experience, to prevent it disintegrating and slipping away through our fingers like sand. In the future technology of *The Memory Store* all residents of the Corporate Strata will automatically upload their memories to the store and not need to remember for themselves.

Today's medium of choice for most individuals to capture their memories are photographs taken and instantly uploaded to social media from a smart phone, or even live streamed. 'Photographs show people being so irrefutably there and at a specific age in their lives,' writes Sontag (1971, p70) in her seminal essay, *On Photography*. She also notes, 'To photograph is to appropriate the thing photographed.' (Ibid, p5) In our age of the Internet memory collections have become digital, the events, people and places we want to preserve are saved as images in our digital archives, rather than photo albums, tickets and concert programmes saved in dog eared envelopes, shells and pebbles from the beach going dull and dry on windowsills.

In the Internet age we may ask where digital technology leads us, as new tools to create and share memory online proliferate Facebook, Twitter, Youtube, Instagram, blogs and wikis. Van Dijck asks whether, 'digitization is ultimately, a cultural process that is slowly changing the way we remember our selves?' (2007, p49) By providing new tools with which to select, capture and display memory objects that 'inform memory' rather than transmit it (Ibid, p36) and through which 'memory materializes' (Ibid) does the act of recollection change? One affect of the current technologies on

memory capture is the multimedia potential of digital tools. Today memories can be still or moving image, sound files, text or often a combination of all of these. Shared online these can have comments attached or links to further media. Van Dijck describes how:

The fusion of old and new technologies results in a hybrid tool that seamlessly combines editing and archival functions; blogging allows for preserving and revising entries at the same time. ... Although the Internet is often characterized as a transient, evanescent medium, lifelogs have both the ability to fix and the potential to morph.

(Ibid, p75)

Digital tools provide fluid items of memorabilia that are always editable, not fixed like a photographic print. The multimodal aspects of storing memories online as moving, still images, sounds and text and the aptitude of people in recording, using these technologies, leads to thoughtful capturing and editing of memories. This editing becomes an activity in itself rather than the capturing of an activity for later recollection. For example, a group of friends creating and staging a photographic image or video clip at an event rather than a snapshot of the event itself, this then serves as the memory, posed, controlled and captured in a style and format that the participants have devised rather than a happenstance collection of a particular instance. No longer a 'decisive moment', (Cartier Bresson, 1952) but the result of controls, filters and editing that we are all now familiar with to design a moment that will serve as the way we wish the instance to be remembered, a picture posed, a scene reenacted for the camera.

Sontag asserts:

Picture taking is an event in itself ... Our very sense of situation is now articulated by the camera's interventions... After the event is ended, the picture will still exist, conferring on the event a kind of immortality.

(1971, p11)

The *selfie* has in recent years become the epitome of the holiday snap. Is this change in behavior brought about by the technology allowing a person to take a photo of themselves with ease? Or is this phenomenon the result of the encouragement of online technologies to record all aspects of life including the sad and banal as well as celebrations and the unusual? Does the technology reinforce a tendency to affirm our

presence? Does micro blogging, recording *what's happening now*, build into archives of what has happened? Does the 'selfie' build into archives of who was seen where? In *The Memory Store* this capture of the moment happens automatically with Liverpool's residents in 2115 having moved beyond today's norm, of taking images of all aspects of every day life, to an acceptance that their memories will be captured automatically.

The digital age has extended the processes already started by the habits of photography of using this medium as proof of our engagement, not just that we were there, but part of something. Sontag in 1971, in the pre digital age, asserted that, 'Photography has become one of the principle devices of experiencing something, for giving an appearance of participation.' (Ibid, p10). Sontag writes of the way in which tourists use photography to put the 'camera between themselves' and the 'unfamiliar' (Ibid). Thereby the photograph becomes evidence of being there and part of the framed event, but in reality 'being there', is looking through the frame at that event in that moment. Sontag's assertion that, 'today everything exists to end in a photograph,' (Ibid, p24) is more applicable in the Internet age when so much of life is captured and shared and everything exists in order to be uploaded and looked at later. In this way photographs are evidence of how instances of our lives become commodities that in our own data stream make up individual identity, becoming, as Sontag describes, 'a consumable object, ... a short cut.' (Ibid) When placed in particular collections with others these individual memory objects can take on a different significance, with memories of the banal, like *what I had for breakfast* type adding to a thread from which deductions about the collective might be made. Individual 'detritus.' (Ibid, p68) thus combines to offer collective insights.

Digital technologies add other dimensions to the memory objects stored online through the opportunities for sharing recollections that were inconceivable before 2004 when the term Web 2.0 became popular to describe the technologies that made uploading media content simple and possible for anyone with an Internet connection.



With Myspace launching in 2003, Facebook in 2004, Youtube 2005, Twitter 2006, the ability to upload, store and share thoughts, images, music and video became something everyone could do. This sharing amplifies our engagement with memory artefacts as tools for comparison and calibration with our peers. Sixty years ago the wedding photograph on the mantelpiece may have compared favourably with our neighbour's or may have seemed outdated when finally compared to that of our daughter's. Revealing customs, religion, possibly social class and wealth as well as time of year, weather, place and so on. But today we might place our images on the same platform (Facebook, Instagram, Twitter, Youtube) as celebrity weddings. Ceremonies from locations across the world exist cheek by jowl and reflect diverse customs and religions. This process of sharing, reaffirming our individual remembrance, triggering personal and private memories for ourselves and families and making a contribution, if any images are shared publicly, in a collective archive, which reflects a broader historical record. Potentially our individual memories of our big day may be seen in the light of wedding customs and fashion at a particular point in time. This *new* opportunity to share these experiences creates a *new* aspect to memory, of remembering and being remembered in relation to others. This juxtaposing of memories with the memories of others in turn influences our own recollections. Van Dijck cites Robert Payne, writing, 'online dynamics of collective recollection stimulates the articulation and rearticulation of the self.' (2007, p60) That looking at our own memories and those of others leads to an 'inclination to (re)construct the self in the light of experiences posted by others,' (Ibid, p72) to see ourselves in relation to the crowd. Dijck asserts, 'Blogs help users synchronize their experiences with others.' (Ibid)

*The Memory Store* project reflects this trend towards memories becoming valued in relation to the memories of others. In this future archive users can calibrate their memories with the crowd. Memories are linked associatively, placed in relation to others, the interface providing relationships between the diverse contributed content in

the overarching narrative and in themes that have been drawn out of them, for example the thread, *Technology* in the memory archive page,

<http://thememorystore.org/technology.html>. At the same time these memories retain their individual integrity as narratives and expressions of individual character.

Kevin Kelly in his article, *We Are the Web*, first published in 2005, wrote about the first ten years of the Internet and looked forward to the next. He wrote:

What will most surprise us is how dependent we will be on what the Machine knows – about us and about what we want to know. We already find it easier to Google something a second or third time rather than remember it ourselves. The more we teach this megacomputer, the more it will assume responsibility for our knowing. It will become our memory. Then it will become our identity.

(Kelly, 2005)

Here Kelly refers not just to using computers to store our memories, but the capacity of computers to learn, know and remember things about us and our behaviours; for computers to become our memory. The memory trail we leave behind in the machine, our searches, our digital footprints, form evidence about us and define who we are, becoming an expression of identity. In this way trails of archived content in *The Memory Store* provide evidence, clues in the plot and reveal character.

Smith Rumsey reflects that:

As we outsource more of the most intimate part of ourselves – our personal memory and identity - to computer code, the fear of losing our autonomy – the alienation of our data, so to speak – increases because in the digital age, only machines can read our memory and know what we know at scale.

(2016, p106)

This recognises the complexity of data that network computers allow access to both in terms of storage of our own memories and the ease and ability with which we can share this. Facebook's sharing of memories from previous years (see Figure 3.), memories we previously uploaded or when we first became friends with another user, events we are unlikely to remember, serves as an apt example of this. The sheer quantity of tweets, Facebook posts, images and videos stored by an average person is now beyond what might possibly be remembered. We can't remember all of this and yet the computer can.

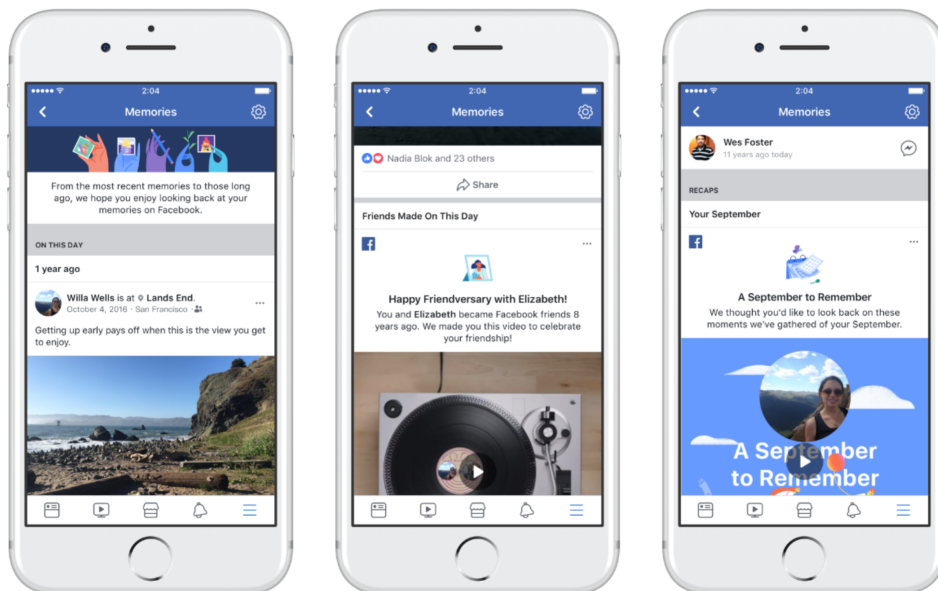


Figure 3. Facebook Memories (Facebook Newsroom)

Computers are used to store memory on a scale that is beyond human capacity and computer algorithms are necessary to order and make sense of these vast memory archives. Another consequence of the digitization of media is the sheer volume of material that can be captured, the limits of analogue, 36 shots on a roll of film, 60minutes duration of an audio cassette, are no longer constraining factors.

Digital storage will always need devices to replay their content and this makes them more vulnerable to inaccessibility than previous memory repositories that had a physical presence, a stone tablet, a photo, a printed text.

As Smith Rumsey notes, 'with digital encoding come a fateful dependence on machines for reading and playback equipment. A digital file is machine readable, not eye legible.' (2016, p116)

Another pertinent issue with the digital storage of memory objects is the problem of data overload, that digital, rather than solving, has amplified. This has led to issues not just of storage and retrieval but also categorisation and navigation. Van Dijck identifies that:

Since early modernity, people have tried to imagine and invent memory machines that could remedy two basic shortcomings of the human brain: its inability to systematically record and store every single experience in our lives, as well as the brain's incapacity to retrieve these experiences unchanged at any later moment in time.

(2007, p149)

This relates to the concepts of pioneers in digital technology such as Bush and Nelson, who in turn reflected on memory processes to conceive of associative indexing and hypertext to counter issues of information overload.

*The Memory Store* is also one such, albeit fictional, solution to this problem of information overload, as an imagined future technology it offers an extension to the user's capacity to remember and to harness those collective recollections for use by everyone. The store uses associative indexing to connect the resulting data gathered. When Jules' memories refer to key-words that are significant in other resident's memories they become connected. In this future scenario, set in Liverpool in a hundred years time, this imagined technology allows users to store their memories in the present tense so they can return to them later and also so that their experience can be shared with others. Their lives can be rated, calibrated and used to detect patterns, to contribute to the collective well-being and safety of the crowd. As these memories are recorded in real time it is supposed that they are immune to manipulation. But there are so many memories and all so disparate, as people recollect different aspects of life and situations, making meaning from this sea of memories is no easy task. Finding the truth of what may have happened is a challenge. The focus of *The Memory Store's* overarching

narrative is Jules Stewart's orchestration of user-contributed memories, each as disparate as a real life random selection of recollections of life in Liverpool today would be, to uncover evidence and find a missing person. Jules's task is to deduce from the pattern of contributed memories the story of Estelle Fischer's disappearance.

## **The Digital Memory Space**

In the previous chapter I have already noted the spatial conceptualization of data on the Internet and referenced principles influential on the development of the Internet in the ideas of Bush and Nelson. Chapter One proposed that concepts of associative indexing influence the way that users work with digital tools to navigate and access material. This theory, that tools afford certain uses over others, is referred to by Manovich as the 'non transparency of the code' (2001, p64), and can also be applied to interface tools online for dealing with memory objects. Manovich asserts that:

the interface shapes how the computer user conceives of the computer itself. It also determines how users think of any media object accessed via a computer...the interface imposes its own logic.

(Ibid, p64/65)

The interfaces through which we store and access memories leads us into a logic which extends beyond how we use the tool to include what we might store and how, and how it might be shared, categorised, navigated. Facebook, for example, encourages users to share, '*what's on your mind*' *Photo/Video, Feeling /Activity*, building into scrolling timelines in both individual and collective or group streams. Twitter's strap line that was used to prompt users when the service first started, '*what's happening*' is another instance of technology encouraging a recording, not of momentous events but the more mundane. This concept and the technical limit of 240 characters provided an immediacy befitting the instantaneity of the Internet but also led users to develop archives of their tweets. Access is given to these archives to those who follow. So although this is a tool seemingly about the present it has built an extensive history. It has encouraged the

storage of micro memories, snapshots, passing thoughts, off the cuff remarks; archives of material vastly different to the stored memory objects of previous eras, such as, photo albums, diaries or even further back carvings on clay tablets. It encourages a practice identified by Sontag that photography ushered in, the recording of mundane reality. ‘We now make a history out of our detritus.’ (Sontag, p68)

Another effect of the digitization of memory objects, as well as the proliferation in terms of types of objects, the sheer quantity of memorabilia produced and its nature, is also the way in which it is stored and retrieved. Manovich writes about the spatialization of data and its consequences, asserting that:

a hierarchical file system assumes that the world can be organized in a logical multilevel hierarchy. In contrast, a hypertext model of the World Wide Web arranges the world as a nonhierarchical system ruled by metonymy. (2001, p65)

The archive of tweets on Twitter is not organized like a library system or indexed as a book. All data exists on the same plane and connections between items are associative with material being found more serendipitously than a hierarchical system would allow.

This application of spatial ordering to locate information can be related to concepts of memory and recollection. Smith Rumsey recalls the mnemonic technique of the Ancient Greek lyric poet Simonides of Ceos:

Cicero, a devotee of the technique, wrote “(Simonides) inferred that persons desiring to train this faculty (of memory) must select places and form mental images of the things they wish to remember and store those images in the places, so that the order of the places will preserve the order of the things, and the image of the things will denote the things themselves.”

(Smith Rumsey, 2016, p36)

She identifies these mnemonic techniques that used ideas of mental maps in which memories could be placed and how the mind is able to recall the map and find information placed there in relation to other information, noting that, ‘places were designated as navigation points along routes of retrieval.’ (2016, p36) This spatialization of memory is aligned with the concept of online space and a user’s abilities to navigate

through spatial metaphors to retrieve data. Smith Rumsey asserts, ‘virtual representation of space is necessary in the absence of real space because the brain spatializes what it perceives.’ (Ibid, p38) She continues, citing ‘interactive timelines, maps, charts and infographics’ as making meaning through spatial organization of data online and asserts that, ‘context is spatial.’ (Ibid)

This chapter proposes that data online is made sense of spatially in the context of the data’s relation to other data. For example, a tweet singularly has some limited significance but navigated to in the stream of a particular hashtag its significance is amplified and may change. It may become more relevant as a piece of information or more relevant to a wider group of readers. In this way the contributed memories of *The Memory Store* collaborators are made sense of as individual entries, in the context of the overarching narrative and also in relation to other entries in the collections of themes, adding to the collective impression of the city.

Smith Rumsey also acknowledges the nonhierarchical storage of digital data and the consequence of this data being stored in bits. All objects, whether they are photographs, sound files or text are stored in code and then need decoding to be displayed. ‘In digital archives, there are no objects, only bits. They are stored randomly and assembled on the fly when they are called up to the screen. There is no deliberate spatial arrangement of bits on a chip.’ (Smith Rumsey, 2016, p41) Memory objects in archives are triggered and decoded in the context of our individual searches. Memories recalled in the present.

As Manovich has already witnessed, the arrangement of these coded items online is spatial and nonhierarchical. Resulting from this, Van Dijck predicts that these processes may lead to a conceptualization of memory and ability that is less about recollection and more about finding data in relation to other data, so our memories maybe more accessible to us, stored and made sense of in relation to the memories of others rather than in our own chronological recall. ‘Memory, as a result, may become

less of a process of recalling than a topological skill, the ability to locate and identify pieces of culture that identify the place of self in relation to others.’ (Van Dijck, 2007, p50)

Jules Stewart, the central character in *The Memory Store*, searches memories through associations looking for clues in a mass of user-generated material, seeking patterns in a vast sea of data. This reflects McLuhan’s assertion that, ‘our electrically-configured world has forced us to move from the habit of data classification to the mode of pattern recognition.’ (1967, p63) Hence Jules Stewart’s job title, a *pattern surveillance officer*.

Manovich identifies the spatialization of digital data that influences the ways in which we approach navigation of information.

Contrary to popular images of computer media as collapsing all human culture into a single giant library ...it is perhaps more accurate to think of the new media culture as an infinite flat surface where individual texts are placed in no particular order... we can note that Random Access Memory... implies a lack of hierarchy: Any RAM location can be accessed as quickly as any other. In contrast to the older storage media ...where data is ordered sequentially and linearly...RAM flattens the data.

(2001, p77)

Digital technology then provides a way of presenting data laid out on one plane rather than a linear hierarchy that implies a particular order. In this way the display of material occurs with no item prioritised more than others. For example the memories archived in social networks like Facebook or Twitter or that come about through a search online for items about events, people or places are, at one level equal and arranged in no order (setting aside issues such as metadata use and search engine optimization). In principle, a search won’t result necessarily in expert views. In principle the thoughts and memories of everyone online are equal and withstanding privacy settings, all items are, potentially, available for anyone to read. The concept of RAM being akin to that of memory as being all within our grasp, stored in our minds waiting to be triggered, not lined up to play in a particular order like a film but called up by prompts in the world around us.



We might note here the use of the term *random access memory*, that this human faculty was chosen to describe this machine function.

Manovich connects a *postmodern* trend towards the concept of *spatialization* asserting that:

time became a flat image or a landscape, something to look at or navigate through. If there is a new rhetoric or aesthetic possible here, it may have less to do with the ordering of time by a writer or an orator, and more with spatial wandering.

(Ibid, p78)

That in retrieving this data, by searching and making connections between content, users author their own journey through information rather than following the intentioned line of an author. Albeit possibly steered in unseen ways by metadata.

In *The Memory Store* readers are encouraged to branch out from the central spine of the narrative and explore the future city through a map, a timeline, news articles and to meet the cities residents through the archive of their stored memories. In other words to wander through this archive of Liverpool, set in 2115, to plot their own journey.

### **Memory as a Narrative Tool**

Porter Abbott writes, ‘that memory itself is dependent on the capacity for narrative.’ (2008, p3) The ability to remember is dependent on stringing together a sequence of events, Abbott argues, that it’s no coincidence that our earliest memories occur around the ages of three or four when children, ‘start putting verbs together with nouns’(Ibid), that is, when children develop the ability to narrate their memories. As we have already established, memories are called to mind in the present, amid present concerns, and are then narrated for others. Mendelsund believes, ‘memory is made of the imaginary; the imaginary made of memory.’ (2014, p299) Stating that memory is the ‘fodder of the imagination.’ (Ibid) Memory then is a shared space

that writers take inspiration from and ask readers to draw upon to understand, empathize and visualize with their creations.

The most gifted writers are those who manipulate the memory sets of the reader in such a rich fashion that they create within the mind of the reader an entire world that resonates with the reader's own real emotions.

(Wolfe quoted in Ryan, 2001, p89)

Here we might refer back to Calvino's request that readers imagine a train station and how he invests that request with such evocative resonance.

Memory is used as a narrative device and particularly in crime fiction where characters relate their recollections as witnesses, investigators or perpetrators allowing the reader to detect the plot.

In the crime fiction app, *Herstory* (Barlow, 2015) the user is presented with a database of video interviews with a witness, who initially reports her husband as missing and then finally is interrogated as a suspect in his murder. Spanning a period of months the interviews reveal the narrative over a series of interviews. The user accesses these interviews through searching in a database using key words and working to detect the crime by deciding what to search for. The use of the reader's memory is a device here to engage and enthrall. Readers are called upon to remember what has been said in order to narrow their search, as a detective listens, to narrow their questioning, having to remember what the witness has said previously. The *Herstory* app cleverly employs this memory puzzle device to lead readers to discover the narrative for themselves through the memories, the statements of the central character, which reveal this character, their secret and draws a picture of their world and the other characters who inhabit the story.

In her monograph, *Private Dicks and Feisty Chicks*, Cole asserts that, 'In crime fiction, clues are an expected and understood convention ... An experienced crime reader anticipates these references.' (2004, p47) Readers become adept at remembering what to look out for, recognizing tell tale signs. Hanging on to the

relevant details. In fiction the reader decides, and in good writing is led, to remember certain details over others and in crime fiction this is used to engage the reader drawing them through the narrative as they anticipate whether their deductions are correct or fear they might have missed or forgotten something important as they, 'draw on their own experience of cautionary tales, reiterated myths as well as their own knowledge of science', (Ibid, p54) as they reflect upon their own memories in the act of deduction.

### **Immortality and Impermanence Online**

At the close of this chapter we return to the idea that memory objects are attempts to preserve moments, thoughts, pieces of ourselves, in time, a proof of our existence. Writing too, of all forms, can be seen as attempts at such immortality. The writer Margaret Atwood notes that, 'all writing of the narrative kind, and perhaps all writing, is motivated, deep down, by a fear of and a fascination with mortality.' (2002, p156) I would suggest also that this is extended to include writing online, every tweet and Facebook post, assertions that we were there, that this happened, that I witnessed this, felt that, thought of this.

Atwood writes that, 'the act of writing charts the process of thought, it's a process that leaves a trail, like a series of fossilized footprints.' (Ibid, p158)

In writing about his project *The Impermanence Agent* Wardrip-Fruin describes the promise of digital media to immortalize memory:

The story of hypermedia, in which the Web is a recent chapter, begins with a vision of transforming the brain's associative connections into media - media that can be infinitely duplicated and easily shared - creating pathways of thought in a form that will not fade with memory.

(<http://www.impermanenceagent.org/agent/essay.html> accessed: 10th April 2018)

He refers to Bush and Nelson's ideas about pathways through data, freed from its original moorings becoming part of the exponential growth of the Internet backend, accessible through the frontend browser via internet searches or at that time, nineteen ninety nine, through a prevalence of agents such as Jeeves. *The Impermanence Agent* was an art piece that users had open on their browser that gathered the content the user browsed and combined elements to tell a story of the combined data, to present a new story from the juxtaposition of diverse content, mutating texts into new messages through their recombination. Through this project Wardrip-Fruin was engaging users with, 'our complicated relationship with impermanence.' (Ibid) By grasping the ephemeral media objects passing through the browser.

The striving for permanence, to set down footprints for those behind to follow, takes on new dimensions on the Internet where those following along may deviate from one pathway onto many others, may recombine and in doing so reinterpret texts. The once fixed trail of memory carved in stone has become fluid and dynamic online. Wardrip-Fruin notes, 'The paper trail is changing, we are changing it, and with it we are changing our contact with immutability.' (Ibid)

In the intervening years since Wardrip-Fruin's project ran and his paper was written the Internet has become increasingly associated with instantaneity whilst, seemingly contradictorily, building a colossal archive. Wardrip-Fruin wrote of this element of life online, these contradictions, 'the ultimate archive, and yet have each element of this archive constantly in process. Dynamism without loss. Impermanence enfolded within permanence.' (Ibid)

Wardrip-Fruin cited two projects that were fighting against the tide online to provide preservation of online resources and to make content findable in the ever-increasing deluge of data. He writes of *Afterlife.org*, a site that preserves the websites of the deceased, maintaining and keeping sites alive after their owners have

died, an attempt to maintain and share their flow of thoughts. *The Internet Archive* is also referenced as an attempt to archive the Internet. Wardrip-Fruin writes that these projects, 'and the dream of hypermedia aren't about embalming; they're about eternal life.' (Ibid) Both projects are attempts to carve in stone these memory objects, to keep them afloat, marked with a buoy in the vast sea of data online. Wardrip-Fruin notes that, 'we find in the Internet that which expresses and creates, reflects and shapes, our complicated relationship with impermanence' (Ibid). This recognition of our attempts to record time passing, acknowledging our impermanence whilst attempting to leave behind a mark or to take with us from any preceding moment a memento I would assert is also a key driver in the act of writing. For Atwood 'Narration – storytelling – is the relation of events unfolding through time. ...once you've got clocks, you've got death.' (2002, P158-59) This chapter asserts that despite the Internet's inherent instantaneity it affords an apparent permanence to our memorabilia. Here we store our photographs, videos, passing thoughts, anniversaries and relationships. These personal troves of identity, that serve as markers in the sand of our passing, added into the mausoleum of the Internet become contributory to the vast social archive, open to the investigations of historians, writers and detectives. Our individual recollections added into the *collective memory* in a literal sign of our times.

This provides a framework for *The Memory Store* in terms of themes of memory within the narrative. The central plot of *The Memory Store* revolves around the storage of memory in a network environment, the complexity and diversity of such archives and the ease with which they might spread paramnesia. As the central narrative unfolds it becomes clear that despite her ability to store her memories and access a plethora of data about her past Estelle Fischer is confused about her origins and her disappearance, it transpires, is caused by her search for the truth about herself and her identity, growing from a realization that her adoptive mother has propagated false memories about her

childhood and because the truth that emerges is completely unacceptable to her. The plot is ultimately about false memory and the difficulties in establishing the truth in a digital environment that encompasses everyone's perspective. In this scenario who is to be believed?

The habits and tendencies to upload online all aspects of life, to assert identity and to prove existence, is extrapolated from social networking today to make feasible the concept of *The Memory Store*, in which future residents of Liverpool archive their reminiscences. Further that this collection of their memories becomes the collective expression of the city and what happens there and that the individual recollections build a collective picture of Liverpool in a hundred years time. *The Memory Store* translates the social media practices that today are increasingly visual into a text-based environment. This is not a prediction of a future technology that is text-based but it is text-based because the project is an exploration of reading and writing fiction online. Nevertheless the text is also the manifestation of the thoughts of the central character and residents and, as this chapter has proposed, narration is key in calling memories to mind. Therefore text delivered narration seems a good vehicle for expressing memory, as it has been in numerous epistemological novels.

The design of the interface of *The Memory Store* reflects the aesthetic of 'spatial wandering' identified by Manovich (2001, p49), encouraging users to explore this online archive of narratives, to have an experience like visiting a 'real' archive of memories and gathering an understanding through that perusal, guided by associations that happen due to the choices made, the direction of travel, rather than the linear line of thought of one author.

This chapter has proposed that memory happens collectively in a 'social framework' built by individual contributions and reinterpreted in the present as it is recalled or triggered. Memory defines individuals and is not only central to a sense of self but also

constructs history, provides social cohesion and expresses social values. In the digital age the collecting and storing of memory objects has become a wide spread practice with all aspects of life, including everyday mundane realities, uploaded. This vast archive of content from individuals, experts and institutions, available to all with a network connection, represents a departure in the retrieval of memory data as users can now 'wander' through a scattering of artefacts, following their own trails and associations rather than indexes and contents pages.

These principles and concepts are the foundation of *The Memory Store* project's design and plot. The ways in which the narrative and its functionality developed from these concepts of memory are the subject of the next chapter.

## **Chapter Three**

**Authoring an online narrative, *The Memory Store*, a reflection on the creation of a collaborative narrative experience afforded by the shared space of the Internet**



## Chapter Summary

Chapter One of this thesis explored how reading and writing experiences are affected by the technologies that facilitate them and proposed that the digital environment of the Internet, in its conceptualization as a space, affords narrative experiences that invite users in, to participate, share and explore. Readers online segue through diverse content ‘intertwining’ (Nelson, 1974) texts in serendipitous and unique readings, combining the individual efforts of writers into a mosaic of meaning. Spaces, conjured in the mind’s eye of readers, triggered by authors, are drawn from reservoirs of memory, unique to each individual reader. In my practice I propose to combine these two conceptions of space to create a shared narrative space online.

Research presented in Chapter Two suggested that the digital space is a powerful archive of memory that narrates history through a collective process. Individuals, experts and institutions tell stories of past events that are combined and curated by readers into unique, pathways of meaning. This chapter asserted that narrative is a tool of memory in that memories are narrated and that memory serves narrative, providing a reservoir of experience for the imagination to draw upon for both writers and readers. Finally, it was suggested that memory is constructed in the context of the present and, online, is juxtaposed with the surrounding content, open to recombination and manipulation. This chapter will relate how this research informed the design of *The Memory Store*, influenced the workshop activities to generate user contributions and inspired the themes of the creative project concerning memory and memory manipulation.

This third chapter brings together theories of reading and writing, digital technologies and memory, exploring the Internet’s potential for authors to create narrative spaces in which to collaborate with readers and share fictional locations, extending the ability of fiction to not only trigger readers’ memories/imaginations but to also share visualizations and populate shared fictional spaces.

## **My Creative Project: *The Memory Store***

*The Memory Store* project is presented as a shared fictional space with the atmosphere and tropes of a Golden Age detective novel delivered online as a multimodal and collaborative narrative.

This multimodal, online detective fiction successfully provides a coherent narrative experience written with the input of one hundred people. The reader on this site makes connections between this diverse content to construct an understanding of the city and the story that takes place there. The contributed content provides a collaborative vision of Liverpool in the year 2115. The reader explores author and participant content about the city that provides a backdrop to the fiction, rich with detail, atmosphere and character. The authored content and the contributed content have been developed in tandem, both influencing the other and thereby creating a cohesive narrative space. The plot has developed through this collaborative process.

The research and website were developed between September 2013 and December 2018. The project evolved over this time in an iterative process whereby a version would be made available, work would take place with users revealing issues, opportunities, narrative threads and design features which would then feed into the following version. Eventually the site was declared closed to more content in December 2018 and a final read-only version produced. Iterations of the site can be seen in Appendix A.

The narrative is presented as an archive of memories in the future technology of the memory store, which everyone in the Liverpool Corporate Strata in a hundred years time is connected to, and has an account in, to store their memories directly so that they need not remember everything for themselves. This is especially useful for Jules Stewart, the central character, a Pattern Surveillance Officer (detective), who can archive her investigations here and then forget all of the gruesome details of her cases.

Also she has developed a pioneering method of detection to look at the memories of other's to gather a more complete picture. We join her as she has just successfully completed one case and is about to embark on the next, the mysterious disappearance of Estelle Fischer, (Case 167).

### ***The Memory Store: A Detective Fiction***

The genre of Golden Age detective fiction was chosen as it lends itself to a puzzle like experience concentrating on the mystery plot in contrast to more contemporary crime fiction that tend to examine more causes and motivations of crime, as James identifies crime 'writers set out to explore and interpret the dangerous and violent underworld of crime.' (2009, p14) *The Memory Store* focuses on presenting a read-write narrative experience that draws readers and contributors into a mystery plot rather than an exploration of crime and as such draws upon the much simpler genre of Golden Age detective fiction, which is identified by, 'a highly organized structure and recognized conventions' (Ibid, p15) It also provides for a more light-hearted experience, more suitable for presenting in public spaces (libraries / galleries) where the audience is unknown and will happen upon the work.

At the heart of this detective fiction sits the mysterious disappearance of Estelle Fischer, a puzzle to be solved. This style of plot was considered as appropriate for this type of delivery, allowing for exploration by the reader and being capable of containing multiple user-contributed memories as evidence, some red herrings and some essential to the investigation.

*The Memory Store* contains the tropes that James outlines as defining classic detective fiction,

a central mysterious crime, usually murder; a closed circle of suspects each with a motive, means and opportunity for the crime; a detective, either amateur or professional, who comes in like an avenging deity to solve it; and, by the end of the book, a solution which the reader should be able to arrive at by logical deduction from clues inserted in the novel.

(2009, p15).

In *The Memory Store* the central mystery is a disappearance, although a murder occurs later in the narrative. The plot, which unfolds over the 25 lexia, with supporting material in the newspulse reports and user-contributed memories, concerns the disappearance of Estelle Fischer. The eventual revelation is that Estelle has been a victim of memory manipulation and, having uncovered the truth about what happened to her family when Jet Wong adopted her, has run away and bought her freedom by providing a blackmailer with evidence that her adoptive mother, the powerful, corporate executive Jet Wong, was responsible for the deaths of Estelle's parents and that this was covered up. Jet Wong is keen to have Estelle traced but whether this is because she is concerned for her adopted daughter's safety or wishes to silence her is unclear. Jet does manage to outwit her blackmailer, and having murdered him, she eventually tracks Estelle to the ruins of her old family home at street level. Jules witnesses the ensuing struggle and accidental death of Jet Wong and although her move to a higher strata rests upon her finding Estelle Fischer her integrity dictates that Estelle has the right to remain unfound and knowing that the truth will be unpalatable to the corporate executives and unlikely to be believed, she leaves the case officially unsolved. We leave Jules still on strata 19, waiting for her next case and her next chance to progress.

James also identifies 'a closed circle of suspects each with a motive, means and opportunity for the crime.' (Ibid) Our detective, Jules Stewart, meets a high profile mother (Jet Wong) with a reputation to protect from her missing daughter's scandals, a jealous friend (Loretta Parkes), a boyfriend (Justin) connected with protestors and a potential threat to the strata and an angry work colleague (Peta). These characters are lined up as potential suspects, like characters in traditional detective fiction such as Agatha Christie's, *The Hollow* (1946), where we are introduced to a list of suspects in the investigation of the murder of John Christow including his wife Gerda Christow, his lover, Henrietta Savernake and the victim's ex-lover Veronica Cray. In this plot each character is by turns the main suspect, investigated by Hercule Poirot and the reader. In

*The Memory Store* the reader accompanies Jules Stewart as she interviews suspects and investigates locations but here the reader can also delve into the character's pasts or material that places them in context. Each section of the investigation has corresponding news either about the character or about their circumstances. For example, in news about Jet Wong two sides of her character are presented, the charitable benefactor and the corporate executive responsible for destroying Sefton Park and Aigburth Vale to make way for building the Corporate Strata, ignoring the protests of local residents. The reader is left to weigh up these news items and their verification ratings in relation to other elements of the site that they have read, including the user-contributed memories, which provide more detail and evidence of what this world is like. In addition to the back-story about the development of the Corporate Strata the user-contributed memories strengthen the likelihood of plotlines that implicate certain characters over others. Justin is implicated as a protestor and user contributed memories about riots and protests evidence that this is happening in this world. Could he be responsible somehow for Estelle's disappearance? Memories about life in the Corporate Strata and the apportioning of resources could lead to speculation about Loretta Parkes, the jealous friend who lives several levels below Estelle. Was she trying to supplant Estelle in Jet's affections and climb the social ladder? There are memories about technology that could lead the reader to believe technology itself may be implicated and clues pointing at these suspects could all be red herrings.

James' list of tropes continues with, 'a detective, either amateur or professional, who comes in like an avenging deity to solve it' (Ibid). Jules Stewart is a celebrated PSO (detective) with a track record for solving crimes and can be seen in the tradition of other classic detectives such as, Christie's Hercule Poirot, or Chandler's character Philip Marlowe, who navigates a precarious existence solving crime in the seedy city of Los Angeles. In, *The Lady in the Lake*, he finds himself in:

The Indian Head Hotel ... The whole place was full to overflowing with males in leisure jackets and liquor breaths and females in high-pitched laughs, ox-

blood finger-nails and dirty knuckles. The manager of the joint, a low budget tough guy in shirt sleeves and a mangled cigar, was prowling the room with watchful eyes.

(Chandler,1944, p67)

Marlowe is a product of his city, shaped by the space (the city) that he serves, mistrustful, always alert, observing his surroundings and always ready with insightful descriptions. The reader walks with him and witnesses events at his shoulder as he narrates, revealing his thought process. In this way the reader keeps pace with Marlowe in the investigation and pits their powers of deduction against his.

Despite his surroundings, and the company his cases lead him to keep, he remains a 'good guy.' Despite his wise cracking exterior the reader believes in his integrity and would be glad of him as a friend in a tight corner. He is a man of the city and he understands the people of his city.

Chandler provides an insight into his character, Marlowe, in *The Simple Art of Murder*:

down these mean streets a man must go who is not himself mean, who is neither tarnished nor afraid. The detective in this kind of story must be such a man ...if he is a man of honor in one thing, he is that in all things. He is a relatively poor man, or he would not be a detective at all. He is a common man or he could not go among common people.

(1950, p12)

The reader accompanies Marlowe on 'these mean streets' walking alongside this common man, who unlike, Hercule Poirot or Sherlock Holmes is presented as an ordinary private eye, rather than a genius with extraordinary powers. He takes a few knocks but always persists until the case is solved.

Jules Stewart, the detective in my creative project, also narrates for the reader in her memory transcripts that follow the stages of the case. She has more in common with Marlowe than Poirot, in that, being a Pattern Surveillance Officer (detective) is her job. Like Marlowe she is a detective by trade, it is her livelihood. She is working to get by and trying to get on in the strata, but not at any cost. She has an integrity and compassion that lead her to solve crimes but on her own terms. So finally she resolves

the case and ties up loose ends to satisfy the reader but allows Estelle to disappear. She exists in a society aware of its issues but like Marlowe she's not looking to solve social problems, just the case she's working on. She is a resident of the strata, one of the 'common people' in this future city. She lives in this city. This is her city as LA is Marlowe's home as well as his beat. Like Marlowe, as defined by James, she, 'has a social conscience, personal integrity and a moral code, beyond unquestioning loyalty to (her) job and colleagues.' (2009, p76) She is guided by her own moral compass, which extends beyond her commitment to the strata.

Cole asserts that 'readers want crime fiction's investigators to be strong and astute, but they also enjoy their weaknesses.' (2004, p123) In my online fiction I have provided a backstory for Jules Stewart about her relationship with her grandmother and the death of her mother (<http://thememorstore.org/newspulse/jules-stewart-2.html>), which offers a conflict with the Corporate Strata and provides complexity to the character. Jules has an issue with caring for her grandmother and faces criticism for Dorace, her grandmother, not being chipped and on the network, as are other corporate residents. <http://thememorstore.org/newspulse/jules-stewart-3.html>

This characterization makes Jules conform to the idea of a *common* character with the complications of her own life outside of the plot suggesting an area of weakness, which might skew her judgement. This element of a possible conflict of loyalties in her character brings her in line with other detectives in this genre. Whilst confident as an investigator we witness her relationship with Dorace and her sadness at the death of her mother. We see the flaw that makes her less certain in her defence of the Corporate Strata at all costs. Cole argues that, 'the crime genre relies on truth-seeking and hubris. It requires characters who, while confident about taking a stand against social evils, are also fraught with personal uncertainty.' (2004, p123)

Jules' relationship with her Grandmother is perhaps unusual for this genre, as Cole points out, 'mothers are also often absent from feminist crime fiction, dispatched

through death, divorce or dislike so the female investigator is unencumbered by the constraints and ambiguities of the mother/daughter relationship.’ (Ibid, p156)

In *The Memory Store* the relationship between Jules and Dorace offers an opportunity for a conflict of interest and also parallels with the mother and missing daughter in the plot, Jet and Estelle. There is a theme here of mother and daughter relationships, also a theme of aging in the future and how society might treat the elderly. This too has a connection with the theme of age and memory as Dorace questions the use of the memory store as an archive, trusting more in her own capabilities.

As males, traditional detectives like, Poirot, Marlowe, Holmes exist unencumbered by relationships, devoted to their investigations. However in developing a female detective character it seemed unrealistic for her to exist in isolation. Cole writes about feminist crime fiction taking ‘the hard-bitten, wisecracking private detective, regendering him into a lippy, confident female private eye,’ (Ibid, p136), but recent detectives that might provide more of a role model for Jules include character’s such as Catherine Cawood in the TV detective series *Happy Valley* (2014, BBC), in which the detective is at one and the same time defending and becomes compromised by her family. She is a savvy detective, with strength and integrity but she is also a mother, grandmother and sister whose family’s safety is upmost in her mind.

The next most important character in detective fiction after the detective is the victim. In classic detective fiction the victim is rarely accorded much sympathy and is the centre of a puzzle with the details of their lives important as clues rather than fleshing out their characters. James cites William Trevor who sums up his experience of reading Golden Age detective fiction thus:

All over England, it seemed to me, bodies were being discovered by housemaids in libraries. Village poison pens were tirelessly at work. There was murder in Mayfair, on trains, in airships, in Palm Court lounges, between the acts. Golfers stumbled over corpses on fairways. Chief Constables awoke to them in their gardens.

We had nothing like it in West Cork.

(Trevor quoted in James, 2009, p65)



This alludes to the trend in the Golden Age of detective fiction of creating a world in which murder was harmless fun, a riddle to be solved rather than a worrying phenomenon. The cosy crime occurring in sleepy English villages where, ‘stands the church clock at ten to three? And is there still Arsenic for tea?’ (Ibid, p66)

In *The Memory Store* I wanted to create a similar approach to the crime, to see it as a vehicle for the plot, a mystery to solve, rather than the symbol of a social issue. Crime in *The Memory Store* is not serious or disturbing. The central crime being a missing person was decided upon as being appropriate in the nature of the piece as a puzzle and also partly because this was a work I was placing in the public domain and inviting people to participate in and it seemed problematic to include a violent murder. This might have required a warning or age restrictions for involvement and might have elicited content that was difficult to deal with, that might have required some form of moderation.

Eventually I settled on the idea of a disappearance as a more open-ended mystery that allowed for a variety of outcomes and would not upset audience members and that I would feel more comfortable presenting. From here I became sure that Estelle had intentionally disappeared and that this was connected to some form of memory manipulation, that Jet had lied about the past but the details and consequences of this I left open to be influenced by the collaborative process, as well as the method by which Estelle had disappeared.

I did initially start the work with a female corpse being pulled from the Mersey, as a murder victim for *Case 167*. Although this provided a dramatic opening for the narrative I became uncomfortable with the idea of a murder and also a female victim. Cole writes of the ‘female victim’s ...role as victim belying the feminist assertion of the strong woman able to survive independently and on her own terms.’ (Ibid, p150) When it came to presenting this opening scenario in workshops I quickly became uncomfortable and did not want to fall into having a ‘fetishized female body’ (Ibid)

Recognizing the image I had of a drowned female corpse, with long strands of hair floating around her head like weeds, was heading in that direction, I started to reconsider the victim and what had happened to them.

Unlike Marlowe and more in keeping with British, Golden Age detective fiction, Jules Stewart has an associate in Fat Peter, who helps her solve cases, asks questions and provides a way for her to communicate her thinking to the reader. James cites Ronald Knox in his preface to the *Best Detective Stories 1928-29*, 'The stupid friend of the detective, the Watson, should be slightly, but no more than slightly, less intelligent than the average reader, and his thoughts should not be concealed.' (James citing Knox, 2009, p52) In this way the detective can be sure to point out clues of note and their current deductions in relation to the plot to the reader. I used Jules' conversation with Fat Peter at the end of the first stage of development, to sum up the point the investigation had reached, for readers and contributing writers:

There are links in the stories on newspulse about her that link her to the use of some very imaginative tech, supplied by very dodgy characters.' I say 'And didn't Jet Wong have some connection with the Wavertree VR Lounge and Sensorium? I'm sure I read that somewhere,' Fat Peter adds.

<http://thememorystore.org/Archive/berry-berry-2.html>

Last in James list of detective fiction tropes is 'a solution which the reader should be able to arrive at by logical deduction from clues inserted in the novel.' (2009, p15)

The plot is deducible by following clues in the text (see chart of clues in Appendix B). As in traditional detective fiction, the reader follows the progress of the investigation alongside the detective, in this case through the memories of Jules Stewart and associated links and news about this case. However, because of the multimodal nature of this work clues are spread between newspulse items and the main lexia and readers need to explore to discover relevant background information.

As readers follow the case they are introduced to possible suspects, red herrings and erroneous information. In common with more traditional detective fiction readers

need to decide which clues to follow and which to discard. In *The Memory Store* readers can use the truthfulness / verification ratings of items to weigh up the clues they collect by deciding how the information sits with the official word of the Corporate Strata and then whether they feel it fits with their other deductions / view of the world. A departure from traditional detective fiction is found in the way that this text was constructed. In early phases possible suspects and seeds of scenarios were presented. Writers then picked up and developed these threads and the plot grew from the contributions of participants. Unlike a printed novel, early readers / writers of this text were engaging with a fiction that was still in development and so could influence the outcome and either select clues to reference, reinforce or add in vital new information. For example, John Pilkington, a contributor, added a memory about the Lime St Stalker and the smell of almond, thus reinforcing the evidence in that case and providing an example of how *The Memory Store* works. Another contributor, P, added a memory about a magnetic pulsar reflector, which became a vital piece of evidence that I picked up and used as a main device in Estelle's disappearance. Stella Wisdom added a memory about a suicide epidemic that could be seen as a red herring / erroneous information that could have led readers to speculate that Estelle could have been a victim of suicide or memory loss. This is much like Isabelle Vincent, whose memory concerned forgetfulness, possibly linked to technology. These contributed clues lead readers to form expectations about what happened. Of course unlike traditional detective fiction not all readers will read all memories and so some may miss these and other clues / red herrings.

The clues, added by the author and written by contributors, not only make the mystery deducible but also provide detail of the world the crime is set in, making the world more tangible and the plot more plausible.

As in all works of detective fiction, part of the pleasure of this work is recognizing clues and piecing together the evidence. Lovsey, in Burak's *Writing*

*Mystery and Crime Fiction*, recognizes this. ‘Like no other form of fiction, the true mystery novel presents a challenge.’ (1986, p100)

In *The Memory Store* the challenge in the early stages to readers was to consider the evidence presented initially, the suspects lined up in the initial 10 lexia and add in more clues, further evidence, their own fictional memories. In the final version the challenge to the reader is to solve the mystery. This playful process of adding to, sharing and guessing clues is part of the appeal of detective fiction that translates to the exploratory nature of online fiction. Cole asserts that ‘one of the greatest pleasures in reading crime fiction lies in the genre’s puzzle structure.’ (2004, p45) and further identifies that the initial appeal of the crime genre was as ‘a new literary form in which they (readers) could play an active part.’ (Ibid, p50) Detective fiction therefore already has a readership that seeks active participation in the text.

Crime fiction, as a genre, has always demanded that readers pay attention and make connections between clues in the plot to detect the crime. The reader is also detecting. Leavenworth notes ‘puzzle-like gaps are likely to encourage what Ryan calls “epistemic immersion” or “the desire to know”, which is one of the pleasures incumbent to imaginative engagement with a mystery narrative or narrative-generating work.’ (2014, p337) Explorations of multimodal environments provide the opportunity for the reader to search for clues, to piece together the full picture, to uncover events and so is particularly appropriate for mystery and crime fiction.

*Disappearing Rain* (Larsen, 2000) and *Gone Home* (The Fullbright Company, 2013) cited in Chapter One both feature a search for a missing person and invite readers to find and interrogate clues to solve the mystery. The environments the text is placed in augment this experience of searching and in the case of *Gone Home* the clues are distributed in the environment, the obituary found in a drawer, the record that the reader is invited to play on the turntable ready and waiting in one

room, the television weather report that is on in the living room. In *Gone Home* the reader is playing the part of the protagonist however, *The Memory Store* conforms more to the model of text-based crime fiction in that the reader is testing their own powers of deduction against that of the pattern surveillance officer (detective), Jules Stewart, although they also are invited not just to read and solve clues but to add in their own. Cole identifies clues as ‘the mortar of crime fiction.’ (2004, p47) She goes on to identify that this process of detection is part of our hunter-gatherer ancestry and that the first storytellers were hunters from whom we learnt to identify the signs of danger, ‘patterns of reading which enable us to identify a wolf like villain.’ (Ibid, p50).

The playfulness of selecting clues and discarding red herrings is apparent in *The Memory Store*. It is a salient feature of hypertext, interactive fiction and the crime genre. What is new in this narrative experience, *The Memory Store* is the invitation to readers to find clues spread across the work (see chart of clues in Appendix B) and to contribute, to write into this fictional world developing the character of the story world, the atmosphere and potentially clues that may solve the mystery or further frustrate other readers. This provides an experience that invites people to read and write, blurring the boundaries between producer and consumer of the text.

James identifies the ‘Fairplay rule whereby the detective must never be in possession of more information than the reader.’ (2009, p24) In detective fiction the reader accompanies the detective and learns with them as clues are discovered in their presence. For example, Poirot, in Agatha Christie’s, *The Hollow* (1946), notices in the pavilion ‘a cape of platinum fox’, ‘an expensive French perfume’ and ‘a little pile of matchboxes – six of them – stacked on a small table by the settee. It was a detail that struck him as definitely odd.’ (1946, p154) In this novel we witness all of these clues with Poirot and use our own grey matter, the challenge, to see if we can arrive at the

solution before he does. Similarly in *The Memory Store* the clues are there to be deciphered by the reader. (See more detail about clues in Appendix B.)

The solution is important as James notes, the ‘British detective story is concerned with bringing order out of disorder’ (2009, p72). The narrative must end with a neat solution. James describes Christie as the ‘arch-purveyor of cosy reassurance.’ (Ibid, p70) With the settings of her novels in ‘what seems a mythical village,’ (Ibid, p71) in contrast to Hammett and Chandler, who ‘were depicting and exploring the great social upheavals of the 1920’s,’ (Ibid) but who nevertheless created detectives who, if they didn’t tackle the social injustices or wider issues, did solve the case and bring about a resolution.

## **Structure**

The plot of *The Memory Store* hinges on past events that become clear during the investigation and through understanding the past. The history of the Corporate Strata is key in appreciating the narrative. Byrd in his chapter ‘Plotting’, in Burak’s *Writing Mystery and Crime Fiction*, identifies seven plot categories for detective fiction. *The Memory Store* conforms to the *oedipal* category, in which,

there is always an earlier crime. This plot requires you to treat the present crime as a consequence of an earlier, perhaps forgotten one, and it requires you to push far back into the past to explain the present.

(1986, p31)

To understand the plot the reader needs to know about the construction of the Corporate Strata on top of the old city and the rationale given about the population escaping the poverty and disease of the streets, the flu epidemics that spread and also the riots and protests and people not wanting to leave their street level homes. This is mentioned in the lexia that contain the main thread of the story and also in newspaper items, the timeline and in numerous user contributed entries which picked up on this theme in the environment. There is also the role of Jet Wong, details about her adoption

of Estelle Fischer, rescuing her from street level, and her role in street clearances, which are found in the newspulse files about her. The *oedipal* plot structure is an appropriate structure online as it encourages exploration through artefacts to uncover the past and fits with the idea of the memory store as an archive to look back through, to uncover events.

The searching for answers in an archive to reach an understanding in an *oedipal* plot is perhaps best structured in what Ryan terms a ‘vector with side branches,’ (2015 p167), configuration. This carries the linear progression of the detective fiction from mystery to solution, whilst adding branches for further investigation. The trajectory of detective drama has a tendency to a linear structure as the reader follows the investigation in time with the detective. I still wanted to retain this overall linear progression but with digressions along the way to explore. Ryan identifies, ‘the vector with side branches [as] main sections of content are arranged after another. The user moves forward only between these. But with the possibility of many smaller diversions.’ (Ibid).

This structure,has the benefit that users don’t get easily lost. It’s easier for users to see if they have completed the site and have seen everything available. It is appropriate in terms of diversions from a main narrative thread. Ryan states that, ‘This additional content expands the storyworld without affecting the logic of the plot, so that readers can take either a short route through the book or a long route that follows the side branches.’ (Ibid, p168)

This structure creates a narrative space through the interface of a fictional network environment, a future technology, in a future city. It has a spatial dimension. The interface provides access to the memory store, a digital archive, that houses the memories of residents of the Liverpool Corporate Strata, newspulse articles, a map, a timeline, photographs and brief remembrances, all pulled from the fictional network space.

The website then plots a linear trajectory through this imagined digital space for readers to follow with branches off for exploratory experiences that enhance and add more depth, authenticity, atmosphere and detail to the plot. Any amount of exploration in this structure allows for a unique and individual reading experience through provision of extra information and in the order through which it is accessed.

This exploration provides a sense of space, a network of information about a collectively imagined society in a collectively imagined city.

The history and the social attitudes surrounding the street level and Corporate Strata split are fundamental to the plot and will be returned to in the section below about world building. In relation to detective fiction the world is presented as a high-rise city straddling old Liverpool below, this split between the old and the new and the character's attempts to progress in the Corporate Strata are important drivers and motivations in the plot. Jules Stewart is motivated to solve this crime so that she can move up to strata twenty, her grandmother, Dorace, hankers after life below and is resistant to her new life in the Corporate Strata, Loretta Parkes is a social climber and vulnerable to being manipulated by Jet Wong because of this, Estelle was rescued from street level by Jet Wong, who was instrumental in clearing the ground for the Corporate Strata.

### **Narrative Space**

The environment itself (the Liverpool Corporate Strata) is central to the plot. Without the history of this location being built on top of the old city, and the way in which social advancement works in the Corporate Strata, there would be no plot.

As Cole asserts, 'because place exists in historical time, the footprint of all that has gone before remains within its textuality.' (2004, P169) (The development of the narrative world and its history will be returned to later). And, as is the case in many examples of detective fiction, in *The Memory Store*, the location is another character, its



agency not just being the scene of the crime but leading to the crime. Place provides a backdrop of social and geological features imbued with clues, motivations and atmosphere. 'The convention that allows place to become a character in its own right also allows the language of place to become a major part of crime's lexicon.' (Ibid, p165) In *The Memory Store* Liverpool is presented as a collection of high-rise buildings owned by the corporations, with characters assigned to the hierarchy of the strata. It is a city mapped onto and straddling the old street level city that still struggles beneath it with the last of its residents resisting the lure of the Corporate Strata. This mapping of a new city on top of an existing one provides topography for users to engage with and for writers to populate. Spaces are identified in pictures and on maps as well as through text descriptions, providing the atmosphere of an overcrowded, bustling, hot, high-rise space.

James notes 'the description in crime fiction of domestic interiors, furnishings and possessions does more than denote character; it creates mood and atmosphere enhances suspense and is often crucial to the plot.' (2009, p94)

In the lexia set in Estelle's cube we see her living space and possessions through the eyes of Jules Stewart, this provides an insight into Jules as well as Estelle, provides clues and more atmosphere about the place. Before we get inside we are introduced to Everton Heights as somewhere with a reputation for high spirits. Jules notes parties are still going on in full swing at noon. She seems disapproving, 'Parties are obviously still in full flow on two of the middle floors, lights flashing and figures dancing, even now at mid day.' <http://thememorystore.org/estelle-s-cube.html> Up on strata twenty-five Jules appreciates the luxury, 'The walkway curves languidly, cool concrete and warm wood.' But there is also evidence of hedonism, as a man is thrown out of a door ahead of her. By the time the reader reaches cube 1,357 an atmosphere of luxury, pleasure and profligacy has been evoked. This continues in the cube where Estelle's stuff is strewn everywhere and Jules notes that, 'It could have been ransacked but I'm guessing this is fairly typical for Estelle.' Whilst appreciating the cubes attributes (light, view from a

window, good water supply) Jules also takes an inventory of Estelle's possessions, which paint a picture for us of someone who likes a good time (dyes, jewellery, high-heeled shoes). This makes the discovery of the photographs of street level and fragments of map seem all the more incongruous. They don't fit with the picture established so far of Estelle and so they appear significant.

Stewart, in 'Setting and Background in the novel', in *Writing Mystery and Crime Fiction*, identifies the dynamic and static use of setting. She describes dynamic setting as occurring, 'where the place is as vivid as the people' (1986, p147), where the 'characters grow out of the place and so does the action.' (Ibid) This is the case in *The Memory Store*, Jules Stewart's motivation is to solve the crime to move up in the strata and the plot hinges on the history of the strata's construction. The Corporate Strata is bustling and overcrowded and so privileges like space, water, access to recreational space are apportioned.

Of course employed here too are tropes of science fiction that trigger contributors and readers to bring to mind shared visions of future cityscapes from science fiction classis such as, Dick's *Do Androids Dream of Electric Sheep*, in which Deckard travels from rooftop to rooftop of high-rise towers in his battered hovercar, television screens bleeding a blue light in shadowy abandoned places at street level. Dick takes San Francisco and extrapolates a future city, abandoned by the most able of the population, the city streets left to fall into ruin and disrepair but still with identifiable place names. Deckard travels around a recognizable city, 'parking the departments speedy, beefed-up hovercar on the roof of the San Francisco Hall of Justice on Lombard St' (1968, p38)

Atwood in her trilogy, *Oryx and Crake*, conjures a world in which professional people escape the city streets and live and work in compounds, 'nobody had to commute to work from the modules.' (2003, p27). The city, Atwood describes, as 'endless billboards and neon signs and stretches of buildings ...thousands of people, hurrying,

cheering, rioting.’ (Ibid ) These images of the future provide a familiar shorthand to many readers from their past experience of science fiction. The split between ruined streets and professional spaces, the imagery of high-rise towers, Dick’s reference to monorails and Atwood’s bullet train inspired my future cityscape in *The Memory Store* and furnished it with a vocabulary for the future that contributors and readers alike could share.

To bring such fictional locations to life for readers Stewart notes that ‘nothing takes a reader more immediately into the being of a fictional character than the swift recognition of some common experience.’ (Ibid, p148) *The Memory Store* starts with the familiar experience of being in a crowded carriage (like the tube / metro), a feeling everyone can relate to of being held in place by a crowd on a public transport system. This leads the reader into a cityscape, set in the future but with familiar issues that readers can identify with, and a cityscape with the tropes of a futuristic city, tall towers, a monorail, electric blue fluorescence. Stewart warns of providing too much information:

a physical setting should never be built up too elaborately. What a writer is doing is opening a gateway on someone else’s imagination. You have to build your effects by using the reader’s experience and terms of reference at the same time as your own.

(Ibid, p150)

As stated previously, one of the pleasures of reading is calling to mind imagined places and characters inspired by the details in the text, such as the train station Calvino asks readers to imagine in his novel, *If On A Winter’s Night A Traveller*, with a few details to trigger our imagination, ‘a locomotive huffs, a cloud of smoke, the odor of train that lingers’, all elements that we use to conjure our separate images in our minds eye of train stations, as Calvino says, ‘stations are all alike,’ (1998, p11) meaning not that they are all alike but in terms of atmosphere and what might happen in a station they share narrative possibilities, they lead the reader’s imagination. By using details of the

city *The Memory Store* is set in I sought to trigger a similar process, to generate an imagined city in the minds of writers on the site and at the workshops I ran.

Wood describes the process of using detail to provide plausibility and aid immersion in a text. He describes this as *thisness*, and defines it as ‘ any detail that draws abstraction towards itself and seems to kill that abstraction with a puff of palpability, any detail that centres our attention with its concretion.’ (2009, p55) In *The Memory Store* the aim was not just to call to mind locations for readers but to inspire writers and to provide some common ground to seed the ideas of multiple authors. And this was to some extent successful, in that contributions were made and many did share commonalities in terms of mood, atmosphere and location details. On the site and in the workshop exercises (to be discussed shortly) text descriptions in both the lexia and the newspulse articles as well as photographs provided this *concretion*, triggering the imagination of writers and providing a shared set of references that then resulted in content that shared origins and so displayed a degree of cohesion. Also the map and the *real* space of Liverpool provided a shared set of reference points.

John Pilkington, a contributing writer, followed on from suggestions in the text about street level, ‘street level far below is lost in darkness. Who knows what’s going on down there on the ground, it’s out of my jurisdiction – so who cares.’

<http://thememorystore.org/monorail1.html> and with reference to an accompanying image, to write his piece about under the bridge, where, ‘The mass of dark humanity abandoned by those who live above, shelter.’

<http://thememorystore.org/CrowdMemories/john-pilkington.html>

These contributions add detail to the shared concept of street level, as does the entry by Lyle Skains, who provides characters who live down on the ground with a history:

My grandparents tried to resist the corporations, and my parents tried to join. Neither succeeded. Those of us who didn’t die from the ’68 flu bought it anyway in the ’92 epidemic. My sister and I are all that’s left.

<http://thememorystore.org/CrowdMemories/lyleskains.html>

These entries and others make street level a palpable place, like evidence that the reader can uncover, they add plausibility.

Photographs gave writers a starting point and detail to build upon and make sense of. The contributor P wrote about the image of a wooden puzzle, turning it from just an object on the table at Jet Wong's apartment into something more curious, which suggests Estelle is not all that she seems. P introduces ideas of espionage.

<http://thememorystore.org/CrowdMemories/p.html>

The image of an exotic pink flower at Otterspool Skypark, led the writer Julia Tickridge to write about 'the heat and humidity'

<http://thememorystore.org/CrowdMemories/julia-tickridge.html>

picking up on the theme of a world of high temperatures through the suggestion of the tropical plant. Similarly the image of an orange skin (1C), prompted J. Smith to write about Liverpool's climate, now conducive to growing tropical fruit.

<http://thememorystore.org/CrowdMemories/j.-smith.html>

Through these entries, inspired by images, the world developed and became palpable for other writers and readers. (See Figure 4.)

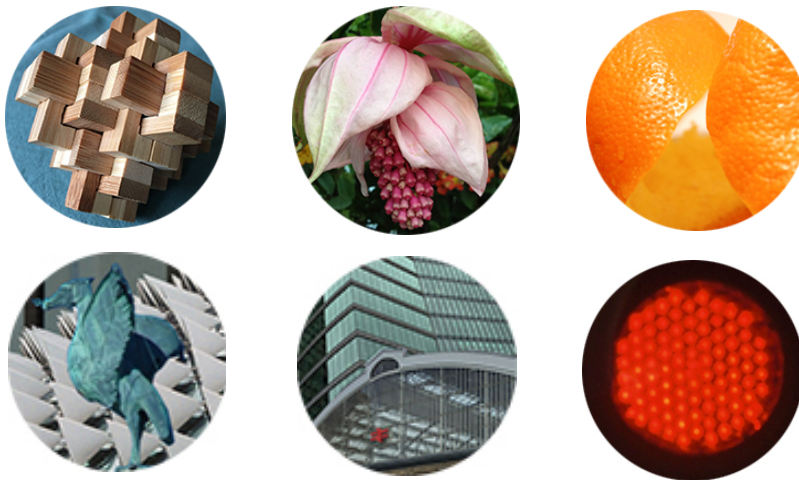


Figure 4. (Haynes, 2019) Images from *The Memory Store* used online and in workshops to inspire content about puzzles, environmental issues, the city, protests, technology, and landmarks.

The newspulse articles also provided a level of detail that created a sense of the place and gave writers a confidence in the world that they were adding to, such as the newspulse article about moving Sefton Park Palmhouse to Otterspool Skypark, <http://thememorystore.org/newspulse/otterspoolskypark3.html>. This led to J. Cavanagh's memory of the palmhouse and speculation about how it was moved.

<http://thememorystore.org/CrowdMemories/jcavanagh.html>

These details, images and articles were enough to engage readers but left them space for their own fiction, space for writers to add their own corner to this world.

In this way the location was made vivid, brought to life by details in the text, images and contributed memories. It was, however, also a limited canvas, delineated by the boundaries of the corporate strata and city below. The map shows the edges of the location. Ryan writes about the importance of boundaries in fictional worlds:

When the imagination engages in world creation, it tends to favor islands. There are several reasons this insularity appeals to the creative mind. First islands constitute a microcosm of the real world...Second, islands satisfy the mind because their limited size makes them knowable and mappable...Third, islands can be explored and settled...the ocean that separates islands from continents provides an allegory of the ontological difference that separates fictional worlds from the real world.

(Ryan, 2016, p57)

*The Memory Store* is not set on an island but it is in a space delineated by a boundary that separates it from its surroundings and from the here and now. It is like an island in that it can be mapped, it is separate to the real world because it is set in the future, in the Liverpool Corporate Strata where readers and writers are transported.

Cole asserts, 'For crime readers ...the world they enter is connected through shared experiences to the outside world, but it is also removed from it - it is a heterotopic world.' (2004, p170)

This can be seen in more recent works of crime fiction from Jenn Ashworth's *Cold Light* (2011) with its setting in a Northern town complete with parks, pubs and a shopping centre, made up of familiar stores, such as: Primark, Woolworths, Debenhams but removed to ten years past. Told through the lens of Lola as she comes to a realization of exactly what did happen to her friend Chloe all those years ago. May's collection of crime fiction (*The Blackhouse* (2011), *The Chessmen* (2012), *The Lewis Man* (2014)) is set on the Isle of Lewis. The reader is a visitor to this Hebridean island, with a geology and a history that set it apart and allow for crimes connected with rituals on remote islands and bodies preserved in peat bogs whilst playing out in familiar domestic scenes.

*The Memory Store* is also a heterotopic space. The reader and writer are taken from the familiar Liverpool of present day to a space in the future, affected by the intervening history and governed by its corporations. This is also a narrative space online for readers to explore and writers to populate, bounded in code, a discrete set of folders on a web server.

The current city of Liverpool provides a platform to step from, into this *heterotopic setting*, where 'all the action is contained within its own space, and is governed by its own rules and temporality. The world beyond the narrative is of no consequence.' (Cole, 2004, p196)

The term heterotopia was first used by Michel Foucault to refer to spaces that were removed, spaces closed off, set aside for activities outside of the norm. The concept is useful in relation to narrative space, particularly detective fiction, which is removed from, for most of us, daily life, relevant also to a future city, related to but removed from the Liverpool of today and finally in relation to the online space, which is a virtual space as distinct from real space. *The Memory Store* is a heterotopic space not only as a narrative space set parallel to reality but also as a virtual space, a virtual archive that writers are invited to populate with the memories of their fictional

characters, to share stories with other writers and readers and to share a collaborative imagining of a future society in a future city. This setting requires the real city as a referent for readers and writers to gather their bearings, but provides also a stage for different narratives to play upon. Foucault explained that, ‘the heterotopia is capable of juxtaposing in a single real place several spaces, several sites that are in themselves incompatible.’ (Foucault, 1967, p1) In this way *The Memory Store* presents, all within the context of being an archive of memory, user-contributed memories of riots, protests, cricket, parks, food shortages, alcohol bans and alien invasions. The connection between these disparate items, that provides a unity, is that they are all memories in the archive of the memory store. This comports with Nelson’s concept of ‘intertwining’, (1974, p29) referenced in Chapter One and is reflected at the start of Foucault’s 1967 talk, *Of Other Spaces*, when he declared that, ‘We are at a moment, I believe, when our experience of the world is less that of a long life developing through time than that of a network that connects points and intersects with its own skein.’ (1967, p1) Space, proximity, interconnectedness have become more important than time based structures. It is the binding principles of the heterotopic space that provides the narrative cohesion. In *The Memory Store* all content exists in this archive, a space with a ‘precise and determined function’ (Ibid), a ‘heterochronie’ (Ibid) (set specifically in 2115). This conception of narrative space relates back to the reference made previously to Manovich’s theory that culture has in the digital age more to do with what he terms, ‘spatial wandering’ (2001, p49) than hierarchical structures. It is this model of online space as somewhere that can be visited, explored, added to, which makes sense of the juxtaposition of disparate content that is at the heart of *The Memory Store* project.

Ryan quotes Murray who declared, ‘Digital media are spatial.’ (Murray quoted by Ryan, 2016, p100) Ryan continues, ‘we have developed the habit of thinking of computers as machines that take us into a separate reality’ (Ibid). The language we use to talk about the experience of using computers reinforces this, as we ‘navigate... a



conceptualization that combines nautical travel with the image of a road map' (Ibid, p102).

From the early days of digital media, and the Internet in particular, this idea of online as a space persists, with the term 'cyberspace' being first coined by William Gibson in 1984. In his novel *Neuromancer*, he described the digital realm as a place to go and the approach to the digital as of being 'somewhere'. It is this concept of online space that I sought to utilise as a shared space to construct a narrative experience in *The Memory Store*. Whilst I did not have ambitions to build a game, or offer interaction beyond exploring and adding to the narrative, I did seek to provide a sense of 'spatial wandering' (Manovich, 2001, p49) through this world and the story contained within it, not as a literal model of the world but to explore through a series of artefacts and hyperlinks: the map, timeline, photographs, memories and newspulse articles. It is the navigation around the artefacts and within the intradiegetic interface of *The Memory Store*, as the archive of resident's memories, which allows readers to enter into the world of the Liverpool Corporate Strata.

Murray posits that 'the interactive process of navigation' is the distinctive feature of New Media spatiality.' (Murray quoted in Ryan, 2016, p103). That the process of moving between items through hyperlinks is travelling through space. Ryan references *Storyspace*, the Eastgate systems hypertext authoring system, which first pioneered interactive fiction in 1987 and 'metaphors applied to hypertext such as the labyrinth and the Borgesian image of a Garden of Forking Paths,' to support 'the idea of the inherent spatiality of hypertext.' (2016, 102)

Ryan argues that, 'It is only in digital media that a represented world offers the user the opportunity to travel and explore its space, because it is only in digital media that users are placed in an environment that can be dynamically reconfigured in response to their actions.' (Ibid, p102-3)

Unlike a book or fixed media experience, digital media provides a dynamic interface that allows the user to travel through it, to bring forth artefacts in response to user demands. It is this that provides the illusion of interaction, in the case of *The Memory Store* of accessing items in the fictional technology of the memory store.

It is the interface I propose that is key as a portal to transport readers and participants, not in a physical sense but in their conceptualization of any experience they engage in. To refer to examples presented in previous chapters, the interface of *Gone Home* (The Fullbright Company, 2013), presents the user with a house to explore and reveal the narrative, the interface of *Disappearing Rain* (Larsen 2000) provides also an exploratory experience for the reader too, whilst not offering a virtual location to move through, the user is invited on the opening screen to, ‘Come on in’ and we are told that ‘The only trace left of Anna, a freshman at the University of Berkeley California, is an open internet connection in her neatly furnished dorm room. Join the four generations of a Japanese-American family as they search for Anna’ (Ibid)

The logic here is the ‘terrifying power of the Internet.’ (Ibid) Inviting the reader to wander through this space, to discover what has happened to Anna.

In *The Memory Store* the interface logic is of a future technology to store memory that also makes associations between users memories and items found on a fictional network. This skeleton of a story world, a future city, invites writers to add fictional content. In this spatial environment that provides a concept to upload narrative to and content to navigate through, I propose that the author and the reader might share the same fictional space, that the distance between them might be reduced. Ryan points out that, ‘the act of storytelling and the use of narrative devices are deeply affected by the spatial and temporal distance between storyteller or narrator and the audience for a story, as well as by whether or not they are located on the scene of the events.’ (2016, p4) This is in the context of location-based work but it seems appropriate here to wonder what affect casting the reader as a character in a location with possible agency in the plot

might have and what ‘narrative devices’ might be required to facilitate this within the story world that is created. What might the consequences be of closing the gap between the author and their reader?

### **Collaborative Creation of a Storyworld**

Porter Abbott in his *Introduction to Narrative* cites Bakhtin in respect to storyworlds, ‘All narratives of any length build worlds with all four dimensions of time and space, inhabited by characters who have inner worlds of their own, inner worlds that can, in turn, leech out ... and even extend beyond the time-space of narrative.’ (Bakhtin, quoted in Porter Abbott, p164). This relates to the way in which contributors to *The Memory Store* place their characters in the fictional world, each with their own *inner world*, their own fiction that *leeches* out into the shared city and the site’s central plot.

Porter Abbott further describes the ways that two storyworlds coexist in narratives. ‘1. The *storyworld* in which the characters reside and the events take place. 2. The world in which the *narration* takes place.’ (Porter Abbott, 2008, p169) In *The Memory Store* it is the former, the storyworld that users contribute to and construct collectively and this in turn influenced and is drawn into the *narration*, providing detail and authenticity. So in a third instance, what Porter Abbott terms, ‘the world of production’ (Ibid, p170) the user contributed fiction is orchestrated in the service of *The Memory Store’s* central narrative.

I considered how to engage participants with a representation of the city, how to encourage participants to imagine themselves, or their own characters in the city. Starting with Liverpool and then leading writers to see how the city had changed seemed a good approach. As Ryan notes, ‘visual modeling of the setting is an important factor of narrative immersion ... The map enhances memory of the text by letting readers attach individual descriptive statements to specific areas or landmarks.’ (Ibid, p58)

In *The Memory Store* I drew a map of my future city on a map of Liverpool as it is today. This shows the relationship of the Corporate Strata with the old city of Liverpool, the new places of my future city juxtaposed with the existing city. This established my imagined Corporate Strata developing from the current city and enabled participating writers to gain a foothold through their recognition of the city today, its *specific areas or landmarks* and its geography, history and reputation.

Ryan quotes Stevenson, who, when writing about *Treasure Island* said, ‘the tale has a root [in the map], it grows in that soil; it has a spine of its own behind the words.’ (Ibid) This led me to reflect that the space I had designed for my future Liverpool of the Corporate Strata provided a narrative with delineated boundaries. This outline of the city was the narrative glue that bound all the diverse elements together, whether participants were in favour of the strata or not, however they thought the city had developed, the existence of the strata was a fact that all shared, as well as the fact of life down at street level. Even though a range of views about the past before the strata and life beyond their construction might diverge the actuality of the location existed and was a shared concept.

### **Critical Reflection On Collaborative Writing Projects**

My approach to the shared space of collaborative fiction was informed by other collaborative writing projects and the spaces that these fictions created and existed within.

*Rainy City Stories* (Openstories, 2008) is a collection of 114 stories contributed between September 2008 and May 2014. The stories are Manchester specific, attached to a map of the city. These individual fictions collectively provide a snapshot of the city, a picture of the people and culture of this place. ‘This site gathers up a wide experience of living in, remembering and imagining the great city of Manchester.’ (Rainy City Stories 2008)

This was my ambition with the user-generated memories of Liverpool in 2115 to create a sense of the city, its diversity, its ethos, mythos and topos, told by the people who lived there. However in *The Memory Store* the contributed fictions were woven into one cohesive narrative fabric.

*Rainy City Stories* (2008) was supported by the Arts Council England and the Manchester Literature Festival and these organisations did lend the project some credibility. The site offered writers a platform to share their work, with promise of an audience through connections with other Manchester literary events and the opportunity to receive feedback through a comments section on the site. There are several instances where the site facilitates a conversation between authors and their readers. This is an obvious incentive to submit writing, to know your work will be more widely seen and to receive feedback from readers. These incentives were perhaps missing from *The Memory Store*.

The Coma Press project, *MacGuffin* (2015), took these opportunities for writers in Manchester to share and receive feedback for their writing further with an app that writers uploaded fiction to, which was then rated, categorised and commented on by readers. Statistics were generated so that writers could see how long readers spent on their work, to what point they read up to, as well as seeing how the work they contributed might be categorised by others. As well as providing this individual feedback to writers the app also generated statistics about reading on mobile devices. These facilities on the site provided real incentives for writers, the site offered a lot in return for the contributed writing.

Another influential project was the Penguin Books and De Montfort University project *A Million Penguins*, which experimented with the use of a wiki to write a novel asking, 'Can a community write a novel?' (Mason and Thomas, 2008, p1). Following this experiment the report noted that:

'Douglas Rushkoff, - the Internet guru was not optimistic:

“A Million Penguins looks like fun, but it's still likely to remain more a million penguins than a cohesive or coherent bird,” says Rushkoff, who points out that every book needs its author.”

(Ibid)

The project used wiki technology and the only given was the first line of Jane Eyre as a starting point with the community then set to collectively write the rest of the work. This project was about testing out whether a community could write a novel and did so by focusing the research on ‘two questions: what was the role of the discussion around the writing, and what patterns of social behaviour occurred among the contributors?’ (Ibid)

This approach was very different to *The Memory Store* in that *A Million Penguins* was not coordinated by a central author and was open to a much higher degree of interaction between participants, encouraging more anarchic behavior. The project was open for users to experiment and for writers to edit work together. Leaving aside the trolls and vandals who didn't want to participate but disrupt, there were also altercations between writers and with no hierarchy but writers engaging in a free for all performance that the project report compares to, ‘Bakhtin's notion of carnival’, which, ‘is a moment of excess featuring multiple competing voices and performances.’ (Ibid, p2)

By contrast *The Memory Store* was orchestrated by a central author and performances were brought in and deployed in the service of the over arching narrative, the aim being different, to generate a coherent narrative written collaboratively, guided by one authorial voice.

The report notes that,

A Million Penguins challenged the garden metaphor so widely used to characterise behaviour in wikis. According to this metaphor, a wiki grows successfully when it is properly seeded with content and tended by gardeners.

(Ibid)

Whilst *The Memory Store* was not a wiki and content did not grow on its own with the need for weeding, as content was submitted to me rather than uploaded directly, the idea of the gardener does seem apt for my approach to authoring this project,

certainly in seeding ideas through the content I made available that did subsequently grow into threads shared by multiple authors.

An early experiment with collaborative narrative online was, *In Search of Oldton* (Wright, 2004). The main strand <http://www.oldton.com/index.html> is the jumbled memories of the author told at random as the reader picks a playing card and the site, [http://timwright.typepad.com/your\\_oldton/](http://timwright.typepad.com/your_oldton/) is where user memories are collected and categorised. In this second site the crowd built a picture of the fictitious Oldton that sits alongside but doesn't interact with the main text. In this way the fictional space of Oldton is collectively constructed whilst leaving the authors narrative strand intact and separate. This way of utilising the crowd to develop the fictional space whilst maintaining a separate strand for the authors main character presented a balance between control of a central narrative thread and allowing reader/writer agency. In Oldton this is achieved as two separate sites. In *The Memory Store* the ambition was to create one site that interspersed the contributed memories with the main narrative thread and built one story in tandem, not as two separate entities. The result sought in *The Memory Store* was a central narrative that was affected by the contributed content.

### **Collaborative Practice and Workshop Design**

To understand how to collaborate with potential writers for the site I began by delivering workshops with potential contributors to test ideas. This approach and these activities were inspired by user-centred design concepts.

My approach in workshops was to provide paper-based, and in the latter stages screen based, activities that led participants to add writing to the site but also enabled me to identify what inspired contributions to the site and what the barriers to participation were.

In early workshops activities were paper-based. I used envelopes placed in the space that contained text and images and asked participants to write inspired by the

contents of the envelopes. In these early workshops I tested not only what might trigger participation but also terminology, text-based instructions and some paper-based interface ideas and interaction processes such as submitting character profiles. (Paper prototypes and details of these workshops can be seen in Appendix C)

Bill Buxton draws a distinction between what he terms sketching and prototyping, which ‘serve different purposes, and therefore are concentrated at different stages of the design process.’ (2007, p139) Sketches (in this case printed photos and text) are quick and easy to produce, less investment in production time than a digital prototype, but also they have a tactile and social element. Having paper-based exercises in a workshop situation meant that people picked up images or items that appealed, this made it easy to see which elements people favoured. They passed each other items and commented on them so again I was able to observe people’s reactions to images versus text-based pieces, location versus event or character or more abstract items. Paper-based exercises encouraged interaction between workshop participants eliciting conversations about the work, which was useful for me to hear.

In later stages, once the site was live online, I observed workshop participants using the site, concentrating on navigation and interaction online rather than with the concept of the store and the development of the storyworld.

At the time this iterative process felt messy and was often frustrating but on reflection there was a discernible method.

Bill Moggridge lists Chris Conley’s five core skills of design:

1. To synthesize a solution from all of the relevant constraints, understanding everything that will make a difference to the result.
2. To frame, or reframe the problem and objective
3. To create and envision alternatives
4. To select from those alternatives, knowing intuitively how to choose the best approach
5. To visualize and prototype the intended solution

(2007, p649)

These five points provide a useful structure with which to discuss the development of *The Memory Store*. Initially I developed the concept of the project in



relation to other online narrative work and the tropes of detective fiction, as discussed previously and within the constraints of my design and production capabilities and on a platform that enabled an iterative design approach to develop an original site. In this first stage I decided upon Liverpool in a hundred years time as a setting and the concept of the store as a memory archive that could handle user contributions.

In the second stage I explored ideas about how to create the concept of a story world and how that might be communicated to and shared with readers and writers, reframing the projects objective from engaging users with collaborative writing to engaging users with a story world.

In this endeavour I was influenced by Klastrup and Tosca's essay, 'Game of Thrones: Transmedial Worlds, Fandom, and Social Gaming', in, *Storyworlds across Media: Toward a Media-Conscious Narratology*, edited by Ryan. Klastrup and Tosca describe how:

Transmedial worlds are abstract content systems from which a repertoire of fictional stories can be actualized or derived across a variety of media forms... TMWs are mental constructs shared by both the designers/creators of the world and the audience/participants. The TMW is not defined by the material entity of any particular instantiation (the media platform) but by the shared idea of the world.

(2014, p296-7)

Whilst I did not plan for *The Memory Store* to be cross platform I did take a multimodal approach and this concept of creating a shared vision, was useful for me, summed up by Klastrup and Tosca as a 'mental image "worldness"'. (Ibid, p297) The definitions of *designers / creators* and *audience / participants* was especially apt as the project was to create a fictional world that others participated in. The fact that the world was defined by the totality of the work also chimed with the ideas I had taken from the consideration of memory archives, that the recollections of individuals added to a whole and cohesive vision, even when they were divergent. This would allow for a collective imagining of Liverpool in a hundred years time built from numerous entries.

Throughout the project's development I wanted to collaborate with other writers in developing the fictional world and the possibilities within it for a narrative to develop. Klastrup and Tosca's theory, about the dimensions that create the cornerstones of *worldness*, provided useful starting points to consider how to build the 'mental image' of the future city and share that with others. They identified three dimensions that drew this image: 'Mythos – the establishing story ...backstory, Topos – the setting of the world in space (geography) and time (history), Ethos – the explicit and implicit ethos, or the moral codex of behaviour for characters. (Ibid) These ideas influenced the project in its development and informed my approach to creating and sharing a space with others.

In the workshop material developed I used the three dimensions (*mythos*, *topos*, *ethos*), defined by Klastrup and Tosca, to create a sense of location, history, social behaviour and mores and used these as starting points for exercises to inspire participants to contribute narrative content. I developed exercises based around locations utilising a map of the city, a timeline with key events spanning from 2008 to 2107 to consider and develop the back story of this fictional space, newspaper articles to generate content about the ethos of the world, and images that tapped into all three dimensions.

The immediacy of writing on paper, discussing with others and putting the work developed into envelopes generated energy and stimulated writing in the workshops. It was interesting to note too that the character of the city was starting to develop across the writing being contributed in workshops. The images, news articles, locations and timeline events did show their influence, resulting in writing about the environment, the city as threatening and ugly, featuring epidemics, protests and anxious characters. In this regard I judged the elements that I used to instigate the writing to have worked well. There was an apparent emerging *Topos*, *Mythos* and *Ethos*, which did create a cohesive picture of the city. This can be seen in the development of common themes grouped

together in the memory archive section of the site.

<http://thememorystore.org/investigation-map.html>

These workshop exercises were refined over time in response to feedback and my own observations (utilising the third and fourth skills of design cited by Moggridge, ‘create and envision alternatives’, ‘select from the alternatives’). I added a large map of the city and more photographs including manipulations of cityscapes showing iconic Liverpool buildings in possible future scenes, surrounded by towers and I discarded the character profile, which I’d tested in earlier workshops and found issues with the expectations it prompted (see Appendix C for details).

The workshops also informed the development of the website because the aim was to develop a site that generated contributions from writers online. The site then adopted the same principles of using materials to communicate the *Topos, Mythos and Ethos* of the storyworld, the news articles, photographs, map and timeline all became elements available for users to explore online. Also these items provided a ‘bible’ of information that users could develop knowledge of the world from and so have confidence that the writing they contributed would fit. I also created a system of *truthfulness ratings* that could denote whether a contributed memory was in line with corporate thinking. This was to reassure writers that whatever their content it could still make sense within the world, even as an outlandish conspiracy theory with a low *truthfulness* rating. Readers could then make up their own mind whether to trust the rating made by the corporation or to trust the author as to the veracity of the content. Also readers would apply their own understanding of the world and narrative within the context of the material they had accessed so far.

As author I organised and coerced participation in the site through the devising of the story world, using *the cornerstones of ethos, mythos and topos* (Klastrup & Tosca) to provide a shared ‘mental model’ (Ibid) of the fictional world. Having made this picture of the city available to users through the lexia, newspulse items, imagery,

map and timeline users could take these elements as starting points for their narrative contributions and with these shared origins develop content that had cohesion. I then built my fiction further on the foundations of the user generated content. I was adaptive to feedback I received, not only in workshops and through comments about the project, but also in response to the work writers contributed. I saw my role as discretely directing the writers I worked with through prompts in the material I provided, so the place and names of locations, pin pointing the locations associated specifically with the plot, such as Otterspool Skypark and by providing news items and imagery that guided the atmosphere of the piece.

As noted above many contributors picked up on the threat posed by the Corporate Strata, the resistance and the poverty experienced by those at street level. Once those ideas were seeded by the inclusion of my initial material, they were then reinforced through the contributed writing.

I orchestrated the writing by associating the submissions with sections of the plot in the archive interface and by hyperlinks from the text of Jules Stewart's memory transcripts.

In the first memory transcript the reader is taken into the world of Liverpool in 2115 and as well as my authored content, the memory of Jules Stewart, I was able to draw upon the memories of others to reinforce the sense of place. The threat of authority is called upon by Mikey D, 'that man in the tower window... always watching us.'

<http://thememorystore.org/CrowdMemories/mikeyd.html>

This memory linked to as an association with the word 'tower', which provides a context for tower here, in this city.

Alex G. Worthington provides a nod to the history of this place with his memory about the Liver bird, 'When the liverbirds fell everyone went mad.' This allusion to the iconic symbol of Liverpool is a reminder that this is a future of a real

city that has a real past but also that this is a fictional future. This contribution is evidence of that imagined future.

Monorail platform links to a memory submitted by L. Cable, which at the start of this detective fiction introduces a dead body, not the main concern of the central plot but introduces an atmosphere of foreboding and mystery, what kind of city is this? Not only a flu epidemic, but a suicide epidemic. Or is this more complex than that, why is the victim gripping a 'pale blue child's toy'?

<http://thememorystore.org/CrowdMemories/lcable.html>

These first three links do take the reader to separate fictions but ones which touch upon the page they have left, the first memory transcript and although they raise questions and allude to other narrative threads they bare relevance to and shed a light on the world this narrative is set in, providing atmosphere, detail and authenticity. By their connection to a wider world existing around the central plot they bear witness to the place, it's history and ethos on this first page.

Only in the case of a couple of inappropriate or nonsensical entries did I operate a selective process and accepted all other contributions because the idea is that this is a memory store for the people of Liverpool in 2115 and that the store is making associations with Jules Stewart's memory transcripts. Our experience of this digital concept of association is of an imperfect tool that does at times throw up the unexpected, the out of kilter and so this diversity of content, even content that didn't fit my vision of the future, seemed appropriate here. At times in the text Jules Stewart does acknowledge the existence of conspiracies, in memory transcript 23 she writes, 'A woman of about seventy grabs my sleeve and starts an old story I've heard before, an invasion conspiracy about people from the centre of the earth.' This then links to the contribution of Aaron Muldoon, about this theory, as if another conspirator.

<http://thememorystore.org/CrowdMemories/aaron-muldoon.html>

In fact a central premise of the plot concerns whose truth is to be believed. Because of this the site can flexibly accept very diverse content whilst still maintaining cohesion. Variations on the history of this place were welcomed, such as Adam Anderson's allusion to 'the alcohol ban of 2076,' in his memory, <http://thememorystore.org/CrowdMemories/adam-anderson.html>

The alcohol ban was incorporated as a fact in the plot, and as a contributed memory, it provided another detail, adding to the history of this place.

Further details about the workshops and the exercises used can be seen in Appendix C.

Taking the final skill in Moggridge's list I prototyped iterations of the site with my PhD peers and following observation of their interactions and discussion necessary adjustments were made and concepts added. Recommendations from this user testing included; adding some user contributed memories to the map, creating the memory archive page that functions as a site map, so readers can see the entirety of the site, this also chimed with the idea of a map of the investigation. Site testers also suggested having access to the contributed memories in themes. Initial designs had the narrative start on the first page and the site opened with a page of text and this was seen by many as off putting. This led to the idea of almost a cover page so readers could see what the site was about before they started and this page included imagery and interaction flicking through the images and the short remembrances, to make the site initially more engaging and not just a blanket of text.

As author I was inspired by the content I received from others. It helped to construct the world I was writing in. It provided details for me to draw in and to augment the plot, suggesting ways forward for my central narrative. I was conscious of the ways in which I prompted content and thought carefully about how I introduced and placed the submitted content. This did in turn influence my writing and occasioned serendipitous connections such as the reference to political figures in two contributions - <http://thememorystore.org/CrowdMemories/jonathon-kinsella.html> and

<http://thememorystore.org/CrowdMemories/ebroje.html> that allowed me to have notable public figures in Mondo, a sleazy club where Roberto is murdered who were both keen to not be discovered there when it suddenly becomes a crime scene.

<http://thememorystore.org/booth-23.html>

Jane McGonigal, in her thesis, *Why I Love Bees: A Case Study in Collective Intelligence Gaming*, wrote of ‘organised serendipity’ (McGonigal, 2007) to describe the way in which the game facilitators of the I Love Bees augmented reality game created opportunities coercing players to respond to events, creating opportunities for chance to play a role. This sits at the heart of experiences that are open to participation because there will always be an element of the unexpected and this needs to be factored in.

When I began writing this project I imagined a character in Liverpool in a hundred years, she was a pattern surveillance officer (my imagined future detective) utilising network information, the memory store to detect crimes. From the start I wanted to employ memory and the idea of memory manipulation in the plot but the technology aspects, such as the *magnetic pulsar reflector* were through the chance contributions of P and the club / drugs scene from the contributions of Chris <http://thememorystore.org/CrowdMemories/chris.html> and Simon Sanders <http://thememorystore.org/CrowdMemories/simon-sanders.html>.

These additions were unforeseen and developed the plot in unexpected directions. This role of author then seemed more steering than taking an omnipotent control of a fictional world. To me this collaboration added an authenticity to the content I was working with and provided me with confidence in my setting. This was what other people thought this future city looked like.

*The Memory Store* was successful as a shared narrative space built collectively. It has resulted in a coherent story world, a heterotopic space, an archive of memories of

fictional residents of Liverpool in 2115 that portrays the city and delivers a narrative about the mysterious disappearance of Estelle Fischer, with content contributed by a hundred writers coordinated by one central author.

Following an iterative user-centred process a collaborative narrative space was developed. This was successful more as a workshop facilitating contributions than as a site that encouraged direct participation online. This assessment, the rationale for the projects themes, design and development as an online detective fiction along with other reflections on this project are continued in the following conclusion.



## **Conclusion**

This thesis has explored the possibilities offered by the shared space of the Internet to create collaborative, narrative experiences online. It has considered the implications of collaborative online fiction for the role of authorship and suggested ways in which writers might construct digital story spaces that readers can explore and participate in. Through my creative project, *The Memory Store*, I have experimented with processes to author (design and write) an online space in which to collaborate with others and produced an original work of detective fiction that incorporates the writing of a hundred people.

My research has examined the inherent characteristics of the Internet and digital tools more broadly and proposed that these technologies offer spatial relationships between narrative items and interactive reading experiences not possible on a printed page. I proposed that this has developed a readership whose reading experience is of multimodal media in environments that encourage what Manovich terms, 'spatial wandering.' (2001, p49) This readership is versed in meaning making from accessing diverse sources, making associative links between texts. Online readers Jenkins suggests are 'hunter gatherers,' (2006, p138) expecting texts online to be open to exploration.

These readers are also writers. They narrate their own lives online in social media accounts and increasingly they also express their own creative output, identified by Kelly in his article, *We are The Web*, (2005) which in its title encapsulates the idea that the Internet is a space that involves everyone; that is open for everyone to participate.

Throughout the thesis I proposed that the Internet environment offers interconnected spaces for texts to be placed and accessed, thus lending itself to multimodal production. It not only offers opportunities to share the space for content with users but also, has developed a readership that expects a level of interaction and participation. This, I argue, provides a platform for authors to write and design fictional experiences that can be works of co-creation with their readership.

The original contribution of my creative project, *The Memory Store*, is as a successful example of a narrative that has been authored (in terms of text and design) to provide an intradiegetic interface that creates cohesion between diverse contributions of text from a hundred people. As a result of my research I assert that, it is possible, using online tools, to create a multimodal, interactive, narrative environment into which multiple writers can submit content and with the orchestration of an author a coherent narrative experience can be created. The binding element in this process is the creation of a shared space, a fictional location that casts readers in roles that afford participation.

*The Memory Store's* success can be seen in the following conclusions that I draw from my research. The site is a coherent narrative experience created by multiple authors. It is a storyworld that presents user-submitted content to connect and reveal characters, locations and plot. The project generated a collection of fiction, contributed by a hundred people, all set in Liverpool in 2115, that does provide a collective picture of this future city and shares common themes that relate the *Mythos, Ethos and Topos* of this fictional realm as a coherent storyworld. This was achieved by utilising exercises in workshops, that were then translated online, that led writers to develop content within broad themes guided by imagery, a timeline of events, news articles and a map. From this I conclude that there are roles for authors in digital environments to inspire and orchestrate content from multiple users to tell a unified narrative.

I identified the process of defining a *Mythos, Ethos and Topos* as central to generating contributions of fiction that share a *worldness*. This process of constructing a storyworld was developed in an iterative user-centred design process at workshops.

The site successfully houses the diverse user-contributed content, allowing serendipitous wandering for readers within the boundary of the memory store. The intradiegetic interface of this archive provides a concept that encourages and facilitates participation and makes sense of the disparate content that readers wander through. The

interface was from the start conceived of as a memory store, but its design was refined through feedback at workshops and observation with groups of users.

The site successfully utilises the characteristics of the Internet, specifically hypertext, to *intertwine* content, to create a web of associations that define the space of this future archive. It builds upon the contemporary practice of storing memories of every day life online and in its production I applied theories of collective memory to consider the contributions individual memories make in constructing a coherent narrative mosaic.

The site was a successful experiment with a new style of authoring that was collaborative and borrowed methodologies from the field of user-centred design to author (write and design) a collaborative narrative experience.

The process of writing *The Memory Store* was collaborative from the start with workshops throughout the production period shaping the overall project and the plot, utilising my skills as an educator to facilitate and lead the creative process. Yet it has also been a solitary activity. In retrospect, working as sole producer, writing, designing, constructing the site and generating the content by running workshops, has been testing on all levels and on all fronts and working with others, certainly with the design and technology aspects of this project, would have been beneficial. However, the experience I wanted to have and to write about was that of text and web author and conductor of content to orchestrate the final work. This required an adaptive, iterative approach that best suited a lone producer, able to bend with and respond to the input received from contributors.

Initially the intention was to create a site that inspired contributions from writers online, however this proved difficult to achieve and most contributions were made at, or following, workshops. Only five unsolicited direct entries were made online by strangers (excluding workshop participants who uploaded content) proving that the site worked functionally, in that users could arrive at the site and understand how to submit work,

without having been instructed and the mechanism for submission did function. The missing element I identified was the motivation of writers to contribute directly online and this will be discussed further below.

Based on user observation, and supported by web analytics (see Appendix D), *The Memory Store* has had limited success as an online collaborative narrative space. As an exercise in developing a shared narrative world the project does deliver a coherent narrative space to be explored by the reader. The concept was successful in that participants in workshops responded to the idea and contributed. The method of accepting memories and working them into the central narrative worked as an iterative process that developed the narrative in stages adding to the world, its *Mythos*, *Ethos* and *Topos* as well as character and plot development. The project was less successful at engaging participants online and eliciting collaboration directly through the website, an original ambition of the site, but perhaps hard to achieve without incentives in place. The site had no recognizable writers named to inspire people to write with them, no publishers associated whose name might lend kudos and there were no rewards for submitting writing or opportunities for feedback about writing, in conclusion, there was little motivation to contribute beyond the experience of being involved in the project. This was hard to achieve with people I had never met. In future work these barriers to motivation need to be acknowledged and accommodated with contributions incentivized and motivated by rewards, competition, potential for feedback, a clear sense that the work will be widely seen.

From speaking with people who looked at the site but didn't submit writing another barrier was time and I received many responses saying 'I'll write you something when I have time.' The open ended nature of the site also didn't encourage people to write immediately but instead to wait as they didn't feel they had a deadline and perhaps setting a deadline for contributions may have helped in this regard with people feeling the need to submit straight away before they lost the opportunity.

The interface design and navigation are very basic and ideally would be finished with greater finesse and sophistication. Additions that greater skill could have provided include: a way to bookmark pages, saving a place in the fiction, so readers could return to where they left off (a page can be book marked in the browser, but an intradiegetic facility would be neater); a more dynamic and interactive interface that animated to suggest a sense of information being provided in layers overlaid directly in vision like an augmented reality display, as if the reader were seeing the site directly in their vision like a Corporate Strata resident; a more dynamic map of the city with further content; a more sophisticated use of sound to create more of a soundtrack as opposed to just readings of the lexia.

Finally, *The Memory Store* reflects an achievement as an author, not just for myself individually but for the numerous contributors who collaborated on its production. This thesis presents lessons learnt from my research and production experience about collaborative narrative practice online, for myself, and the wider academic community. The essential elements for online collaborative projects that I have identified through this process are: the delineation of the narrative space through an intradiegetic interface that presents a performative role for contributors and readers to participate in and a boundary to the storyworld; the communication of the *Mythos, Topos and Ethos* of the narrative world through the interface and multimodal artefacts to not only guide contributed writing and readers interpretations but also to generate a confidence in the storyworld and create a palpable and shared vision; the central role of an author, authoring not just the text but also the interface, site functionality, user experience and orchestrating the contributed material into a cohesive narrative arrangement. I would also suggest that online participatory projects need to operate within a specified timescale, rather than being open ended, to manage participation and contributor expectations so that participants know when and for how long they can engage with the

project. Participation should be incentivized, this could be through the inclusion of the project in festivals, conferences or events that bring more kudos and a wider audience for contributing writers to engage with, further opportunities for feedback and discussion of writing could attract more participation, as could writing with well known and established authors. Contributor expectations need to be managed in relation to the scale and reach of the project and the possible interactions they might have so that in the context of read-write narrative experiences the offer is clearly engagement with the narrative rather than a game experience or one of live interaction with other contributors.

I believe that the inherent characteristics of digital technologies and the Internet in particular, offer writers exciting opportunities to escape the confines of the page and engage with their readership in new narrative environments that are still waiting to be explored and defined as an increasing audience of creative reader-writers develop.

## **Appendix Contents**

**Appendix A. Iterations of the site design**

**Appendix B. Chart of clues**

**Appendix C. Workshop documents and exercises**

**Tate Exchange 2017 workshop**

**Mix Digital 2017 workshop**

**Liverpool City Library workshop**

**Appendix D. Chart of user statistics/User engagement online**

**Appendix E. The Button Jar**



**Appendix A.**  
**Iterations of the site design**

The site was designed in Adobe Muse, which allowed for scrolling sites. This seemed appropriate to allow for varying length text entries.  
What follows are the main iterations the site went through and notes about user feedback from each stage.

**The Memory Store** A subsidiary of Securion  
 Providing peace of mind since 2090 [more...](#)

User: Jules Stewart  
 D.O.B: 15/05/2087  
 Occupation: Pattern Surveillance Operator  
 Marital Status: Married  
 Current Location: Liverpool Corporate Strata  
 Verification Rating: 199

Investigation Number: 167 - Memory Transcripts

19th July 2115 - **Berry Berry Fort Sefton**

Four in the morning and Pat Peter fixes me some fruit concoction with a kick, guaranteed to be easy to soothe and relax, help me to forget, as good as a memory wipe or I & I therapy.

I sink down into the squishy plastic strawberry that in this place counts as a chair. Everything here, including furniture, has a berry theme. Berry-berry wouldn't be my first choice of drinking pod but it's the nearest outlet for liquid refreshment to my cube.

The man, projected onto my retina through the network, floats, a transparent layer in the foreground of my vision. It boasts drinks flavoured like every berry there ever was, including all those selties sponges that didn't catch on. The menu is long, I'm too tired to read it so I blink it closed.

I'm celebrating, another case solved, another medal to be awarded, and the in-chute police are out of action, but all I want to do is sleep, no drama, pure emptiness and to wake up with no recollection of bulging eyes, purple tongues or the bear stretched faces of relatives. It's all archived in the memory store so I don't have to remember it.

I turn my attention to the network to switch off the bare music selection, a damply melody on a fruit theme, streaming directly into my ear canal. I silence the irritating jingle and push the network hub to the back of my mind. Congratulations messages and requests for interviews are blinking on the periphery of my vision. I push them to one side too. They can all wait.


I drain my glass of the red syrup, not bad, and guaranteed to contain at least five percent genuine, real fruit, from a biological source, Pat Peter insists, his shirt taut across a round belly, trousers forced to cling low to his hips underneath the overhanging gut. A red juice stain splattered below his rib cage on the left draws my eye and for the tiniest millisecond I think he's been wounded.

An alert message overlays my vision. Flashing furiously, not to be ignored. I blink it open, a new assignment. I flag it unable to respond. Someone else can pick it up. Head of Surveillance and Detection pings back immediately that this is top priority and I'm the only woman for the job. None other than Jet Wong herself has noted my pioneering use of the Memory Store and wants me to find a missing person, her adopted daughter, Esabelle Fischer.

Looks like that sleep will have to wait.

Investigation number 167

Missing Person: Esabelle Fischer  
 D.O.B: 15/05/2087  
 Resident: MC Everton Heights, Strata 25, Cube 1357  
 Employed by: Mammari, Creativity Division, Emerald Sky Terrace  
 Last recorded on the network at: Diversand Skyspark  
 On: 18th July, 2115, 14:07  
 Reported Missing by: Jet Wong, 18th July 2115



**News Pulse**  
 Be at the heart of it  
 A resource of updates

Click here for the best of the network news.


Liverpool Corporate Strata in the news  
 Liverpool Population Still Invests Corporate Strata Being  
 Verified Rating 97%  
 1. Liverpool Population Still Invests Corporate Strata Being  
 Verified Rating 97%  
 2. Project of Corporate Strata Development in Wotton, Liverpool  
 Verified Rating 97%  
 3. Police force and children's safety  
 Verified Rating 97%  
 4. Memorial unveiled at Fort Sefton in the victims of the 2087  
 Verified Rating 97%

Satisfying to note that my use of the Memory Store for pattern surveillance has been acknowledged. The premise is that we all know something and together we know everything. Each detail remembered reveals parts of the puzzle. A seemingly unassociated recollection might illuminate a state of mind, reveal a motivation, explain how a situation might have arisen or provide a clue, a sighting, a shred of vital evidence. Memories from the crowd can validate assertions or throw up discrepancies. So, I collate and calibrate memories from the crowd to construct a bigger picture, to uncover a pattern of events and solve criminal investigations.




Of course, just like the network, user's verification ratings in the Memory Store help us all to see which sources are more reliable than others.

Let's start with memories associated with Berry-berry, a good place to begin to build a picture of this world from which one of our characters has gone missing.


**Crowd Search ~ Berry-Berry, Fort Sefton**



Memory Leaf - Liverpool A to Z since 2088

 **Read a memory**
 **Upload a memory**
 **Upload a memory**

Follow my investigation further by selecting a location on this map below.



## Site Design One

This first interface design for the website was a long scrolling page – with the memory transcript of Jules Stewart on top – and at the very top the details of Jules memory store account

Details of case 167 as a static graphic.

Newspulse – which linked out to newspulse articles.

Crowd search section is at the bottom and had a read a memory and upload a memory option.

The page ended with a map of the strata.

This design was too crowded and it wasn't clear at all how to participate or where on the site to participate – it seemed the participation was added on the end of the page as an afterthought – it wasn't prominent enough – it also linked to just three options one to read and two to upload to – so not enough to appeal to a broad range of writers. It depended on people reading to the end of the page to interact.



## Site Design Two

The second design responded to a desire to make the site more visual and with more imagery – and to make the user generated content more visible and accessible.

A menu top and bottom linked to the memory transcripts and the right side panel linked to contributed memories and images that were awaiting a memory – these were in categories –

But in user testing this design was seen as too busy, too complicated and confusing.

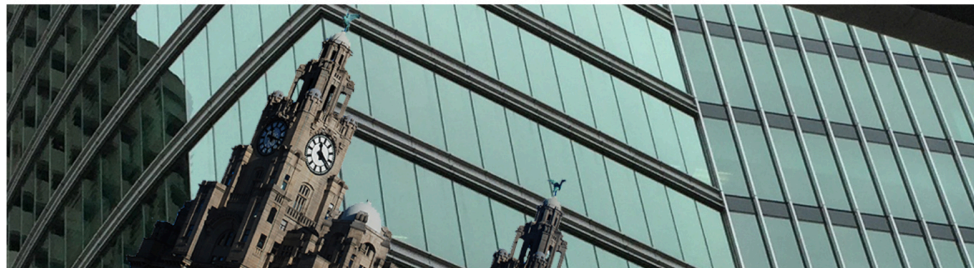
The calls for participation were more prominent but still not intuitive to use and the images and categories seemed constraining.

### Site Design Three.

This third iteration began with a cover page – I had wanted to not explain the site and launch straight in – but user testing suggested that readers needed to know more in order to interact and so I developed this first splash page to introduce the site and thought of it rather like a book cover – Feedback from users was positive about this page.

The main interface then was also simplified.

This was the final version of the site made live for contributions and is archived here: <http://thememorystore.org/Archive/index.html>



Jules Stewart, a Pattern Surveillance Officer, needs YOU, citizens of the Liverpool Corporate Strata, to write and upload your memories of your life in 2115 to help her solve her current case, that of missing person, Estelle Fischer.

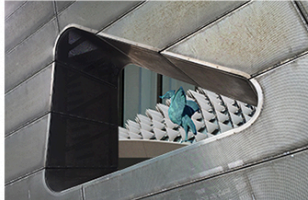
The following pages are Jules's memory store account. An archive of her investigations, the facts of which are stored here. Recorded in the present so she can forget the past. Her pioneering method of detection is to sift through all of our memories and make connections between them to uncover evidence and establish the pattern of events.

Read about her latest investigation, explore the corporate strata, write and share memories with other residents about life in Liverpool in 2115. [Continue...](#)

# The Memory Store 2115

Providing peace of mind since 2090 A subsidiary of Monanzo

User: Jules Stewart  
 Occupation: Pattern Surveillance Officer  
 Date of Birth: 05.09.2060  
 Assigned to Strata: 19  
 Verification Rating: 87%



## Monorail from Breeze Hill to Aigburth

The strata never sleeps. Two in the morning, the night outside the windows recedes into darkness but the corridors and walkways are flooded with light and streaming with people. I stand on the platform. I desperately want to lean, but there's nothing to lean against. Held in place by the crowd, I rub my eyes, they're gritty and sore. I've left Dorace dozing and I'd rather head straight to my cube, but I'd better go and celebrate, or at least be tagged in a bar. The news is out and the heroine should finish with a victory drink not alone in her sleep sack. I need to keep my ratings up. The monorail carriage silently glides in. The doors hiss open. On board I brace my feet and grip the strap. The network voice cuts through my soundtrack and recites the stations all the way to Dingle Rise. The carriage around me a sea of faces, shoulders and backs, elbows and arms. A man, unshaven, eyes glazed, stares straight ahead, struggles to undo the clip on the high neck of a dark grey top with his one free hand. In front a couple slump into each other, their heads touching, giggling at something shared on the network.

Two young men in GoGo Grasshopper uniforms just make it on board at Vauxhall Vaults as the doors close. Wired, all set for the day that lies ahead of them.

I turn away and gaze out at the river as we pass along the waterfront. Eerily lit, yellow lights from piers and watercraft project shimmering paths on the dark choppy surface.

At Pierhead Towers I'm swept into the elevator at the exit. Packed in, we stand with knees curved into the backs of knees. I keep my place at the door edge, facing the metal, feeling the surge of bodies behind me. As the doors open on strata ten I stride out, most people heading on to twelve. A year or so back ten was popular but the crowd's fickle.

I cross the skybridge from the Pierhead Towers to Lime Street Interchange. From here the strata is a pattern of white lights in grey blocks against the dark night sky, illuminated walkways and the monorail's electric blue lines connect all the hubs like a

diagram. Light spills down into street level far below, bright pools in the darkness, making the surrounding shadows impenetrable, too dark to see from here what's going on down there. And I'd rather not know. It's out of my jurisdiction.

Anyway, come on, tonight we're here to celebrate. Case 166 closed, the Lime Street Stalker captured and I'm topping the nineteen board, one step nearer to Strata twenty, one more case is

**Explore** - catch up with the latest news about Pattern Surveillance Officer Jules Stewart.



**Read** memories of other Liverpool Corporate Strata residents.



**Write** a memory and upload it by clicking on an image below. This will add your reminiscence into the collective memory archive. Help solve this case, remember the more we share the safer we are.

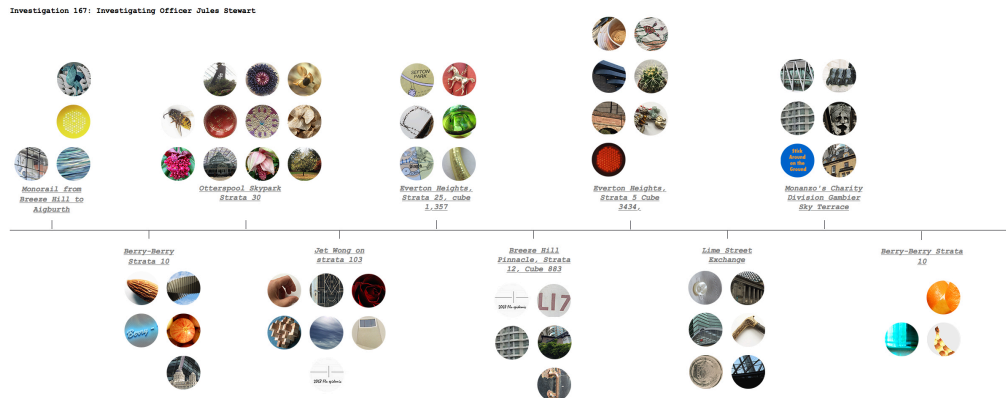


**Lost?** Use this map of the investigation to orientate yourself.



The main page design had hypertext links to the following sections at the end of the text – hyperlinks to connected crowd memories and the links in the right hand panel to explore the map, timeline and newspulse content, to read other residents memories and to write a memory.

During user testing sessions a need for a site map had been identified, which could also double as a map of the investigation – a way to help users who felt lost and a way to show the elements on the site in relation to each other.



Users liked this map of the investigation – which was a wide scrolling page. However as more sections were added and more user contributed content this interface became unwieldy and in the final read only site this was changed to be an archive page.

Users could contribute their writing by using the image links in the write section

**Write** a memory and upload it by clicking on an image below. This will add your reminiscence into the collective memory archive. Help solve this case, remember the more we share the safer we are.



Each image from the Write panel links through to a submission page for writing.



Thank you for linking your memory to this resource. Please complete the sections below. The name you would like your text to display and your email so that I can contact you to let you know when your text is on the site - it's not instant! When you select submit your text will disappear from the page don't be alarmed - it will still arrive with me.



Name:

Email:

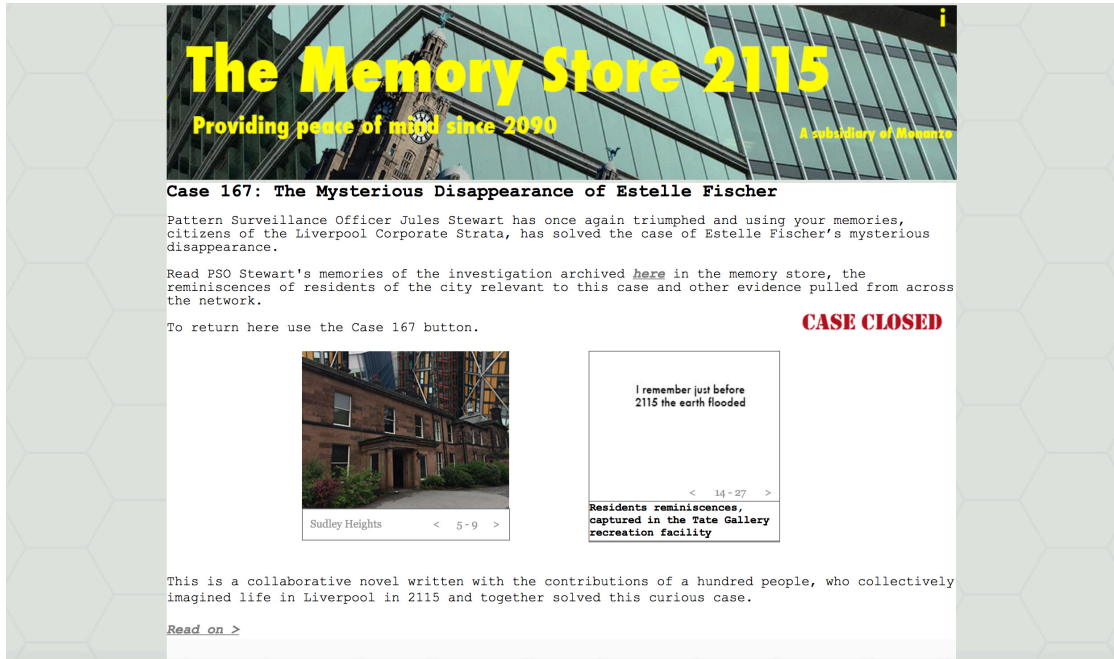
Blur Memory:

*Write your memory in word or another software and copy it into this box so that you can keep a copy - Don't worry your writing will disappear from here when you select submit - but I will take good care of it!*

Declaration:

By submitting content you affirm that this is your original work which has not been published, and give permission for its publication in The Memory Store and affiliated platforms and to be cited in any resulting research documentation. You also understand that you will retain all other rights for the work and that it will not be reproduced in any other format without your prior consent.

## Site Design Four.



The final site design was for a read only version of the site – closed for entries – the logic being that the case is now solved. I retained but updated the cover page and included on it interactive photos and short memories gathered at the Tate Exchange workshop to flick through and to provide a snapshot of the narrative world.



# The Memory Store 2115

Providing peace of mind since 2090

P.S.O Jules Stewart  
Truthfulness Rating: 86%

A subsidiary of Memoria

**CASE 167:  
MEMORY TRANSCRIPT 1.  
MONORAIL FROM BREEZE  
HILL PINNACLE TO  
PIERHEAD TOWERS**

**CASE CLOSED**

▶ 00:00 ◻ ... ◻ ▶

ASSOCIATED  
NET-TABS



Pattern surveillance Officer Jules Stewart leapt across from the maintenance shaft on the side of the hydroponics plant. Her dashing figure a silhouette against the bright sky to onlookers peering across from Gambier Sky Terrace. Witnesses reported her chasing the notorious Lime St Stalker across what was once the tower of the Cathedral to the far corner. Trapped, the vicious brute lunged at PSO Stewart who leapt on her attacker. Grappling to secure her arrest the pair came perilously close to the drop, three hundred feet down to the street level below. Pulling back from the brink she finally managed to secure the monster just as her colleagues joined her at the scene.

Not quite how I remember it, I blink newspulse closed. There's no pouring rain, stumbling over fallen masonry, the animal howls of the man I was pursuing, nor the smell of blood and fear. No mention either of the Memory Store. I couldn't have caught him without you. All of your memories held in this store led me step by step to see the true pattern of events. Our collective memory reveals exactly what's going on in this city. Still, it's increased my ratings and I'm one case nearer to strata twenty.

I went immediately to tell Dorace. I wanted to tell her myself, get the story straight. Still can't get her on the network, she refuses to be chipped and I won't force her, not at her age, so she'd only hear gossip, a distillation of netnews from the few friends she has. She didn't really grasp the significance. I tried again to explain how different our lives will be on strata twenty but she doesn't understand. 'One more case I said to her, one more and we can move up,' 'Your mum will be so proud of you,' she said patting my knee.

I feel the carriage braking beneath my feet, lean forward and brace myself against the crush, everyone preparing to disembark as we approach Pierhead Towers. The monorail passes by the tarnished copper eye of the Liverbird, caged in by buildings of glass and chrome, which extend endlessly above and straddle the old streets way down below. Its view of the river blocked. Against the night sky the corporate strata is a pattern of light, bright windows, shining walkways and the monorail's electric blue tracks. The illuminations are like a diagram of this city, built layer upon layer upon layer, stretching up to strata one hundred and ten.

As the doors of the carriage hiss open the network voice cuts through my personal soundtrack, reciting the stations all the way from Breeze Hill Pinnacle to Dingle Rise and the crowd sweeps me onto the monorail platform.

Two in the morning and the walkways are flooded with light and streaming with people. A short man in a red vest, face glistening with sweat, his focus on the network, barges past me. I note his net-ident as it flashes in my field of vision. Blink it closed. He's going to hurt someone going against the flow like that but I'm off duty, someone else can deal with him.

The walkway over to Lime St Interchange is impassable, the crowd at a standstill. I lean against the window and yawn. No sleep for the last forty-eight and in this heat, even hotter now after the rain. I'd rather head straight to my cube. But I'd better at least be tagged in a bar. The hero should always finish with a victory drink not alone in their sleep sack. I need to keep my ratings up if Dorace and I are ever going to advance.

Beyond the glass, way down, yellow lights, from piers and watercraft, project shimmering paths on the dark choppy surface of the river in between the tankers that are lined up to enter the super port. The waterfront at street level far below is lost in darkness. Who knows what's going on down there on the ground, it's out of my jurisdiction - so who cares. Folk begin to shuffle forward and Berry-Berry is beckoning me, last year's place to be but at least you're guaranteed a seat and Fat

The main memory transcript page has a folder tab element to suggest a filing system and side tabs that suggest other folders / sections – links to other archived documents.

Associated net tabs – at the side are links to content associated with this memory.

I changed the verification rating to the truthfulness rating, which users thought was clearer.

I included an audio reading of each transcript as these are perhaps overly long for reading on screen and also because many of the sites readers were coming to the site on mobile devices and so listening could be preferable to reading.

