Edited by
Joanne Garde-Hansen
Andrew Hoskins
Anna Reading

Save

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Digital
Memories

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Also by Andrew Hoskins

TELEVISION AND TERROR: Conflicting Times and the Crisis of News Discourse (*with Ben O'Loughlin*)
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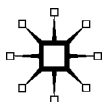
Save As... Digital Memories

Edited By

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Introduction

This book is about how we embody, create and are emplaced within digital memories. As our lives have become increasingly digitised, so digital memories become us. We upload personal images to websites to share with family and friends. With our mobile camera phones we capture the ordinary and mundane as well as the traumatic and newsworthy, slipping in our pocket an archive of texts, photos and contacts. We post online conversations and thoughts that become memories on social network sites; we visit online museums and pray at sites of digital condolence. Our movements, actions and preferences in space-time are routinely recorded and traceable via Google, mobile networks, surveillance cameras, and data stored by transport systems, at work-places and borders. Even our clothes are 'intelligently' tagged.

Unlike in previous eras, where keeping the past was an expensive business with access provided often for only an elite, digital media technologies provide cheap data storage, ease in terms of the searching and retrieval of data – with digital and mobile networks providing unprecedented global accessibility – and participation in the creation of memories. In these ways, digital technologies might seem to be changing memory by reversing the age-old default of human societies, which is to forget (Mayer-Schonberger, 2007). The digital suggests that we may need to rethink how we conceive of memory; that we are changing what we consider to be the past; that the act of recall, of recollection and of remembering is changing in itself.

New (and old) thinking on memory and on media

Yet, what is memory? At an individual level memory seems to be that which we carry about with us in our heads, (or do we mean our brains

or indeed our bodies?), which comes back and forth into our consciousness. Past moments, places, people, events, encounters and actions all seem to swirl around and contribute to our self-identity – how we see ourselves – sometimes available to us in an ordered sense of biography stretching over chronological time, but more often haphazard and disordered. Is memory then the 'stuff' somehow stored in our minds and accumulated over years, or is it the act and time of recollection itself, so when we routinely speak of memory we actually mean *remembering* – a function, a process, an act? In this way memory can occur only in the present and ever-new moments in which we retrieve aspects of our past. So, a commonsensical notion of a retrieval of memory from some kind of 'store' is misleading, as whenever we re-cover some aspect of the past, we do so in a later, temporal position – a new context. Moreover, every time we *represent* an aspect of the past to ourselves we inevitably change it.

Another, perhaps more useful, way of characterising memory is to consider that every time it is remade in the present it becomes 'active'. Frederic Bartlett (1932), for example, who had a significant influence on the psychology of memory,[1] claimed that the key process of remembering involves the introduction of the past into the present to produce a 'reactivated' site of consciousness: 'Remembering is not the re-excitation of innumerable fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction, built out of the relation of our attitude towards a whole active mass of organised past reactions or experience' (Bartlett, 1932, p. 213). It is not a question of the past itself as an entity as such, but, 'our attitude towards' it and our 'organisation' of past experiences. So, crucially, individual memory is dynamic, imaginative and directed in and from the present.

Unsurprisingly, psychologists have constructed a variety of complex models of individual memory (Parkin, 1993, pp. 3–25). Yet, memories also require distinct *social* frameworks: patterned ways of framing the flow of remembered actions, images, sounds, smells, sensations and impressions (Boden and Hoskins, 1995). Without social frameworks (Halbwachs, 1980) memories would flicker like dreams without anchors in the theatre of consciousness, in the paramount reality of everyday life (Schutz, 1962). Indeed, it is social memory studies, according to Jeffrey Olick (2008), that have undergone 'metastatic growth', whilst there appears to be an emergent multidisciplinary engagement being brought to bear to an understanding of remembering and forgetting in the contemporary era.[2]

This engagement includes the development of an array of new public and academic taxonomies and typologies of memory, in an attempt to differentiate or compare the realms of the personal and the public, the everyday and the cultural: to identify and comprehend their intersections and to explore memory's functions and dysfunctions. For example, Jan Assman (1995, pp. 128–129) contrasts the dynamics of 'communicative memory' or 'everyday memory' with the fixity of 'cultural memory'; others focus on an 'experiential' form of engagement with a past that reaches beyond generational memories (this is particularly so with Holocaust and other conflict memories: see Hirsch, 1997, Landsberg, 2004, and Weissman, 2005, on 'post', 'prosthetic' and 'fantasy' memories, respectively).

Whether explicit or implicit in the accounting of the nature, forms and consequences of contemporary memory, it is media and their associated technologies that are being increasingly acknowledged as influential in shaping the emergent 'memory boom' (Huyssen, 2003). In terms of the recent past, one can identify the late 1970s as marking the beginning of a 'memory turn' initially in the West, and, specifically, in relation to the premiere screening of the Holocaust television mini-series on NBC in 1978 (see Shandler, 1999). Moreover, since its widespread introduction, on the one hand, television has seemingly tightened its grip on defining and redefining collective memories for entire generations, especially in relation to events seen as momentous or historic, and for its relentless commemorative 'news' and documentary programming. See, for example, the growing literature on so-called 'flashbulb memory' (Brown and Kulik, 1977; Neisser, 1982/2000; Pennebaker et al., 1997). On the other hand, television as a shaper of remembering and forgetting has to some extent existed below the radar of memory studies, as many accounts 'assume television to be culture's nemesis, rather than a creator of culture – the medium seems inimical to the very notion of memory' (Shandler, 1999, p. 29).

However, many of the models of memory (above) take the media of what is increasingly being defined as the 'broadcast era' as their principal context of study. That is to say, rapid developments in digital media have shaped a new or 'digital media ecology' (which we expand on below). Thus, the existing paradigm of the study of broadcast media and their associated traditions, theories and methods, is quickly becoming inadequate for understanding the profound impact of the supreme accessibility, transferability and circulation of digital content: on how individuals, groups and societies come to remember and forget.

Indeed, some of these very frames of reference of the study of memory, including 'the social', appear increasingly inadequate, or at least constituted in different ways, as William Merrin (2008) argues:

> In the broadcast-era 'the social' represented the abstract social body – the public, the population, the citizenry, the masses – with the media's role being to incarnate the social bond and bring social and political developments to the individual. In contrast the 'social' in social networking derives from 'social life'. The top-down provision of information is replaced by peer-produced relationships with news of the world being replaced by news of the self.

Our citing of Merrin is not just intended to introduce the idea of a shifting mediatised social scape or, rather, digital media ecology. His critique of the field of 'Media Studies' (as it is termed in the UK at least) and his call for a new approach of 'Media Studies 2.0' highlights the difficulties posed for even the academic field devoted to the study of media. It appears increasingly inadequate in identifying and explaining the transformations in and of media, such is the pace and extent of change. Indeed, even to begin a critical exposition on these transformations one needs to go significantly beyond the traditional media and communication studies tools, texts and traditions, including to the writers who are currently taking the lead in their engagement with our digital world (such as journalists, marketing consultants and IT specialists).

What and where are 'digital memories'?

Online mementos, photographs taken with digital cameras or camera phones, memorial web pages, digital shrines, text messages, digital archives (institutional and personal), online museums, online condolence message boards, virtual candles, souvenirs and memorabilia traded on eBay, social networking and alumni websites, digital television news broadcasts of major events, broadcaster websites of archival material, blogs, digital storytelling, passwords, computer games based on past wars, fan sites and digital scrapbooks. All of these are examples of new media at the beginning of the 21st century and all are fulfilling an age-old function: to 'control time, recollection, grief and trauma' (Broderick and Gibson, 2005, p. 207) but how are they making these old moves in new ways? Digital memories deal with the past's relationship to the present through digital media technology and they are engaged in a series of age-old deferrals – the deferral of death (Becker, 1973), the deferral of

endings (Derrida, 1994), and the deferral of history (Baudrillard, 1994; Fukuyama, 1992). It is the instantaneous and flexible production of digital memories that puts history on hold, at least for the moment in which the digital memory is created.

Yet, there is a new deferral that digital memories expose. This has become the self-fulfilling prophecy of information overload, speed and connectivity. As James Gleick astutely points out: 'We complain about our oversupply of information. We treasure it nonetheless. We aren't shutting down our email addresses. On the contrary, we're buying pocket computers and cellular modems and mobile phones with tiny message screens to make sure we can log in from the beaches and mountaintops' (Gleick, 1999, pp. 90–91). Keeping track, recording, retrieving, stockpiling, archiving, backing-up and saving are deferring one of our greatest fears of this century: information loss. The speed at which we live and work in digital culture means that we are producing our memories on machines that do not seem substantial enough and lasting: 'We now stockpile our heritage on millions of hard drives and optical disks, and these flaky objects, too, promise to go obsolete on a rapid schedule' (Gleick, 1999, p. 250). How many of us feel the heavy weight of the memories captured and consumed within the pile of VHS tapes and the VCR gathering dust in the loft? As Blu-ray appears to win the DVD format war, how many consumers are lumbered with HD DVD, the Betamax of 2008? In these contexts, memory means 'backward compatibility'. Amnesia and the fading of collective memory are the symptoms of a society moving too fast Gleick (1999, p. 251) suggests, but this is also squared against the multitude of archivists saving memories we may wish to forget, from the drunken karaoke video we post on YouTube to the flaming missives we tap out in discussion forums. A longing for memories, for capturing, storing, retrieving and ordering them: this is what digital memory culture is all about.

However, for many, one of the consequences of the documentation, storage and re-assemblage of our past(s), of and through the mass media and their associated technologies, is that they 'condemn' human memory. So, the media of 'artificial memory' are said to diminish our capacity to remember in unique and imaginative ways (Rose, 1992, p. 61) and for Nora the accumulations of mass archives produce a 'terrorism of historicized memory' (1989, p. 14). Furthermore, memory itself may be 'mediatized' (Jameson, 1999) in the sense that memory processes are increasingly embedded in a self-reflexive and self-accumulative 'media logic'. Although some of the mediatised memory records of the post-broadcast era are in some ways easy to delete or lose, the emergent

domains of social networking have ushered in new hybrid public-personal digitised memory traces that although open to immediate and continual reshaping are also resistant to total erasure by even, and especially, the authors of these digital archives of self. 'Social network memory' is thus a new hybrid form of public and private memory. The instantaneity and temporality of social network environments disguise their potential as mediatised ghosts to haunt participants far beyond the life-stage of their online social networking.

Having said this, in times of trauma, crisis, grief and mourning digital media can be seen to contribute to a 'comfort culture' (Sturken, 2007, p. 6), giving immediate access to sites of memory, national identity, community and consumerism secured by purchasing a World Trade Center memento on eBay for example. If, as Sturken argues of the American public, citizens could be viewed as 'tourists of history' who experience the past 'through consumerism, media images, souvenirs, popular culture, and museum and architectural reenactments' (Sturken, 2007, p. 9) then surely digital memories would only fuel the connection between memory and consumerism? Everyday life's penetration by the continual documenting of the instant, portable and accessible digital media has produced new and more frequent intersections with the institutional and not least in terms of often free if not cheap content for the news media.

If not offering the latest mobile phone images of the 2005 London bombings, digital media is recording the minutiae of family life to be shared online as personal memories streamed through computerised networks, thus contributing to an upsurge in memory-making from below and revealing the current obsession with capturing and editing as much of our lives as possible. As a subject of Nicola Green's (2006) ethnographic research into teenagers' use of mobile phone text messaging revealed:

> Text messages are something you store … they're kind of memories you want to keep. It would be really cool to have like a memory card for each person so I can put all their text messages in there so I can retrieve them one at a time when I want them. ([L respondent] Green, 2006, p. 256)

Although not dealing with digital memory culture, Green's research produces a respondent who conflates the digital terminology of the 'memory card' with the desire to memorialise and immortalise the affective and personal moments shared with friends through networked

mobile phones. This desire to make immediately accessible those personal memories, to order and archive them (consider *Blade Runner*, 1982) implies that these technologies are really shifting the power base of social history and taking it away from the traditional and institutional producers of media.

But what is the value of memory in the seeming flux and satiation of digital content in the contemporary era? 'Archiving of the online world is not centralized. The network distributes memory. [...] Who, if anyone, will decide which parts of our culture are worth preserving for the hypothetical archaeologists of the future?' asks Gleick (1999, p. 252). Moreover, the presentist function of digital media raises new and interesting challenges for thinking through how these new tools (re)present and (re)construct the past, our pasts. More specifically we could say that '[t]he past and the present do not denote two successive moments, but two elements which coexist: One is the present, which does not cease to pass, and the other is the past, which does not cease to be put through which all presents pass' (Grosz, 1999, p. 59). Therefore, amnesia may not be the problem at all in a culture where past and present are remembered along the side of one another. As the Internet 'turns a large fraction of humanity into a sort of giant organism – an intermittently connected information gathering creature' we find that this 'new being just can't throw anything away. It is obsessive. It has forgotten that some baggage is better left behind' (Gleick, 1999, p. 254).

This book proposes a concept of digital memory as one that rethinks time as linear and moves toward a concept of time and memory as spatial and involving organic participation with inorganic structures. Grosz reads in Darwin, Nietzsche, Heidegger, Merleau-Ponty and Foucault a theorisation of time and the passage of time not as a modality that is determined as lineage, development, accumulation and causality but as the eruption of events that are unpredictable and involve upheaval and chaos. This conception of time underpins digital memories and their production from the bottom up, which is 'to acknowledge the capacity of any future eruption, any event, any reading, to rewrite, resignify, reframe the present, to accept the role that the accidental, chance, or the undetermined plays in the unfolding of time' (Grosz, 1999, p. 18).

Digital memory is, then, an enactment and engagement with difference and the use of digital media to remember is not about taking a passive approach to the passage of time, however fast it appears to be. Rather, it is the active, subjective, organic, emotional, virtual and uncertain production of the past and present at the same time. What digital media brings to memory – and to thinking about and representing the

past – is the possibility of simultaneity, indeterminacy and 'the con-
tinual eruption of the new' (Grosz, 1999, p. 28) into a landscape of old
ways of doing things. In this introduction we outline our concept of
digital memory in terms of three key tensions: the relationship between
history and memory, the relationship between organic and inorganic
and the relationship between 'old' and 'new' technologies.

Digital memory: the end of history – the beginning of memory

Unlike history, which has traditionally been promoted and defended
by the written word, memory has projected itself in multiple media and
formats over the last few centuries: as script, audio, images, artefacts,
sculpture, artwork and architecture to name but a few. This is not to
say that history is not currently embracing and engaging with other
ways of distributing itself: film, television and websites for example,
but rather that history is delivering itself through technologies that
befit memory-making. The shift away from the dominance of the logos
toward more flexible and participatory systems of representation is
one that lends itself particularly well to theories of memory within a
culture of convergence of digital media. In this culture, 'convergence
represents a paradigm shift across multiple media channels, toward
the increased interdependence of communications systems, toward
multiple ways of accessing media content, and toward more complex
relations between top-down corporate media and bottom-up participa-
tory culture' (Jenkins, 2006, p. 243). The question in all this is how far
any culture can continue to invest in old-style ideologies that generate
myths of history (national, religious and political) that are meant to gal-
vanise people and are communicated through traditional mass media
or dislodge such myths by participating in and producing their own
multi-media memories that are personal and collectively shared. Does
this new convergence culture of digital media mark the end of history
and the beginning of memory?

   Like traditional mass media, history shares a one-to-many approach
in disseminating its messages. It is authoritative and institutionalised.
Challenges from grassroots histories, history from below, have to some
extent allowed for revisions of history that take into account the voices
and experiences of others. Memory takes another approach. It is more
peer-to-peer (to use digital media terminology) in its dissemination.
Families and friends form close networks and share memories, both
personal and collective. Likewise, it is participatory, as mourners visit

graves, monuments and memorials. It is accessible not elitist: the language of memory is personal as well as public, affective, and driven by anyone and everyone. Unlike history, memory relies upon personal and shared knowledge for its production (Halbwachs, 1980) and as such accords with Jenkins' redefinition of a new 'collective intelligence' (Lévy, 1997) at work in digital media cultures:

> Knowledge communities form around mutual intellectual interests; their members work together to forge new knowledge often in realms where no traditional expertise exists; the pursuit of and assessment of knowledge is at once communal and adversarial. (Jenkins, 2006, p. 20)

It seems that memory-making, storage, archiving and sharing fit well with what Castells terms the 'hypersociability' of networked individualism that is 'enhancing the capacity of individuals to rebuild structures of sociability [and one could add, structures of history-making] from the bottom up' (2001, p. 132). Mastering the skills to participate in this historical reprocessing is crucial to thinking about how we engage with and utilise digital media. Digital memory practices should not be consigned to an elite few who are fully immersed in the intricacies of what the technologies can do such that their versions of personal and collective memories come to dominate our understandings of social, cultural and political histories. As Jenkins has argued, 'a changed sense of community, a greater sense of participation, less dependence on official expertise and a greater trust in collaborative problem solving' (Jenkins, 2006, p. 209) mean that the new communications landscape expects ordinary citizens to master digital media skills quickly in order to navigate through it.

Perhaps, though, Jenkins is a little too optimistic about the non-elitist community building, knowledge communities or collective intelligence that he sees emerging out of convergence culture. Memory is not homogenous and it does not always promote homogenous communities. Quite the opposite, the convergence of old and new media has provided a multimedia landscape of differentiation, randomness, spontaneity and variation. This seems to be more a Darwinian ecology of digital memory than a rational, deterministic and logical community based upon shared meanings. Nardi and O'Day (1999) define information ecologies as suggesting diversity, continual evolution, change and differentiation. The new digital media ecologies that Cottle and Rai (2007) have identified within the context of 24/7 news reporting

also dispute common myths of homogeneity by revealing 'a dynamic, rapidly expanding and increasingly differentiated ecology' (Cottle and Rai, 2007, p. 72). As noted earlier, the traditional models of 'mass media' so entrenched in the broadcast era appear inadequate as foundations for understanding the flux of digital content, the blurring of the previously distinct categories and experiences of 'producers' and 'consumers', and the meshing of the public and the private. It is a landscape of personal, local, 'regional, transnational and global complexity here that demands increased recognition and theorization' (Cottle and Rai, 2007, p. 53). If history can be seen as the 'rough and tumble analogue narrative of bodies, classes, and power' that 'gives way to a new digital beginning' then surely memory can be said to be replacing it (Mosco, 2005, p. 82)?

However, one cannot expect history-making to end just because new media forms are better suited to projecting the personal and individual from the grassroots up. This buys into the myth of freedom from history that cyberculture promoted in the media theory of thinkers such as McLuhan (1964), Negroponte (1995) and Tapscott (1998) and that continues to be voiced by theorists such as Timothy Allen Jackson: 'New media is a strong force in the ecology of ideas and the formation of personal and collective identities' (Jackson, 2001, p. 352). Yet, this fails to take account of the controlling power of large media conglomerates that produce a great deal of the digital media we consume everyday, and provide and manage many of the very same digital production tools and networks that are seen by some as heralding a loosening of their grip. As Vincent Mosco has argued:

> The freedom embodied in liberalism and the equality of participation contained in democracy are seriously jeopardized by a world in which key economic, political, social, and cultural decisions are set by global networks of firms, many of which dwarf in wealth and power most of the world's nations. (Mosco, 2005, pp. 59–60)

In other words, Microsoft, Google and News International do not invest in social networking sites where personal memories are digitised everyday because they want youth to lead the way, transcend race, gender and class and achieve the world harmony the older generations have consistently failed to deliver. Digital memories (their creation, storage, sharing and retrieval) involve a range of vertically and horizontally integrated media corporations who are all converging upon a central myth: 'Be young, be digital, be equal, be free from history' (Mosco, 2005, p. 81). Rather, digital memories are also being produced for deeply historical

(Holocaust), political (Iraq War) and ideological (9/11) reasons as well as created by cool 'kids' for their online alumni pages. Discourses of freedom, community, equality and collective intelligence that under-pin convergence culture have to be squarely set against a concept of forgetting that is fundamental to the construction of memory. Such discourses, which Mosco would ascribe as myths, create 'the condition for social amnesia about old politics and older myths' (Mosco, 2005, p. 83) and as such we may not be witnessing the end of history but the recycling of history in the form of digital memories.

Digital memory: inorganic + organic = prosthetic

Human memory is fallible, easily distorted and open to loss and deg-radation on a social and neurological level. Media have been seen to supplement human memory, adding to and replacing the capacity for humans to remember in the face of their organic limitations. As McLuhan argued (1964), these extensions of man have made possible multiple applications of media, as people have used cameras to extend the eye and computers to extend the brain. The body, the mind and technology are intimately linked. What is Nintendo's Wii *Fit*™ if not a mediated extension of physical movement, and if it were integrated with WiiConnect24 functionality, or even Nintendo Wi-Fi Connection, then the human body's movements would be fully distributed across networks. Digital memories would then have an ontological status, an existence as being and becoming due to their intimate association with the neurological and the combination of organic participation and technological apparatus required to produce them. Media functions as an externalisation of inner processes, sensations, thoughts and mem-ories but it is the sharing of these through digital media that issues forth a new way of thinking about memory. Making memories remotely accessible, producing empathy at a distance, as Alison Landsberg (2004) has argued in relation to traditional media forms, means that they are not only shared but are prosthetic. They become memories that are not built on first-hand experiences but still have powerful emotional effects. Landsberg focuses upon the sharing of memories of trauma, slavery and the Holocaust through television and cinema, but digital media adds a new dimension to prosthetic memory. This is not a viewer but a user, these are not just events separated by time (Holocaust tes-timonies) but space as well (social networking sites), they are not just from the past (wartime memories) but are continually made present to the audience (9/11 satellite television footage), these are not consumed

memories (cinema audiences of Lanzmann's *Shoah*, 1985) but produced by the audience (9/11 online memorials), and these memories are not simply shared and told (radio histories) but creatively constructed (digital storytelling). They may not even be historically significant memories but they are personally meaningful, and they mingle with the sublime and serious in contradictory and highly differentiated ways in our digital media ecology.

The prosthetic aspects of digital memory are not simply observed by the fact that media's relation to memory is one of the supplement or that the sharing of memories via media produces remembrance at a distance. More deeply, the prosthetics of digital memory raises questions of where we draw the line between the organic and inorganic; what is the ontological status of a digital memory; are these simply recordings, representations or informational or does their ability to integrate human emotion and remembering into the technological matrix suggest something quite different about how media, bodies and minds converge? Crucially, we can see the depth of the prosthetics of digital memory in two crucial ways.

Firstly, as Angel and Gibbs (2006, p. 24) have argued in relation to how the human face is co-opted by television, media are biomediations of the human and are affective. As such, media are not simply cyborgian and continually remediate the human body; that would put the power on the technology's side. In the context of digital media and memory, the human-media interface is invested 'in the body's capacity to supplement technology [and vice versa]' and 'the potential it holds for collaborating with the information presented' (Hansen, 2003, p. 207). If '[m]edia remediate human attention, human affect, and human habit into their flows' (Angel and Gibbs, 2006, p. 27) and the relationship is symbiotic then digital memory is prosthetic in that it is deliberately designed to enlist human emotions and human subjectivity in a much more integrated way. Secondly, in her theorisation of the computer in relation to theories of human evolution, Elizabeth Grosz has posited that in one crucial way computers are already destabilising the boundary between life and non-life. The computer virus, 'a small segment of computer memory', is 'capable of copying its code onto host programs, which, when executed, spread the virus further' (Grosz, 1999, p. 23). Likewise, P. David Marshall has argued that the 'idea of the computer virus has taken on equivalent status to a flu epidemic in terms of warnings, types of inoculation and preventative care and the dire consequences of infection' (Marshall, 2004, p. 45). As such, their ability to self-reproduce and their replication of biological virus behaviour begin

to question the distinction between life and non-life. This convergence of matter (human memory) with information (silicon memory) is crucial here for thinking about the philosophical discourses that underpin a theorisation of digital memory. A concept of digital memory intersects with these same issues. It is not simply a metaphor but a drawing together of the organic and inorganic. When computer viruses infect there is a loss of memory and a digital amnesia that makes digital memory just as fallible and unstable as human memory.

However, digital media are popularly seen not as simple analogue aide-memoires to past events and experiences but as redesigning what can be remembered. There is a distrust of these new memory tools, as if older media such as the photograph were somehow more faithful to the past than a blog (which may remediate old photographs) or a digital image in Photoshop that can be touched up. At least with old media we could keep some distance between human and non-human. However, this fear is based upon a few misunderstandings about the differences between old and new media. The assumptions are that when analogue media is digitised there is a loss of information, an amnesia, that in digital form a media object has a fixed amount of mutable information, and that older media are not interactive, immersive or prosthetic. Yet, Manovich (2001) and Bolter and Grusin's (1999) work has made such distinctions between old and new media untenable. What both old and new media have in common is a desire to 'externalise the mind' and to make what is private (personal memories for example) public (collective memories):

> What before had been a mental process, a uniquely individual state, now became part of the public sphere. Unobservable and interior processes and representations were taken out of individual heads and placed outside – as drawings, photographs, and other visual forms. Now they could be discussed in public, employed in teaching and propaganda, standardized, and mass-distributed. What was private became public. What was unique became mass-produced. What was hidden in an individual's mind became shared. (Manovich, 2001, pp. 60–61)

Digital memory: 'old' media – 'new' media

One of the central claims implicit in the book's title is the suggestion that the digital status of memory-making, documenting, archiving and retrieval has elicited a change or shift or brought about a new form

of the relationship between media and memory. The focus of the title upon 'digital' rather than simply media and memory implies new-ness, difference and uniqueness in some way: marking contemporary memory-making out as in opposition perhaps to analogue. However, if the current theoretical work in digital media has been to focus upon the digital and 'new' media not as radically different from 'old' media either due to remediation (Bolter and Grusin, 2001) or to its sharing of principles with cinema (Manovich, 2001), or as intersecting in creative ways (Jenkins, 2006) then this book needs to tackle just how radically different digitally mediated memories are from analogue-based ones. Is there a continuum between the two and what marks the break?

In defining the relationship between 'old' and 'new' media, Bolter and Grusin's (1999) concept of 'remediation' is very useful. It allows us to think about digital media not as a radical break but as a process of reformulating, reformatting, recycling, returning and even remem-bering other media. 'New digital media are not external agents that come to disrupt an unsuspecting culture. They emerge from within cul-tural contexts, and they refashion other media, which are embedded in the same or similar contexts' (Bolter and Grusin, 1999, p. 19). Implicit within remediation, which Bolter and Grusin argue is the *raison d'être* of every medium, is always already a concept of memory: the memoriali-sation of an older medium by digital media. In fact, the ways in which older electronic and print media continually reaffirm their status and heritage in new and immediate ways suggests a resistance to becoming the lost past of media history. But digital media, digitisation of media itself is different and does issue forth a difference in how we might think about the relationship between media and memory.

Manovich (2001) argues that there are five principles that mark the differences between 'old' and 'new' media. Firstly, 'numerical represen-tation', the composition of media objects from digital code, a mathem-atical product that can be programmable and manipulated. In terms of digital media and memory this means that your old high school photograph, once digitised (converted into binary logic) can have the 'noise' automatically removed by Photoshop. This follows a different logic to the old or modern media, which was mass and standardised in its Industrial Revolution-inspired approach. In this logic, digital mem-ory is embedded in a post-industrial landscape of 'individual custom-ization' (Manovich, 2001, p. 30). Therefore, politically and culturally we can see a creative reinsertion of the personal and mutable into a paradigm of the stable and collective. In practice, your memories and others' memories as captured by media devices can be converged with

other media and customised to fit how you would like your life to be recorded and remembered.

Secondly, 'modularity', is described as the principle whereby media elements remain discreet and independent even when they are assembled into larger-scale objects. The key examples Manovich uses are the Internet, which is completely modular, a movie which may 'consist of hundreds of still images, QuickTime movies, and sounds that are stored separately and loaded at run time' and a Microsoft Office document with an inserted 'object' that 'continues to maintain its independence and can always be edited' (2001, p. 30). It is this independence of storage, separateness of the part from the whole and self-sufficiency of one media element from another, that coupled with numerical coding issues in Manovich's third principle 'automation'. Thus, 'human intentionality can be removed from the creative process' (Manovich, 2001, p. 32) and software programmes can automatically adjust, modify, correct and even create content. For digital memory, modularity and automation present new opportunities for combining old media objects into new configurations in fast and efficient ways that are user-focused. Online museums can draw together numerous different digitised objects (scanned text, clip art, movies, photographs and media clips) that are all separate and editable and consist of smaller independent elements right down 'to the level of the smallest "atoms" – pixels, 3-D points, or text characters' (Manovich, 2001, p. 31).

'Variability' is the fourth principle, in which digital media produces, often automatically, not identical copies but different versions. The principle is dependent upon modularity and automation as defined above and the ramifications are that elements can be assembled and customised 'on demand' (Manovich, 2001, p. 37) in multiple formats. This implies that digital memories are not fixed but liquid, representing functionally the reality of human memory as a constantly mutable experience. While there may be a *master* past event that is remembered, this memory is not documented, archived and retrieved in an analogue way. Identical *copies* of the memory are not generated each time it is produced. Rather, the 'variability' principle of computer culture comes more accurately to describe human culture: the ways in which memory is personally and collectively presented in different *versions* depending on need and context.

The final principle is 'transcoding', the translation of something into another format, where we move away from the cultural coding of media to the computer coding of media. It is this other logic that must be acknowledged: 'Because new media is created on computers,

distributed via computers, and stored and archived on computers, the logic of a computer can be expected to significantly influence the traditional cultural logic of media' and as such 'the computer layer and the cultural layer influence each other' and the 'result of this composite is a new computer culture – a blend of human and computer meanings' (Manovich, 2001, pp. 46–47). This final principle is of significance for thinking through the relationship between digital media and memory, and the digitisation of media objects that have significance for personal and collective memories. What can the computer layer bring to the cultural layer in thinking through the relationship between media and memory? How are human and computer meanings blended in our examples of digital memories?

Clearly, the concept of digital memory is reliant upon the new relationship that has emerged between old and new media, production and consumption, corporate media and user generated content. As Henry Jenkins has argued, this new relationship is symptomatic of 'convergence', in which consumers are encouraged to make their own connections between different kinds of media content (Jenkins, 2006). This is not simply about the convergence of technology but rather the convergence of individuals and cultures:

> Convergence occurs within the brains of individual consumers and through their social interactions with others. Each of us constructs our own personal mythology of bits and fragments of information extracted from media flow and transformed into resources through which we make sense of our everyday lives. (Jenkins, 2006, pp. 3–4)

Jenkins argues that convergence culture is primarily occurring in entertainment and popular media spheres, 'but that the skills we acquire through play may have implications for how we learn, work, participate in political process, and connect with other people around the world (Jenkins, 2006, pp. 22–23). Thus, in terms of a concept of digital memory, the convergence of media to represent personal and collective memory is firstly fuelled by developments in popular culture: blogs, Hollywood film and computer and video games, for example. The expansion of convergence culture into more serious and political issues has largely been generated by the principles that underpin new media, which Jenkins defines as 'access, participation, reciprocity and peer-to-peer rather than one-to-many communication' (Jenkins, 2006, p. 208).

Critically, for thinking about how digital media can represent the past, memories and history, we need to acknowledge the political

importance of 'new' media 'because it expands the range of voices that can be heard: though some voices command greater prominence than others, no one voice speaks with unquestioned authority' (Jenkins, 2006, p. 208). Moreover, what digital media brings to this representation of the past is a greater personalisation of events, narratives and testimonies. The emphasis is shifting away from the collective and toward the personal, as Marshall has argued in relation to the proliferation of digital media technologies that allow this shift to occur:

> Part of the process of new media cultures is an incredible movement towards the personalization of media so that the collective notion of the audience has less salience. The one-to-one relationship to the cultural form of digital television and more clearly with the internet or electronic games creates a heightened sense of agency in the user. (Marshall, 2004, p. 103)

Most importantly, this does not mean that the collective in terms of conceptualising memory has disappeared, rather, it reappears in a different form:

> [S]imultaneous to this growing personalization of media with MP3 players and mobile phones, is a stronger notion of connectivity in new media. [...] this connected 'structure of feeling' is not as massive audiences, but rather as new networked communities that can maintain contact through several methods. (Marshall, 2005, p. 103)

Digital memory discourses, forms and practices

The three tensions that we identify here of the relationship between history and memory, the relationship between the organic and the inorganic and the relationship between 'old' and 'new' technologies are explored in each of the chapters that follow, drawing on different disciplines and giving emphasis to particular sites, contexts and examples of digital memories. The chapters in the book are grouped together into three sections: digital memory discourses, digital memory forms and digital memory practices. In a sense, any kind of division like this, although implying the clear separation of particular elements, is simply an artificial construction and simply one way epistemologically of organising the material in relation to the subject. However, as editors we bring to digital memory and the field of memory studies specific expertise from media and cultural studies, and what we want

to suggest are the ways in which some of the categories often used to analyse media and mediascapes may be useful in relation to thinking about media and memory, and particularly digital memory. Discourses, forms and practices enable us to think across established but increasingly disrupted binaries within memory studies such as the individual and the collective, the virtual and the material and the cultural and the communicative.

Thus, the chapters in Part One address in different ways how memory discourses may be changing with digitisation. Whether a photograph, a video, a text message or an interactive web page, digital memories all share the same essential language: this is the binary code understood primarily only by intelligent machines and a limited number of humans (Hayles, 2006). Examining digital memory through the perspective of memory discourses enables an exploration of the ways in which digital memories through this shared code are merging the personal with the public, as well as creating discourses that are more malleable, alterable and revocable. Underlying contemporary digital memories are liquidities and mobilities that arise from code and in turn are generating new metaphors and discourses for remembering.

The chapters in Part Two then address how digital memories are rearticulating memory forms, requiring us to rethink the conception of media forms itself. By grouping the chapters in terms of digital memory forms we are able to explore the ways in which digitisation is modifying and resulting in new ways in which the past is articulated, some of which appear to be extensions of older media forms whilst others offer new means for recording, recalling and forgetting the past. At the same time, inherent in this section, as with Part One, is the suggestion that the conceptualisation of form, as distinct from digital memory discourses or digital memory practices, is in itself being traversed and disrupted.

In Part Three, the chapters examine the differing ways in which memory practices are changing as a result of mediated memories being created and managed through digital technologies. A more democratised sense of access to memory-making tools, vastly increased memory storage and computer processing power mean that we need to rethink the ways in which 'audiences' now creatively use digital technologies to generate new ways of remembering. We find here that digital memory practices both build on and modify the memory practices associated with 'old' technologies. Consequently, the practices of digital storytelling and creating digital archives can be resistant to the concept of digital 'newness' by invoking nostalgia, reminiscence and community or through using

simple analogue tools. Meanwhile, history from below is now mediated through digital practices such as weblogs, personal journalism, online reunion sites and digital memory mapping, as well as peer-to-peer networks. This has a number of theoretical implications including how we understand the intersection of personal memory practices with more authoritative collective memory practices constructed by memory institutions and organisations including museums and broadcasters.

Although we have grouped the chapters in the book into these three broad sections configured around digital memory discourses, digital memory forms and digital memory practices, it becomes evident from the essays themselves that the very mobilities, convergences, compressions and fluidities suggested by digital media require us to think across and between these categories. Digital media technologies, as we shall see, now point to a much more poly-logical, relational and networked conceptualisation of memory: this is digital memory. Ultimately, the title of this book best serves the purpose of the chapters herein. *Save As…*, with its iconic reference to the computer command we enact every time we name and rename our projects, signals the issues at stake for digital memories: that any medium used to record and archive memory has a redemptive function and that any attempt to save memory always entails loss and forgetting as well as additions and supplements. We save our pasts only *as* something else: something different, something less than, something more than.

Notes

1. The resonance of the work of Bartlett is indicated by the re-issuing of his classic text *Remembering: A Study in Experimental and Social Psychology*, 63 years after its original publication.
2. For example, see the SAGE journal of *Memory Studies* launched in 2008 (http://mss.sagepub.com and http://www.memory-studies.net).

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Part I
Digital Memory Discourses

We begin with 'digital discourses' not merely as constitutive of a body of texts, a set of metaphors or the content of language, but, rather, as the dynamic operations and applications of digital media that shape the formation and expression of all that is conceived of or perceived as held in 'memory'. Digital memory discourses are driving the 'memory boom' and it is no wonder that these are stretching and even exhausting the traditional concepts and ideas about memory. The uncertainties and insecurities of a world characterised by war without end and the 'risk society', have propelled the capital of the past precisely at the time at which its capture and preservation is afforded through new digital technologies. Digital media have enabled the accumulation of selective mass archives perhaps far beyond even that prophesied by Pierre Nora (1989) who warned of the consequence of a 'terrorism of historicized memory'. The huge growth in the mass-mediated commemoration of twentieth- and early twenty-first-century conflicts and catastrophes, and the near-globalisation of discourses on the Holocaust (Huyssen, 2003), for example, contribute to some of the key problematics of contemporary public and academic discourses on memory: saturation versus preservation, obsolescence versus loss and remembering versus forgetting.

For instance, does the dizzying circulation of increasingly recent-past discourses via mass media create a perpetual amnesiac present and the documentation, storage and reassemblage of our past(s), of and through digital technologies, condemn human memory, or does a more intense and visual experience of living memory afford us a more 'useable' past?

It is apparent that public events are increasingly recorded (and subsequently documented) through a fusion of personal testimony and digital personal media, public reporting and the mass media. From the Zapruder film of the assassination of President John F. Kennedy and the

camcorder footage of the attacks of 9/11, through to the mobile phone photographs and video of the aftermath of the 2005 London bombings, the growing availability and portability of audiovisual recording media and digital data have led to their growing influence in the immediate and later construction of events deemed significant in public memory. The accumulations of digital records of public and private events, recorded deliberately and institutionally via our surveillance culture, or randomly via bystander 'witnesses', have provoked critical discourses on the ownership and dissemination of these digital 'memories' in popular culture, and, as 'history'.

One of the central beneficiaries of digital technologies has been the news media, particularly television news and documentary programmes. These routinely employ complex digitised information storage and retrieval systems to contextualise and interpret breaking stories in discourses of the past immediately: in established emotions, histories and associated narratives. This trend is enhanced with contemporary events reported as 'news' being increasingly bound up in the media of their 'production', affording the same media an authorial capacity selectively to repeat (or discard) them.

At an individual level, the personal and the public are also interwoven via digital technologies that mediate so much of the everyday, yet which also extend the continuous present out to edges of the personal and collective horizons of time/space. Under these conditions, Hoskins argues in the first chapter of this section, that memory itself has become 'mediatised'. Mediatisation in part refers to the impact of the media upon processes of social change so that everyday life is increasingly embedded in the mediascape. For Hoskins, this is not just a question of the ubiquity of both new and old media in that today we can observe the satiation of electronic and digital media (images, sounds, and events) as our surround, but that there is a self-reflexive and self-accumulative 'media logic'. In his forthcoming work he illuminates how the rise of the digital media has provoked a re-evaluation of the relationship between media and consciousness. N. Katherine Hayles, for example, draws upon Nigel Thrift's (2004) notion of the 'technological unconscious', namely: 'the everyday habits initiated, regulated, and disciplined by multiple strata of technological devices and inventions' (Hayles, 2006, p. 138). She goes further to argue: 'the unconscious has a historical dimension, changing in relation to the artefactual environment with which it interacts'. Although the field of memory studies emphasises how the past is fluidly reconstructed as part of everyday social interaction (Olick, 1999) the role of digital technologies in this

process is less explored. The everyday has a new 'unconscious' in the form of inaccessible (to most of us) computer code that drives the language of new media communication (emails, mobile phones, social networking etc.). 'Code is the unconscious of language' (Hayles, 2006, p. 137), but it is also the unconscious of memory.

On the one hand objects and artefacts of the past are made visible, locatable and purchasable, on the other, the content of new media – code – produces a different kind of obsolescence (websites) as well as that which is open to collective (peer) alteration and amendment, a new contestable, revocable, 'collective intelligence' (see Johnson, 2001) with authorship and editorial control lauded as a democratic endeavour and the digitisation of the various feedback mechanisms of mainstream media through to 'wikis'.

Paul Arthur, in the second chapter of this section, explores the impact of some of these trends on the field of biography and 'life writing', and interrogates the massive shift to personal expression ushered in predominately by the Internet. Arthur usefully outlines some of the challenges and the opportunities for life and biographical writing amidst the rapid development of digital environments along the spectrum of inaccessibility at one end and over-abundance at the other. Much of the information that biographers conventionally accessed was in hard copy whereas today the traces of people's lives are contained in their digital communications. In one respect, Arthur observes, the veracity of biographical accounts becomes of greater concern given that unprecedented accessibility has made the information on which they are based vulnerable to manipulation. While, at the same time, emails, text messages, and social networking sites, for example, holding the content of a great mass of private and semi-public communications, may seem readily accessible today, but potentially are also much less 'discoverable' in future times in comparison with their hard-copy predecessors.

The memory-shaping potential of digital technologies and also their dangers in effacing and erasing memory is effectively illuminated in the third chapter in this section. Sidney Eve Matrix interrogates the cyberpunk film as a genre to reveal the tensions between different types of memory as a consequence of the intervention of 'mnemonic technologies' into everyday life. At the core of the films, Matrix teases out the tensions between the 'synthetic' and the 'organic' and their co-constitution of memory. She usefully employs the work of Alison Landsberg (2004). (Landsberg, interestingly, in *Prosthetic Memory* actually presents a mostly optimistic account of the potential of media and technologies in enabling memory in the present).

Furthermore, Matrix usefully attends to the focus on the persistence of 'embodied memory' in the films of her corpus, and its capacity to resist erasure. In this way, she evokes the work of Diana Taylor (2003) who explores the 'repertoire' of embodied memory and their tensions and intersections with 'archival memory' (cf. Hoskins, this section). For instance, in arguing that 'Embodied and performed acts generate, record, and transmit knowledge' Taylor (2002, p. 21) reminds us of the resonance of memories lived 'in a constant state of againness' (ibid.). This is in contradistinction to, although intersecting with, other memory mechanisms.

In sum, the chapters in this section all connect, albeit in different ways, the shifting discourses of contemporary memory with emergent digital forms and practices (the latter constituting the two other sections of this volume). For instance, many of the popular concepts and the metaphors of memory have been based upon traditional forms of mass media. However, the terms used in digital media, for instance 'code' and 'data', pose potentially greater challenges in relation to their inaccessibility and fluidity, respectively, for their identification as mechanisms of memory, in contradistinction to the relative fixities of 'flashbulb', 'tape' and even 'disc', for example. It is to these conceptual and theoretical challenges that we now turn, beginning with Hoskins' claim regarding the 'mediatisation of memory' that opens this section on memory discourses.

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1
The Mediatisation of Memory

Andrew Hoskins

Introduction

There is little doubt that the landscape of memory has transformed in modern times. How, what and why individuals and societies remember and forget is being shaped by technological, political, social and cultural shifts that interpenetrate memory and memories, their makers, deniers and their (identified mistakingly or otherwise as) 'repositories'. For instance, public and popular culture and the politics of conflict and security are infused with memory discourses and are conjoined through the contemporary's obsession with commemoration and that which Erika Doss (2008) calls 'memorial mania'.

The complexities of contemporary memory influences and forms, and the consequential conceptual and empirical messiness, have increased calls for moves from multidisciplinary to interdisciplinary approaches in an attempt to become adequate to the shifting capital and uses afforded to, and made of, discourses on society's pasts. However, one of the most influential mechanisms in shaping social or collective memory – or however one wishes to conceptualise the shared, or more often presumed to be shared, memory beyond (but also including) that of the individual – are the modern 'mass' media and their associated technologies. Notably, these include the increasingly interconnected range of forms, institutions and networks of media.

Memory (individual and collective and their varying intersections) is 'mediated' in that how the past is and is not recorded, archived, accessed, retrieved and represented is entangled with the nature, forms and control of the technologies, media and institutions of the day. Thus there has emerged a more publicly and visually explicit 'new memory' (Hoskins, 2001, 2004 and 2005) which is both the media-affected

formation and reformation of shared or social memory in the contemporary age and the consequential reassessment of the nature and the very value of remembering (and forgetting) subject to the technologies of and the discourses disseminated by the mass and other media.

However, the extent to which this is true suggests that radical transformations in contemporary media would similarly impact upon how, what and why individuals and groups remember. The phenomenon set out here as the 'mediatization of memory' is premised upon our being at that very juncture of defining shifts in our mediascape; not only do advances in digital media require a paradigmatic shift in thinking-on-media, but how we conceive of memory requires fundamental reorientation to forge a model adequate to the embeddedness of remembering and forgetting in digital media and in our sociotechnical practices.

Digital media are not peripheral to individual, social and cultural memory, nor are they passing fads like the popular culture that they seem increasingly to be the engine of. Instead, the often variously mislabelled 'new' media (for they are a convergence of the old with the new) have seized, ransacked and made visible the past. The rapid emergence of digital media poses new conceptual and empirical challenges for our understanding of the nature of contemporary memory. This importantly includes the bridging of the personal and the collective. Indeed, some of these very frames of reference of the study of memory, including 'the social', appear increasingly inadequate, or at least constituted in different ways (see, e.g., the quoting of William Merrin (2008) in the Introduction to this volume).

More broadly, the digital era opens up conflicting and simultaneous horizons (or even 'fronts' on the past) that are rapidly being assembled, torn up and reassembled in more self-conscious and reflexive ways by individuals, groups, nations, politicians, news organisations, terrorists, etc. in other words by all those who have ready access to the increasingly affordable tools of digital recording and production, editing and dissemination. There are a number of consequences of this in relation to the substance and articulation of 'memory' in the twenty-first century. A significant one is related to the phenomenon of 'exposure': the public presentation and dissemination of all things past, private or otherwise (the rise of a 'confessional' culture, for example), voluntary or involuntary and planned or accidental. The formation and contestation of memories under these conditions has become apparently more public in an environment of instant and extensive connectivity where the production, reproduction, repetition and circulation of the media-matter of memory are made available with increasing speed and decreasing cost.

What then do these transformations in media and in how the past is being represented and constituted, accessed and retrieved, equate to? How can we adequately comprehend the new 'softness' of our media-memoryscape subject to the rapid and deeply penetrative personal, social, cultural and political changes? One conceptual vehicle that I am proposing as an entry point into both mass and diffused transformations is the 'mediatisation of memory'.

This term mediatisation has a history of its own and so perhaps it is surprising that today it has not attained a wider currency in its application to the rapid advancement of digital technologies and media (and I will turn to a more detailed exposition of this shortly). Briefly, mediatisation refers to the impact of the media upon processes of social change so that everyday life is increasingly embedded in the mediascape. This is not just a question of the ubiquity of both new and old media in that today the electronic and digital media (images, sounds and events) saturate our surroundings, but that there is a self-reflexive, and self-accumulative, 'media logic'. That is to say, as the presentational modes and production routines of the media develop, an awareness of the perceived impact of these (upon audiences' consciousness-in-the-world) feeds back to affirm and/or to develop these modes and routines. Or, at least, this idea is applicable to the so-called traditional broadcast era media and most prominently, television. In our post-broadcast age, the relationships between media and audiences are transposed and transformed, affording visibility on a new ubiquitous mediatised past, literally a 'new memory'.

The new media of memory render a past that is not only potentially more visible, accessible and fluid than that which preceded it, but that also seems at one level more easily revocable and subject to a different kind of 'collective' influence and shaping. What would Maurice Halbwachs have made of such formations? For instance, Halbwachs argued that when the individual makes use of 'group memory' this 'does not imply the actual presence of group members' and he goes on to say: 'I need only carry in mind whatever enables me to gain the group viewpoint, plunge into its milieu and time, and feel in its midst' (1980, p. 118). Well, the actuality of the group today is cast and bonded more than ever before by the virtuality and the simultaneity or near-simultaneity of the group (from proximate to the global). There is no need to 'carry in one's mind' much beyond that which facilitates access to the group; today, memory in this way is less a question of remembering and more a matter of where to look.

The visibility, accessibility, and fluidity of the past has been significantly transformed through the internet and via its reshaping (or 'remediation' to cite Bolter and Grusin, 1999) of 'old' media. These shifts are epitomised by the 'second generation' of services available on the World Wide Web, to which users can contribute content as easily as they can consume, sometimes called Web 2.0. For instance, the rapid rise in the role of social networking platforms in facilitating peer-directed connections and collectivities present potentially an array of new memory forms and cultures. Sites such as BeBo, MySpace and Facebook allow users to display biographical information, post commentaries on their daily lives and interact publicly or semi-publicly with one another through messaging services that can be made visible to all or to chosen users. Other 'Web 2.0' platforms include file sharing systems, for example Flickr and YouTube, that mesh the private and the public into an instant-access and intensely visual and auditory past.

Whereas the personal writing and production of memory (scrapbooks, diaries, photographic albums, etc.) of the past were intended for limited consumption, mediatisation has delivered a new self-centred (and immediate) public or semi-public and semi-private, documentation and correspondence, in other words a social network memory. This new social network memory is social not only through its potential for forging and sustaining communal relationships and activities, but in illuminating the 'well-travelled popular practices of others' (Campbell, 2007, p. 10). For instance, van Dijk (2007, p. 166) argues: 'Google's power lies not in its ability to search fixed sets of databases, but in its ability to navigate a person through a vast repository of mutant items, yielding different content depending upon when and how they are retrieved, reshaping the order of its data upon each usage'. And, as there are necessarily new principles of organisation required to enable us to comprehend the newly visible pasts that we are suddenly confronted with, new principles of memory are also needed that are adequate to these new collective orders, or even the new 'collective intelligence' of Web 2.0, proclaimed by some.

To help to illuminate some of the shifts between but also the continuities of memory shaped in and through the broadcast and post-broadcast eras, I employ the vehicle of 'schemata' as a useful conceptual disciplinary bridging between media and memory. Although the term has its origins in psychology, sometimes credited to the work of Frederic Bartlett (1932), it has been employed by sociologists and others over the years and more recently has been applied to an explanation of the internal logics (operations) of the mass media (Niklas Luhmann, 2000) to which

my conceptualisation is in part linked. Firstly, however, an overview of this term 'mediatisation' and how it is linked to a persisting if not growing area of broadcast-era memory studies: 'flashbulb memories'.

Mediatisation and the persistence of flashbulb memories

Mediatisation is the extended impact of the media upon processes of social change so that everyday life is increasingly embedded in the mediascape. It is not so much that events are straightforwardly mediated by media to audiences; rather, media have entered into the production of events to such an unprecedented extent those events are mediatised (Cottle, 2006).

The popular usage of metaphors of memory are often based upon technologies and media (written, photographic or digital) notably a comparison with some permanent medium of storage (Neisser, 2008, p. 81). However, digital media introduce different equations of ephemera into our remembering processes and capacities as well as new means to preserve, restore and represent the past. Indeed, digital memory technologies also effect what Bowker (2005/08) calls 'inaugural acts' where the old is overwritten by the new. The mediatisation of memory is thus the ongoing negotiation of the self through, and interplay with, the emergent technologies of the day to shape a past that is 'always already new'.

It is important to differentiate two 'phases' of mediatisation (cf. Hoskins and O'Loughlin, forthcoming, for a fuller development of this model). The first is that associated with the dominant media and institutions of the broadcast era, notably television and the news networks, respectively, which produced many more 'flashbulb memories' for a newly connected global village (and an associated literature and mode of analysis). Today, however, the proliferation of new media technologies has ushered in mediatised regimes of memory that effect a new texture of the past that is driven, maintained and replenished through its connections and aggregations. This is not merely about the voluminous accumulations of the archive but rather the ways in which everyday and individual memory is 'imbricated' (to paraphrase Bowker, 2005/8) in the recording technologies and media that afford memory its strength through our mediatised connections with others.

This second phase of mediatisation interconnects and overlaps with elements of the first, but it is distinctive in the capacity of media to transcend and transform the relationships between media and the everyday negotiation of memories.

One significant aspect of this shift from the first to the second phase of mediatisation is the very extent and potential of the media archive, that is the store of images, clips and stories available for retrieval and use. The first phase, characterised by the traditional organisation of Big Media and elite institutions, was seen by some as proliferating archives. However, the second phase of mediatisation delivers not only a 'long tail' (Anderson, 2007) of the past (images, video, etc.) whose 'emergence' into future presents is contingent not only in terms of the when, but also in terms of its access by whom. David Weinberger (2007) calls this the 'third order' of information, involving the removal of the limitations previously assumed inevitable in the ways information is organised. (The 'first order' is the actual physical placing or storage of an item and the 'second order' is that which separates information abut the first order objects from the objects themselves such as the card catalogue). In *Everything is Miscellaneous*, Weinberger argues that 'the 'miscellanising' of information not only breaks it out of its traditional organisational categories but also removes the implicit authority granted by being published in the paper world (Weinberger, 2007, p. 22). The second phase of mediatisation, with its potentially infinite archives and unpredictable emergence of images and sounds, creates challenges for both Big Media and audiences about what information and news is authoritative and credible, and even what authority and credibility mean.

Weinberger's work is indicative of a growing literature (cf. Anderson, 2007; Lessig, 2006; Leadbeater, 2008) that attempts to map the emergent terrain and fast-evolving consequences of the second phase of mediatisation. (Interestingly, this body of work has not emerged from the traditional academic disciplinary areas of media and communication studies, but from the fields of law, business, journalism and computer science, for example). My point here is that it is engagement with the paradigmatic shift significantly underway in the mapping of the new media ecology that is required to provoke and to inform newly adequate accounts of the relationship between media and memory.

The idea of the development of mediatisation is one advanced by Scott Lash. He argues that there are 'two modernities': 'The second modernity is one in which the media spread like a disease. The first modernity describes a process of rationalization. And the second modernity describes one of mediatization' (Lash, 2005). In this way, Lash develops a position out of debates as to a socially located audience in terms of classical encoding-decoding perspectives on the reception of media texts, against those who observe, 'a move from a logic of structure to a logic

of flows [and who] will presume that we as social beings are not outside of the media' (Lash, 2005).

For instance, Fredric Jameson's influential definition of mediatising in his writing on the spatial turn of postmodernism, is a useful starting point:

> the traditional fine arts are *mediatized*: that is, they now come to consciousness of themselves as various media within a mediatic system in which their own internal production also constitutes a symbolic message and the taking of a position on the status of the medium in question. (Jameson, 1991, p. 162)

Social memory is not only directed and made visible through new technologies but it is also reflexively formed through media cultures and practices – very much part of the schemata of modern memory. This includes the rhetorical structures of journalists, programme makers, editors, etc. who make assumptions about the knowledge of other professionals and their audiences (cf. Schudson, 1990). The phenomenon of mediatisation then is not just a question of the uses of media technology, but, as Philip Auslander (1999, p. 32) argues, it is also a matter of 'media epistemology'.

For example, television news is one of the most self-conscious of the electronic/digital media as it reveals and promotes itself in the actual production of that which it documents, reflexively scripting and rescripting the moment-by-moment trajectory of events, and thus constantly adding to its archive, its own repertoire of memory. It selectively sustains and reframes the past through the highly selective repeating of video footage and still images. One might then characterise television's relationship with the past in relation to the 'renewal' of memory, a process, though, that inevitably involves obsolescence, displacement and discarding.

Thus, the amnesiac effects of the process of television's renewal of memory in the broadcast era are crucial to any critical understanding of how modern societies in particular come to live with, deny and transform their pasts, notably in ways that are deemed appropriate for, and reveal much about, the present.

To go further, Jameson's work is important for illuminating the dialectical relationship between media and memory, and also between what can be called 'episodic' or 'event-driven' memory, and the *longue durée* of a 'deep' structure of collective historical memory.

For example, Jameson identifies the assassination of John F. Kennedy as a 'coming of age' of the media culture that was initiated in the late

1940s and the 1950s and he considers the impact of this 'inaugural event'. Although the media event of the death of Kennedy provided a '[u]topian glimpse into some collective communicational festival', Jameson argues that the media have failed to deliver on this collective promise: 'Later events of this kind were then recontained by sheer mechanical technique (as with the instant playbacks of the Reagan shooting or the *Challenger* disaster, which, borrowed from commercial sports, expertly emptied these events of their content)' (Jameson, 1991, p. 355).

So, here are the broadcast-era conditions shaping that which has become defined and studied as 'flashbulb memory' (FBM). The term FBM describes human memory that can apparently be recalled very vividly and in great detail, as though reproduced directly from the original experience. So, such memories are said to possess a 'photographic' quality, owing to the apparent visual clarity of the reproduction of the image in the mind's eye. Explanations for the existence of such a vivid form of memory often relate to the nature and extent of the response to experiencing an event. For instance, events that elicit a greater emotional response (e.g. from surprise or shock) and are deemed to have greater (private and/or public) consequentiality, are frequently noted in psychological studies as key factors in strengthening FBMs (e.g. *see* Finkenauer et al., 1998). In relation to the mass media, and specifically television, work has focused on the FBM of public events. Notably, this is the remembering of the hearing (and also viewing) of news of a momentous event that marks historical memory (an assassination of a political leader, a natural catastrophe or a terrorist attack, for example).

So, the cyclical 'mechanical technique' and the compulsion of repetition of televisual news media have produced the archetypal flashbulb memory and thus the broadcast age is definitively the era of FBM. And, FBM and FBM studies have rapidly multiplied in recent years in relation to the rise in the number of apparently nodal mass-mediated events. For instance, Martin Shaw (1996) argues that we have witnessed a shift from epochal world conflicts intruding once or twice a lifetime to a continual stream of wars demanding our attention. A decade or so later and this trend has accelerated, not least to include other national and global crises and catastrophes. We inhabit a more vivid image-driven environment: events giving rise to FBMs are no longer so distant (or even unique or distinct) and instead are more often connected and stylised. Indeed, consequentiality – to the extent that this as a measure of flashbulb memory still holds today – is even routinely projected onto future events via a cycle of speculative news discourses (especially in relation to terrorism and environmental catastrophes) something that

Richard Grusin (2004) sees as part of television news' logic of 'premediation' (cf. Hoskins and O'Loughlin, 2007).

In attempting to map cognitive approaches' treatment of the mass media one must acknowledge that the key works on FBMs (Brown and Kulik, 1977; Neisser, 1982/2000; Conway, 1995) are studies of the psychology of memory, and not the media. Nonetheless, it is still surprising that these mostly fail to attend sufficiently to the central arbiter of both the original event being remembered and also the key mechanism of its continuation, reinforcement (or conversely its diminishment) in popular memory, in other words, the mass media.

Contemporary FBM studies of public events are defined by two key and related features: firstly, they are often enquiries into events giving rise to memories experienced by or affecting the consciousness of the many rather than the few, notably of events deemed striking and often nodal (in particular in US history – the 1967 assassination of President John F. Kennedy, the 1986 explosion of the Space Shuttle *Challenger* and the terrorist attacks of 9/11). Secondly, television is often identified by respondents as the source of the news in the memory of flashbulb events (accurately or otherwise). It is this latter point, the reported *context* in which news of events was first learned, and the differences between individuals' recollections of their context of learning of the same event, over time, that predominates in FBM studies.

Media and communication scholars interested in exploring the relationship between media and memory (and even those concerned with the relationship between text and image in print, which has a significant history in the field) would benefit enormously from engaging with the excellent psychological work on photographs and the creation of 'false memories' (e.g. Lindsay et al., 2004; Garry et al., 2007; and Sacchi et al., 2007). However, the prospect for genuinely interdisciplinary encounters is charged with considerable conceptual and empirical difficulties that are entrenched through perceptions and misperceptions of academic boundaries and subsequent empirical practices and approaches that often result in studies of memory and of media passing each other, like ships in the night.

Overall, FBM has been defined as a product of mass (broadcast) media and of those events perpetuated by the 'mechanical technique' of television news' compulsion to repeat. In the contemporary environment that combines the saturation of all things visual with the connection and interconnection of all things media, the shock of the new – the defining image of a moment or event – is overexposed and rendered iconic, sometimes instantaneously. The repetition, replaying and re-publication

of an image or series of images, and its accumulation of captions, contexts, and narratives, smothers it so that much of its original meaning is leached out. The student protester halting the progress of a tank in Tiananmen Square, planes crashing into the twin towers of the World Trade Center and the felling of the statue of Saddam Hussein in Baghdad as a false marker of the 'end' of the 2003 Iraq War, are all 'flashframes' that have entered into the pan-media historicising of the late twentieth and early twenty-first centuries.

From a media and communications' perspective, some of the critical issues in identifying the shaping of FBMs would be to trace the repetition of key images, language, and sounds and to ask: (i) how these come to be recorded, archived, selected and re-selected and re-embedded into new media presents (by journalists, news and picture editors, producers, etc.) and (ii) how their recursivity as 'news' reflexively feeds and is fed by other popular cultural content.

If one can then characterise the broadcast era as marked by an apparently powerful inscribing of 'media events' in relation to FBMs, and fed by an institutionally organised archive, what becomes of these vivid collective memories when their core source – television – is de-centred in the diffuse new media ecology?

One means of developing some of these issues as a way of bridging the different disciplinary approaches and the relationship between media and memory, and to consider the transformations and the continuities in remembering and forgetting between the two phases of mediatisation is through the concept of 'schemata', and it is to this aim that I now turn.

Schemata

Schemata are a kind of framework and standard that the mind forms from past experiences and by which new experiences are expected, measured and also reflexively shaped. However, the term is also applicable to the workings of the repetitions and recursions of the mass media, in other words precisely those processes which psychologists tell us are of significance in the persistence (if not 'retention') of individual human memory. For example, incoming information and events that today pass as 'news' are routinely framed, measured and inevitably shaped with reference to and through the use of past and archival images, sounds and events. This includes the deployment of 'media templates' (Kitzinger, 2000; Hoskins, 2004, 2007; Hoskins and O'Loughlin, 2007), a term most often associated with reference to the medium of television.

Media templates are the frames, images and more broadly discourses (presumed by news editors and producers to be familiar to their audiences) that are routinely employed as often instantaneous prisms through which current and unfolding events are described, presented and contextualised. For example, the Blitz (the 1940–41 German bombing of London and other major UK cities) was widely employed as a template to frame the immediate coverage of the 2005 London bombings, invoking memory (but also myth) of the 'Blitz spirit', the capacity to carry on with daily life in the face of daily bombing attacks. This included the use of still images and film footage, and the living memory of survivors from World War Two, in *re*newed narratives interwoven into news coverage and analysis of the breaking story of London 'under attack' in July 2005.

Templates function as a kind of mediatised schemata: a readily available local, national, and global resource of memory which most often through television's highly selective appropriation is self-consciously employed to shape interpretations of the present, as it in turn renews the past. I will shortly turn to address how the nature of media schemata in a post-broadcast age, but first I will consider the application of this term in relation to memory, drawing upon some psychological and sociological perspectives.

A classical starting point for an explanation of schemata at the level of the individual is to say that every time memory is 'made' or 'remade' in the present it becomes 'active'. Frederic Bartlett (1932), for example, who had a significant influence on the psychology of memory,[1] claimed that the key process of remembering involves the introduction of the past into the present to produce a 'reactivated' site of consciousness: 'Remembering is not the re-excitation of innumerable fixed, lifeless and fragmentary traces. It is an imaginative reconstruction, or construction, built out of the relation of our attitude towards a whole active mass of organised past reactions or experience' (Bartlett, 1932, p. 213). It is not a question of the past itself as an entity as such, but, 'our attitude towards' it and our 'organisation' of past experiences. So, crucially, individual memory is seen as dynamic, imaginative, and directed and shaped in and from the present.

This 'active mass of organised past reactions' (ibid.) against which new incoming information is compared and subsequently processed, Bartlett calls *schemata*.[2] As Paul Connerton (1989, p. 6) for example, argues,

in all modes of experience we always base our particular experiences on a prior context in order to ensure that they are intelligible at all;

that prior to any single experience, our mind is already predisposed with a framework of outlines…The world of the percipient, defined in terms of temporal experience, is an organised body of expectations based on recollection.

And, our 'framework of outlines' or schemata, inevitably go beyond the self, and our individual memories are not forged in isolation. For instance, Ernest Schachtel (2000/1947, p. 304, n. 2) considers 'a concept of memory schemata' as 'socially and culturally determined patterns of reconstruction of the past, as contrasted to individually determined patterns'. These patterns of reconstruction are at the very least informed by the mass media who themselves build up repertoires of images and narratives, through which the presentation of events, past and present, is structured, and compared and contrasted. So, the 'active mass of organised past reactions' (Bartlett, 1932, p. 213) which frame, mitigate, and measure the unfolding present, is as easily applicable to the functioning of the mass media as it is to individual remembering, both at the reflexive level of the media and in terms of their shaping of collective memory. In other words, this is a distinction between memory of the media and the media of memory, respectively.

Indeed, as with individual experience, media schemata frame the unfolding present but also affect our expectations of that present. For example, in the conflict-laden field of television news and documentary, highly selected ghosts (e.g. D-Day, the Tet Offensive and 9/11) haunt our television screens and resurrect old trauma in a soothing narrative guise that strikes a delicate balance between therapy and amnesia (Keller, 2001). Television in the broadcast era has become established as the supreme medium of scopic versatility in this respect in selectively both perpetuating and obliterating the past.

To return to Jameson's (1991, p. 355) characterisation of the media's 'sheer mechanical technique', television's repetition and recycling are (especially television news') most powerful operations in shaping and sustaining memory. However, there is surprisingly very little in the way of systematic study of the nature and impact of these processes, nor of their schematic continuities and discontinuities. Many commentators tend to focus their analyses on the ethics of viewing rather than being primarily concerned with television and other media as shapers of memory, often critiquing the leaching out of meaning or numbing effects of repeated exposure to the same image or set of images (*see* Susan Sontag 2003, for example). For instance, in these circumstances, rather than speaking of a chronological time of 'past-present-future' to

cite Paul Virilio, the media forge a 'chronoscopic time: underexposed-exposed-overexposed' (Virilio, 1997, p. 28).

So, an intensification of our experience of the present, through the simultaneity afforded by the multiplicity of feeds that comprise our seemingly more ubiquitous and perpetual view of the immediate, diminishes time and space for memory. For example, Franco Ferrarotti argues that: 'The problem is how to exit from the labyrinth of the instant. For we are what we are and know we are that only in the moment of reflection' (Ferrarotti, 1990, p. 28). If we accept this point of the primacy of the instant, then the hijacking of the modern present by the media affords it tremendous power in obliterating memory. Some commentators argue that a modern malady of an inability to relate to the past is caused by a schizophrenic present that disconnects us from what went before and intensifies our immediate relations. Todd Gitlin, for example, argues, 'the experience of immediacy is what media immersion is largely for: to swell up the present, to give us a sense of connection to others through an experience we share' (Gitlin, 2001, p. 128). This is not simply about an intensification of a culture of immediate gratification, but a growing simultaneity of places, events and experiences that appear to literally consume, fill, and smother, our temporal horizons.

However, television's temporal operations of present and past are not necessarily exclusory or contradictory. Indeed, through the rubric of schemata we can see how television's archival and instantaneous operations are connected. For instance, one key 'patterning' of audio/visual schema is the routine use of simultaneity in television news – presenting past and present sounds and visual images within the same frame – merging temporally and spatially different events into a unifying mediatised sensorium. So, just as personal memory works by matching the here and now with an intelligible there and then, by shifting context, reframing meaning and massive selectivity, television was once the pre-eminent 'global memory bank' (Boden and Hoskins, 1995). The resulting collective or social memory, from this perspective, is seen to be potentially 'strong' in respect of the aggregation of media (both of images and events, and also of its audience reach) being reinforced through selective and continuous connections made with and in the present drawn from its accumulated and centralised archive.

However, the post-broadcast age, which is identified here as the second phase of mediatisation, shifts the dynamics of the relationship between media and memory. The 'active mass of organised past reactions' (Bartlett, 1932, p. 213) against which new incoming information is compared and subsequently processed characterises a cumulative archival

memory that I have suggested is dominant in the broadcast era (that of mass media, mass audiences and media events, etc). However, in the post-broadcast age, the temporalities and simultaneities of our immediate present, although seemingly overwhelming and obliterating in one way, also effect a far greater intensive and extensive connectivity, between the forms and agents and discourses of memory. As the resources of memory-making in the form of digital data becomes more fluid and accessible but also more revocable and diffused, individuals locate their own pasts and those of their groups and societies through their immersion in emergent networks that blur if not transcend the personal and the public, the individual and the social and the particular and the collective.

In these circumstances, some of the established categories in defining memory as individual, collective or cultural, for example, become less distinct and less adequate in explaining not just their interpenetration but also their contestations. Although not explicitly exploring the functioning of media, Aaron Beim considers these very issues in his explanation of the nature and workings of schemata today.

He argues that how one orients to, and is aware of the disjunctures between, 'collective life, cultural life, and the life of individuals' appears to be the key to forging a rigorous theory of the nature and the functions of schemata (Beim, 2007, p. 8). Moreover, he contends that collective memory studies have defined memory to be collective only when it is institutionalised. Instead, Beim locates memory schemata 'at an interstitial level of social life, one distinct from social structure' and advocates going beyond 'institutional objects' to focus analysis additionally on:

> the bundles of cognitive memory schema created through social interaction and accessed systematically when triggered by external stimuli. The schemata are created when individual agents interact with each other among existing institutionalized collective memory objects. (Beim, 2007, p. 18)

The 'interstitial' locus of the active production of memory schemata is an attractive idea as it avoids overburdening the role of institutionalised objects in forging collective memory, although as Beim concedes, perhaps he has replaced one form of reification with another, notably with that of cognitive schemata (Beim, 2007, p. 23). However, he nonetheless claims that 'collective memory' can and should be used to describe 'both individual thought and institutionalized content' if we think of

it as schemata produced via individual interaction with others 'and among institutional representations of history' (Beim, 2007, p.15). So, in relation to the mediatisation of memory, Beim's analysis offers a useful means of reconfiguring the objects and the agents of memory to illuminate the dynamics of the interplay between individuals in the 'new media ecology'. It is precisely the 'interstitial level of social life' that is becoming mediatised, or, rather, it is the processes of mediatisation that are facilitating the emergence of this interstitial level in what is a new media ecology of memory.

Under the conditions of what I have set out here as the second phase of mediatisation, what are the prospects for memory? The opportunities for the capturing, recording, storing, archiving and retrieving of all that is digital are seemingly without limits. The temporalities of our communications with others and the instantaneous or near-instantaneous accessibility of individual and public archives transcends the more retrospective and static documenting and the archiving cultures of previous eras. The fluidisation of digitised content and communications makes available new horizontal connections – peer-to-peer – and has led to the heralding of emergent collectivities: For example, James Surowiecki (2004) writes on *The Wisdom of Crowds*, Vincent Rafael (2003) on the 'Cell Phone and the Crowd' and Martijn de Waal (2007) on 'collective' and 'collaborative intelligence'. The emergent 'social' in the new media ecology is derived from 'social life' as peer-produced relationships are enabled through social networking (Merrin, 2008). And it is these relations which may translate, as I have suggested, into a new social network memory: fluid, de-territorialised, diffused and highly revocable, but also immediate, accessible and contingent on the more dynamic schemata forged through emergent sociotechnical practices.

Notes

1. The resonance of work of Bartlett is indicated by the re-issuing of his classic text *Remembering: A Study in Experimental and Social Psychology*, 63 years after its original publication.
2. According to Neisser (1978/2000) debates over the nature and use of 'schemata' in psychology revived in the 1970s after many years of being largely ignored.

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2
Saving Lives: Digital Biography and Life Writing

Paul Longley Arthur

Introduction

In this first decade of the twenty-first century we are caught up in the midst of a technological shift of the kind that Walter Benjamin, in his 1936 essay 'The Work of Art in the Age of Mechanical Reproduction', attributed to the increasing popularity of photography in the early twentieth century. The essence of that change was the unprecedented capacity to create infinitely reproducible multiple copies. For the first time the idea of the primacy of the *singular* work of art was seriously open to question.[1] 'The history of every art form,' writes Benjamin, 'shows critical epochs in which a certain art form aspires to effects which could be fully obtained only with a changed technical standard, that is to say, a new art form' (Benjamin, 1973, p. 239). Photography initiated a change that Benjamin recognised as being as profound in its impact on people's lives as the introduction of the printing press. Each of these successive technological advances had the effect of putting within reach of the wider public products, information and knowledge that in the past could be enjoyed only by wealthy and elite groups and individuals, so much so that the concept of 'art' itself needed to be redefined to accommodate the many new forms that arose out of new technologies.[2] Over the past three decades, the advances in digital technologies that have occurred have repeated that pattern of rapidly increasing accessibility, far beyond the bounds of art and into every sphere of experience, in a manner and on a scale that Benjamin could not have foreseen.[3] Most importantly, these technological changes have made it possible for 'ordinary' lives, that had formerly left no trace, to be recorded and 'saved' for the future.

'It is no accident,' Benjamin suggests, 'that the portrait was the focal point of early photography.' He explains this in terms of the 'cult of

remembrance of loved ones, absent or dead' (Benjamin, 1973, p. 228). Photography offered the kind of 'immortality' that had formerly been available only to very wealthy or historically important people through painted portraiture. Suddenly, a much wider group of people could enjoy this privilege – of having their name, their image, their *life* – preserved for posterity. As Benjamin points out, these tectonic shifts bring more than a change in art; they change perception – of the world and one's place in it.

In the sphere of writing, the genre of the biography is the equivalent of the portrait in painting. Both have traditionally recorded the lives of the rich and famous. While photography provided an alternative in the field of visual representation, biography has, until relatively recently, focused almost exclusively on historically 'significant' lives and major public figures. Now, very dramatically, the digital revolution has changed everything. In fact, the field of biography/autobiography is changing so fast that it is very difficult to comprehend what is happening and what it means.[4]

This chapter describes a selection of the new digital forms of biography and life-writing as a first step toward exploring the broad questions: What kinds of pressures and changes does the digital environment bring to biography and life writing? And what kind of future is there for biography beyond the book? The chapter considers established forms of biographical representation for purposes of comparison. One thing is certain: the biographical form is thriving in both its traditional forms and new digital forms.[5] Biographies line the shelves of bookshops worldwide in greater numbers than ever before, biography on television has become so popular that it supports a dedicated Biography Channel, and filmgoers have flocked to see 'biopics' (biographical films and documentaries) over the past decade.

All of this is part of a spectacular new chapter in the 'democratic turn' in history-making that is dominating discussion in the history field. The process began in centuries past with the idea that historical knowledge should be available to anyone, not only to experts. Libraries and collecting institutions increasingly opened their collections to the wider public rather than exclusively to scholars. Then, in the twentieth century, there was a widening of the topics of history, based on increasing acceptance of the idea that all subjects are worthy of study and all kinds of lives and experiences should be recorded as accurately as possible. This would mean that histories could compete, that different versions would be possible, signalling a further democratisation through plurality. This has had particular significance for postcolonial history and was crucial in recognising marginalised or minority voices.[6]

In the last decades of the twentieth century the democratisation of history was also linked with the introduction of the term 'life writing'. The new terminology allowed the concept of biography to stretch its boundaries to include many forms of informal and unofficial personal records and stories about lives. It corresponded with history's broadening focus as it moved beyond national themes and leading public figures to include individual experiences that often contradicted the dominant stories of history that had been told.[7] Interest in hidden histories grew out of a new intellectual environment that promoted the individual narration over the broad historical sweeping narrative.

The global explosion of public participation in the digital media and the Internet has greatly accelerated these trends. When digital media began to influence the study of history significantly, not much more than a decade ago, the concept of democratisation was linked primarily with public access to digitised resources. Underlying the principle of public access is the idea that there is a social obligation to make materials available to all. But the greatest change, enabled by the internet in recent years, is undoubtedly the shift to personal expression. Individuals now have an unprecedented capacity to construct, display, share and store their stories, ideas, pictures and videos – their lives – online. Anyone with access to commonly available digital services and devices can self-publish online, reaching a potential audience of millions in an instant. It is astonishing how quickly the Internet is widening the reach of people's stories and allowing immediate connections and exchanges in ways that print never could.

These recent shifts are impacting on the field of biography by greatly expanding the range of forms that can be considered as genres of 'life writing'. As the new ways supplant the established written modes such as diary and letter writing, biographers will need to look for different kinds of information about our lives. Arguably, even the way we are remembering, as individuals and as societies, is now changing as a result of the new creative formats for articulating and recording life experience.[8] The new modes of capturing, storing, presenting and sharing data in people's daily lives are influencing the way that lives are recalled, reconstructed and represented. However, the changes have been so rapid that the impact of the new environment on biography and life writing has, as yet, had little attention.

The expanding field of life writing

The term 'life writing' emerged in the 1980s when poststructuralist, feminist and postcolonial approaches were questioning familiar and

entrenched ways of producing knowledge. Extending the scope of biographical studies, 'life writing' sought to be more inclusive, bringing marginal or disempowered voices into the historical record. In the new intellectual environment that promoted life writing, there was also a stronger critical awareness of the power of the writer in selectively framing a life and the power of the reader in constructing that life in the act of reading.[9] Moving beyond the confines of biography, life writing was also more inclusive of genre and style. In fact, at least 52 genres of life writing have recently been identified (see Smith and Watson, 2001a).

Biography can be considered as a genre of life writing. It has a long history and a set of conventions and expectations that determine how biographers approach their subjects. Like the writers of other long-established genres for recording history, biographers once aimed at an elusive 'objective' position, trying to present as accurate and truthful an account as possible. Although it has long been recognised that any biographical account is as full of the life of the writer as it is of the subject, this does not fundamentally alter the work of biographers. Their task continues to require that they identify, verify and consider the available evidence about a life (documents, testimony and memories of events), and then produce an account of that life. In the case of autobiography the writer is also the subject, but the process follows the same pattern.[10] Some of the genres considered within the broader sphere of life writing are regularly drawn upon by biographers. However, the digital environment has introduced a new complication into this process. Much of the information that was formerly dealt with in hard copy, is now in digital form and is therefore either difficult to access (as in the case of email correspondence, for example) or is now so freely accessible and open to manipulation that it is almost impossible to know whether the evidence or information about a life is genuine or reliable. Obsolescence of early digital formats and proprietary software pose equally significant challenges.

The extreme example is that some people now have multiple identities, even living a 'second life' online. In the same way that life writing was conceived as an extension and expansion of conventional biographical studies, life writing itself is being stretched to accommodate the new possibilities for personal expression, representation and documentation that digital media are enabling.

While the term life writing implies *written* documentation, it is still has currency in the new world of digital communication, which includes mixtures of written, visual and audio material. John Eakin's description of life writing, for example, mentions web pages at the end of a list of 'the entire class of literature in which people tell life stories'. These are 'the protean forms of contemporary personal narrative, including

interviews, profiles, ethnographies, case studies, diaries' (Eakin, 2004, p. 1).[11] However, it is not surprising that both the terminology and the theories of life writing are also being challenged by the rapidly changing digital environment. Sidonie Smith and Julia Watson conclude their 2001 essay, 'The Rumpled Bed of Autobiography: Extravagant Lives, Extravagant Questions', by asking whether current theoretical perspectives are adequately attuned to the new forms in which lives are being recalled, the 'self-reflexive narratives that interweave presentations of self across multiple media, including virtual reality' (Smith and Watson, 2001b, p. 13).

In 2003 the journal *Biography* published a special issue on the topic of 'Online Lives' which records how the boundaries of biography and of life writing were beginning to be pushed and challenged by the most recent digital technologies. In the introduction, the editor John Zuern, sketches a short history of biographical experiments online from the beginning of widespread public access to the Internet in the mid 1990s.[12] In the decade before the Internet was widely available, people began to use computers to write accounts of their lives using word-processing programs. Some even used email to correspond with friends and family. However, the Internet opened up many more possibilities, creating a 'fertile environment for the development of innovative forms of self-representation with potentially global audiences' (Zuern, 2003, p. vi). Online diaries began to appear, with the first dating back to 1994. As communities formed around them, these became known as online journals. Weblogs (a term first used in 1997) and blogs (dating from 1999) were extensions of online journaling.[13] Blogs have created spaces for personal expression and discussion that have no earlier equivalent. In fact, personal blogs provide some of the most interesting historical records of unfettered contemporary opinion and insight and as such are valuable artefacts of our time. People not only wrote about their lives online, they began to record their lives visually and stream the material live to the world. Jennifer Ringley's JenniCam was one of the best known examples (she operated JenniCam from 1996 to 2003).

The theme that runs through all the papers in the Online Lives issue is of reciprocal generic influences. As Zuern explains:

> When we put our lives online, we expand the capacities of the more traditional genres of life writing and the capacities of the new media we employ. While the network environment obviously reshapes life writing in many ways, it is also the case that life writing makes its

mark on the network, putting pressure on its technical conventions and questioning some of the commonplaces of the cultures that have grown up within it. (Zuern, 2003, p. viii)

Of the six articles in the issue, the first three are devoted largely to discussion of the differences between handwritten diaries and diary writing online. The next article is based on an assessment of more than 100 personal home pages and asks whether this can be considered as a new genre for self-presentation. The final two articles are wider ranging. One gestures toward the future by discussing the potential for collaborative authorship online, while in the final article, Helen Kennedy proposes the term 'technobiography', which she first put forward in the title of a co-edited book in 2001.

Regardless of the terminology chosen, it is clear that further discussion is needed of the influence of the digital environment on biography and life writing. The following section outlines the major digital innovations that are most deeply influencing the way that people are displaying, discussing and sharing lives online.

Web 2.0 and the public forms of personal expression

Even since 2003 the digital environment has changed in ways that the contributors to the special issue of *Biography* could not have predicted. Many of the new forms are yet to be recognised as life writing. The single greatest catalyst for the new forms has been the Web 2.0 environment – a set of technologies, standards and approaches that enable information sharing, collaborative authorship and a range of other kinds of user interactivity online. For the study of lives, some of the most important new forms include social networking, social bookmarking and digital storytelling – or 'videoblogging'.

Digital storytelling using a video camera (now commonly built into mobile phones) is now one of the most prominent genres for recording personal histories. Videos posted to YouTube (launched in 2005) can reach an audience of hundreds of millions in an instant. Building upon the digital storytelling tradition that grew up around personal digital media devices in the 1990s, YouTube stands out as the iconic video-sharing service of the early years of the Web 2.0 environment. In its first years it has had no equivalent and no rival. Very quickly it has become a major global channel – even a standard – for recording lives. Easy to use and remarkably flexible, it appeals to young and old and continues to engage huge numbers of new users daily.

The first experiments with social networking services such as MySpace led to a major new phenomenon, with competitors such as Bebo (launched 2005) and Facebook (launched 2004 but not open to all Internet users over the age of 13 until 2006) now thriving with, collectively, hundreds of millions of registered users. In fact, the community-building capacity of these services has been so quickly and eagerly embraced that in the very short time that they have been in existence, they have enabled communities to be formed that have populations far larger than many of the world's major countries.

Social bookmarking (a term first used in 2003) is a related phenomenon that is enabling people to store and tag information about websites they have visited and then share this information publicly. The pioneers of social bookmarking such as Del.icio.us (2003), were followed the next year by Simpy, Furl and StumbleUpon and there are now countless similar services. Like social networking, social bookmarking is a mechanism for exposing information about lives. By sharing information about patterns of searching and saving online, the interests of an individual are revealed. This technology is an unseen 'eye' that tracks and maps users' personal interests. Through web annotation, social bookmarking can also take the form of collaborative authoring, which helps to show larger patterns and preferences for information amongst groups as well as for individuals.

All of this provides a rich, living store of new raw material for history. People are telling their stories in their own ways and broadcasting/publishing them for the entire world to see. In fact, the theme that links most of the genres of personal expression online is that they tend to be very public, whereas personal expression used to be just that: personal and hidden. This is a major shift, with ramifications that are yet to be understood. One is the changing nature of personal expression in this exposed arena and another is the abandonment of the established forms – such as diary writing, memoirs and other print-based records – in favour of public, dynamic and immediate forms of communication in cyberspace.

It is tempting to look on all this activity and wonder whether it may signal the beginning of the end of the usefulness of traditional biographers. On the one hand, how can they manage this multiplicity with its constant movement and unreliability, and on the other, who needs them in an environment where 'publishing' is so easy and everyone can tell stories of their own lives and those of others and update them at will online? In this continual process, lives seem to tell themselves. But in this trend is also the best evidence of the need for biographers and

other experts in recording and interpreting lives. The field of online 'publishing' is expanding at an exponential rate. It offers unprecedented freedom and inclusiveness. However, the other side of this free and egalitarian digital world is that it is chaotic and uncontrolled – a free-for-all. The same technology that empowers and liberates also opens the way for self-indulgence, fraudulence and even violence. More than ever before there is a need for specialists to make sense of these new worlds of digital expression, find patterns in them, help to shape and manage them and to suggest what they mean for the way we see ourselves as individuals and in communities. And of course there will always be a role for biographers to write about significant public figures and to situate their lives and their influence in the context of the time in which they lived. The biggest difference for biographers is that there will be a great deal more material to discover, explore and sort, and much of it will be in new forms whose authenticity is much more difficult to assess than in the past – but perhaps the question of authenticity will also be less critical. After all, the lives of public figures have always been judged not only by verifiable facts, but also by opinion, speculation and hearsay – from multiple perspectives. The digital information explosion simply makes this more obvious than ever before.

The future of biography

So far this chapter has surveyed the expanding field of life writing and shown that the Web 2.0 environment is enabling new creative kinds of public/personal expression – all of which are contributing to a growing store of evidence for biographical research today. But what about the biographical account itself? The formal study of biography, in its traditional print format, has remained surprisingly stable even as the new forms of life writing have multiplied. Will the biographical genre take new forms in the digital environment?

There is no doubt that new ways of presenting biographical information will evolve and will provide alternatives to the printed book. In fact this is already happening, although mostly, at this stage, through either direct autobiographical entries or basic conversions of print-based texts to online formats. But in the future it seems very likely that online modes of expression and online genres will become increasingly popular and put pressure on traditional biography to adapt and change. This can be explained by the fact that the 'natural' fragmentation and dislocation that is part of digital textuality actually much more closely mirrors the chanciness, randomness and fluidity of memory than does

traditional narrative. The web environment also corresponds with the collective structure of lives – intertwining, meeting and diverging (a web can be defined as 'an intricate network suggesting something that was formed by weaving or interweaving').[14]

In spite of its power and popularity, digital textuality does not pose a fundamental threat to biographical narrative. Storytelling is central to our lives and is the means by which we 'shape' our identities and give meaning to our lives and our relationships.[15] We need to be able to tell coherent stories about lives even though they may intertwine like a web or be available to us only in fragments and scraps of information. For this we still need books.[16] It is not the linear form that is the drawback of books. Many experiments and discussions of non-linear, highly interactive forms have shown that most people long for the reassurance of the familiar sequential, chronological narratives. While the digital information may be increasingly messy and dispersed, it is the role of the biographer to give that information order and meaning in the context of a life. However, both the concept of narrative and the nature of the book as an object are likely to have to adapt to the new environment.

At this stage the first production versions of hand-held digital books are not so much a successor to the printed book as a copy in a different form. Nevertheless they provide a 'handleable' object that may well develop into an important component for digital biography. Experimental multimedia documentaries, however, have progressed far enough to provide a glimpse into the future. Some occupy a middle ground between long text works and film documentaries while others offer models for newly flexible, distributed and decentralised formats.[17] These experimental works that bring visual and written narration together, while not privileging either, may provide a model for a future kind of biography that is freer than the book but retains and communicates meaning through narrative – as stories of lives.

Future forms of biography will need to support easy reading of large amounts of text but also allow for visual, audio and other multimedia to be interwoven as part of a richer multilayered narrative. Biography can profit from freeing up its form. What is required are new online forms of storytelling that allow the fragments to be referred to through hyperlinks and that enable the written, visual and audio fragments to be collated and narrated as a richer composite text that better reflects the information available in digital form about a life. This future digital biography would allow the discussion of lives to be brought

back to its most basic mental and material components: memory, testimony, scribblings, bits and pieces and objects of significance. This is likely to blur the biography/life writing distinction even further because multimedia texts will be able to bring together that raw store of evidence about a life as a compilation, allowing that compilation to 'stand for' the life or using it as the reference point as part of an account of that life. In turn, new by-products would be created. These new combinations of primary and secondary sources would produce archives of material that would otherwise have existed as scattered fragments.

The challenge then will be to develop familiarity. The new formats for organising and 'containing' biography/ life writing will not thrive overnight. Until there is an established history of using the new genres, they will remain marginal. This has always been the case with experimental genres. For example, the rotary press, developed following World War One, allowed photographs and text to be combined on the one page cost effectively. This resulted in a rapid growth in the popularity of photographic magazines. However, widespread popularity of photographic history did not come until after World War Two. This was not because of any new technical advances but rather because newspaper and magazine publishers by then held half a century and more's worth of archives of photographs.

In the case of digital biography, the barriers to wide acceptance of the new formats are likely to be multiple and complex. One barrier is undoubtedly the computer screen itself. The challenge is for the digital book, which mimics the printed book in shape and size, to develop in such a way and provide such enhancement of the traditional reading experience, that it will begin to overcome that barrier. But there are many other potential barriers, some of which are suggested below. In some cases these point to a fundamental shift in the way we communicate, the way we see our world, the way we remember and the way we tell the stories of our lives.

Traces of lives

Increasingly there will be new challenges facing biographers, whether or not they wish to experiment with digital forms. A major challenge will be in how to find information. How would a future historian or biographer look back on our lives today and what they would find? Historians and biographers in the future will have their work complicated by having access to an overload of information about our moment

in time, at the anarchic beginnings of the Internet era. However, much of it is likely to be more difficult to access and to interpret than traditional hard-copy documents. As younger people in particular continue to embrace social networking and other online and mobile forums for personal expression, there is a high risk that much of the important information about everyday lives will be lost.

At the same time future historians will notice that people are abandoning the long popular modes for personal expression, such as the written diary or letter, that were once some of the most important sources of information about personal lives and memory. The old practice of a family finding the personal records of a deceased family member and choosing to deposit them in an institutional archive for posterity or making them available to a biographer, is also becoming less common. While some blogs, especially institutionally hosted blogs, may be archived and preserved for the future, personal blogs are particularly vulnerable and the majority will not survive to provide a lasting record for the future. Posting to these blogs is the equivalent of writing extensive diaries and exposing them in the public domain, but all the while accepting that these will almost certainly be lost.

There are also other concerns and dangers. YouTube, in only four years, has created a valuable and liberating mass channel for personal expression. But because they are uncontrolled such tools for mass communication can easily be misused: 'Today the pond – YouTube – laps at every door, letting egos of the shakiest foundation reflect imagined beauty or genius to the entire world', wrote a reporter, prompted by the case of a young Finnish man who advertised on YouTube his intent to kill innocent fellow students, and who subsequently murdered eight students and the head mistress at his school. How could this have been viewed by millions, the reporter asked, without anyone taking action?

With the new digital forms come new challenges that print records did not pose. Letters tended to be more personal (they were usually only meant to be read by one person), more 'complete' and more extended than email. Other examples of everyday electronic communication are even further abbreviated and fleeting. The record of correspondence can disappear immediately, as in the case of instant messaging or SMS text messages. Today the love letters once exchanged in the early stages of a romance may equally take the form of highly abbreviated and code-laden SMS text messages which must be deleted in order to receive more.

Moreover, the correspondence between people is increasingly distributed, impermanent and complexly interlinked. One person's social

networking web page on a networking service is likely to be characterised by short, code-laden communications from 'friends', and the idea of 'correspondence' – with the to and fro of information between people – has been lost and replaced by an unpredictable kind of multiple commentary. Even if there is an intention for such exchanges to be stored for the future, personal privacy settings routinely block access in user-defined ways, and even major data storing services do not normally archive these Internet domains – for privacy and other reasons. A significant volume of communication may also be non-textual but rather expressed in the form of exchanges of visual images or videos, which inherently communicate a message about/to the sender/receiver, but one that is not decipherable to others.

The future historian may be confronted with an apparent void of information on lives that were in fact richly documented, but only through fleeting digital entries on security encrypted online services. A further issue is that people's digital identities can be plural: for better or worse, many people have multiple online personas to which they devote as much time as the physical self. But much of the information about these alternative identities is hidden and inaccessible to an outsider.

All of this is compounded by the fact that generally people do not have adequate strategies for long term personal data management. Most people have a story to tell about one or more occasions when they lost vast stores of important information on their personal computers due to hard disc failure, file corruption, viruses or irrevocably 'mislaid' data through inconsistent filing or other aspects of poor data management. Computers may be routinely backed up at workplaces when employees are working on networked computers, but this information is unlikely to include personal data such as private diaries, photographs or other life records that would be of interest to historians in the future. And personal computers are precisely that: information stored is largely beyond the access of more than one user. Computers are usually password protected at the login stage, and even when they are not, individual files may be password protected. Because email servers require password login they actually a much more secure store of personal correspondence than the traditional box of received letters – but if the password is not known the store may as well not exist.

In addition, the way we *remember* trivial everyday things – such as telephone numbers, addresses, names, birthdays, tasks and diary commitments – is undoubtedly being changed by new technologies. Where once we kept such things in handy notebooks – or in our heads – they are now stored and accessed digitally, with none of the former aids to

memory such as the place on the page, the colour of the script or the many other material triggers to memory that are suddenly becoming a thing of the past. We are increasingly dependent on memory banks that are external and separate to do the memory work for us.

It is a great paradox that, at a time when there is an unprecedented amount of textual interaction and information about our lives, if the current pattern persist we are in danger of leaving fewer personal textual traces than ever before and those we do leave may well be either inaccessible to indecipherable by others. Only the 'lifecasters' or 'lifeloggers' are taking control of digital technology to create long-lasting records of their lives.[18]

Conclusion

The digital revolution has had a more profound effect on biography and life writing than on any other branch of literature, perhaps of any branch of the arts. Playing a crucially important role in the explosion of interest and activity is the Internet. Nothing from the past can rival the scale and speed of the Internet's unleashing of enabling technologies for researching and documenting lives – all kinds of lives, past and present, everywhere. Thousands of family history websites are fuelling an insatiable appetite for genealogical research and now even the most respected print-based reference works for the study of biography are available online, some without charge. Whereas once the historian or biographer had privileged access to information, now many base their research on web-based resources that, by and large, are available to all.

The Internet has also provided the opportunity for 'ordinary' people everywhere to tell their story to a circle of online friends – or to the world. This development represents a massive advance in the process of democratisation that has been occurring in the field of biography over recent decades. It has given people the opportunity to record their lives in far richer, more varied and more creative ways than were previously possible. In order for the academic field of biography to keep pace with the changing technologies and media that most people are now using to communicate and record information on daily basis, new ways of presenting and theorising biography in digital environments are required, and the study of lives needs to be consciously open to this plethora of new forms.

With Web 2.0 technologies and services the democratisation of history has taken another huge step forward. Entirely new forms are being developed with the growth of social networking and the possibility of sharing

personal information and opinions with a global audience on blogs.[19] Never has it been so easy for people to record their lives for others to see. This is allowing for new kinds of personal expression that are far more public than earlier written records could be, and this is fundamentally altering the old patterns of human communication. Never have so many vehicles for self-expression emerged so quickly and confusingly, requiring a language not known as little as five years ago. Perhaps 'democratisation', with its inbuilt sense of communal and consultative order, is no longer an appropriate term for this phenomenon which is characterised as much by its chaotic and unruly nature as by its inclusiveness.

The other side of the coin is that this exciting development has occurred in association with an increasing dependence on online modes of communication and information storage that are temporary, vulnerable and in many cases, inaccessible to others. While they may be more prolific and more accessible they are volatile and fleeting. Could it be that this enormously exciting and apparently emancipatory trend will actually work against the saving of 'ordinary' lives for posterity? The challenge for biographers and historians is to make sure that this is not the case. An important aspect of their role is to work with others across the disciplines to influence the development not only the genres of digital biography and life writing, but also the modes of storage and of access to the digital documents that increasingly represent the most abundant and significant traces that we leave – of our lives.

Notes

1. Walter Benjamin refers to the long tradition of creating replicas through casting (for example, coins) or woodcuts, engraving and etching, but sees photography as starting a new era of mass reproducibility in art.
2. It was long debated whether photography was an art form. As Benjamin points out, 'much futile thought had been devoted to the question of whether photography is an art. The primary question – of whether the very invention of photography had not transformed the entire nature of art – was not raised. Soon the film theoreticians asked the same ill-considered question about film' (1973, p. 229).
3. See Jose van Djik's (2005) discussion of the evolution of media formats.
4. The same point applies to autobiography as well a biography. Until very recently, publishers were interested in the autobiographies of significant publicly known figures. In Australia, Albert Facey's *A Fortunate Life* and Sally Morgan's *My Place*, both first published in the 1980s, marked the beginning of a broadening of interest to include 'ordinary' lives.
5. Mary Besmeres and Mary Perkins, in the first issue of the journal *Life Writing*, write 'Autobiography and biography seem to have become the most popular forms of storytelling of our time.' (2004, p. vii).

6. The rising interest in Commonwealth literature in the 1970s and the emergence of postcolonial literary theory in the latter decades of the twentieth century provide ample evidence of these inclusive trends. The stories of indigenous people, immigrants and displaced people received increasing attention, as did the stories of women. As Joy Hooton (1990, p. 1) notes: 'It has become a truism of recent cultural studies that women did not appear in Australian historiography in any important way until 1970. Publicly relegated to a lesser ahistorical sphere by their male contemporaries, and usually by themselves, women were doubly penalized by the prejudices of twentieth century historians in favour of history as the arena of public events.'

7. In the words of Janet Hoskins (1998, p. 5) 'Perhaps because many of the "grand" narratives of science, progress and politics have lost their credibility, "little" narratives situated in the particular experience of individuals have resurfaced. Third World authors are publishing their own personal accounts of the rise to nationhood…. Within the academy, interest in people's own stories has been spurred by a new hermeneutic self-consciousness in criticism and history, and the struggles of feminists and minorities to be heard on a personal as well as political level.'

8. Lev Manovich has argued that the database, as the most fundamental aesthetic element of today's electronic media, is radically changing patterns of creative cultural production. See Manovich and Kratky (2005).

9. As Roy Miki (1998, p. 39) puts it, 'the reader is no longer a stable point of reference, but becomes an active producer of significances and values'.

10. As Joy Hooton (1990, p. xi) notes, 'Autobiography moreover, is now accepted as a highly artful mode, incurably problematic, vulnerable to all the devices of fictional narration.'

11. Paul John Eakin (2004, p. 3) also traces an increased personalisation in life writing to the early 1990s, 'a new frankness which seemed to be the hallmark of contemporary memoir' (including sex lives, alcoholism, mental illness and even adult incest – the topics that may have once been repressed, hidden, or otherwise overlooked in historical accounts, however personal).

12. Zuern makes repeated reference to *The Pain Journal*, an autobiographical account by writer and performance artist Bob Flanagan tracing his last year of life living with cystic fibrosis leading up to his death in 1996 (published posthumously in 2000). For Flanagan the shift from handwriting to typing on a laptop was a revelation. The computer also became an electronic extension of his body. In that early era of personal computing, the unreliability of the computer seemed to mirror his frailty. When the computer breaks down he relates it to his own health. A modem is installed and he refers to it as an 'implant'.

13. See http://en.wikipedia.org/wiki/Blog.

14. See http://wordnet.princeton.edu/perl/webwn.

15. On storytelling, see Trinh T. Minh-ha (1989, pp. 148–9).

16. Perhaps the main reason that biography continues to be published in book form by publishers is that the quality of traditional book publishing is closely monitored and maintained. The same cannot yet be said of the majority of digital publication formats, although scholarly publishing in the form of e-books and online journals has quickly gained respect in the academic community over a very short time.

17. Some of the most innovative and visually interactive examples have been produced over the past decade by the Labyrinth Project at the Annenberg Center for Communication, University of Southern California.
18. On the motivations for lifecasting, see the Wikipedia entry at http://en.wikipedia.org/wiki/Lifecasting_%28video_stream%29#Pioneers.
19. To the computer-literate (and those with access to a computer), then, creating and online dairy has become as easy as 'putting pen to paper'. On blogs and online diaries, see McNeill (2003).

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3
Rewind, Remix, Rewrite: Digital and Virtual Memory in Cyberpunk Cinema

Sidney Eve Matrix

Preface

In *Blade Runner* mastermind Dr Eldon Tyrell of TYRELL Corporation builds replicants that are virtually indistinguishable from humans. There are a few notable exceptions however; replicants are restricted to a four-year lifespan, and the configuration of their neural processors is limited so that they have no ability to process or express human-like emotions. However, perhaps as a result of aLife evolution, as Dr Tyrell and his associates closely monitor their replicants, looking for signs of sentience, he admits that they 'began to notice in them a strange obsession.' The replicants become increasingly agitated and subsequently difficult to manage, something that Tyrell hypothesises might be connected to a programming issue. Their four-year shelf life means that the replicants come into existence mimicking mature adults, yet they have very limited life experience on which to base decisions. The artificial human-like beings are suffering from a lack of history, and their personality constructs require more psychological depth. TYRELL Corporation laboratories develop a patch for this system weakness, inserting a neural implant filled with synthetic historical data that operates as a 'cushion or pillow' for the replicants' nascent emotions. After the replicants are outfitted with this soothing bolster of fabricated memories, Tyrell admits, 'We can control them better.'

Not long after, the lovely replicant Rachael hands a photograph of a little girl posed with two adults to Rick Deckard, a bounty hunter hired to assassinate renegade androids. 'Look,' she declares confidently, 'It's me with my parents.' Staring at the snapshot, Deckard replies nastily, 'You

still don't get it?' To which Rachael responds hesitantly and in a small voice, "No, I…I…don't." Lacking in self-awareness, the lovely and docile Nexus 6 female replicant had long treasured her family photographs, trusting this visual documentation of her childhood was undeniable proof of her humanness. It is predictably catastrophic for Rachel when she is unsympathetically informed by Deckart that the images in her memory are synthetic historical data implants, and the precious family snapshots are merely props provided by TYRELL Corporation to reinforce her false identity, so that she easier to control. Rachael staggers under the crushing weight of realisation that she is not human but a machine, as the emotional cushion of memory is mercilessly torn away.

Introduction

The links between technology, memory and identity have figured centrally in the cyberpunk film genre from its inception in the 1980s. Since then, two decades of film have explored the practices of downloading, implanting, amplifying, and remixing synthetic and organic memories – interrogating the effects on individual subjects and societies. As Alison Landsberg observed in her analysis of classic cyberpunk films *Blade Runner* and *Total Recall*, entitled 'Prosthetic Memory':

> [S]cience fiction cannot simply be dismissed as escapism; rather, it reveals the very real collective fantasies and anxieties of a culture at a specific historical moment. Moreover, these films about implanted memory can productively be read as attempts to theorize the political and philosophical ramifications of memory in an age of mass culture.[1]

In agreement with Landsberg's comments, this chapter traces the operation of selected discourses of technologically-enhanced prosthetic memory work – what Landsberg calls *mnemotechnics* – as they are deployed within futural figurations of digital memory in contemporary cyberpunk cinema (Landsberg, 2004). Films such as *Minority Report*, *The Final Cut*, and *Vanilla Sky* describe powerful computer technologies, databases and miniature personal prosthetic memory gadgets that manage the data of the collective social past, operate to extend human neural function and claim to improve the quality of human life. As is often repeated (including by Landsberg in the passage quoted above), the cyberpunk genre in film and literature is largely dystopic and reflects *fin de siècle* apprehension about the ramifications of computer

technology on the human condition. Moreover, cyberpunk stories can be viewed as cautionary fables concerning our over-reliance on digital technology. At the same time, it is true that the cinematography and set design in cyberpunk film can be counted on to deliver a spectacular machine aesthetic, wherein computers, vehicles, weapons, and all things high-tech are fetishised as powerful and beautiful objects. Therein lies the irony of the genre, positioned as it is with one foot in a science fiction utopia, steeped in technogear lust, and the other firmly planted on the terrain of social criticism, qualifying cyberpunk as the quintessential postmodern text for Fredric Jameson.[2] Among other things, cyberpunk cinema warns of the many potentially perilous implications of experimenting with computer memory technologies and attempting to modify (amplify, preserve, erase or overwrite) individual and cultural memories through digital means.

In films such as *Blade Runner*, *The Matrix*, *Total Recall* and *Cypher*, memories lose their ability to anchor identity, history and truth. In each of the last three films, the cyberpunk hero is profoundly shaken when, as he goes about his workaday life, and without warning, he is abruptly confronted with an entirely new (and incompatible) set of (what appear to be) his own memories. Experiencing considerable trauma due to the lack of an 'emotional cushion' of established memory, and imagining he must be trapped in a nightmarish simulacrum, our protagonist desperately tries to make sense of and find his footing among layers of realities. In *The Matrix*, Neo's (Keanu Reeves) vivid memories of a mundane job in an office cubicle, a dingy bachelor pad, and a favourite noodle shop are suddenly thrown into doubt. Are they real, or a dream? In *Total Recall* and *Cypher*, our heroes Douglas Quaid (Arnold Schwarzenegger) and Morgan Sullivan (Jeremy Northam) are stunned when informed that their marriages are charades, their names are pseudonyms, their jobs are staged and that all they knew and remember is fakery. At the diegetic level, the effect of layered synthetica and reality is accomplished courtesy of a few memory implants and some high-definition synthetic reality programming – stock-in-trade conventions for cyberpunk filmmakers exploring the pleasures and dangers of machine-mind connectivity.

In what follows I will consider some additional representations of computer memory in cyberpunk film, examples that both utilize and depart from the trope of Baudrillard's simulacra. These films enquire about the impact of cyborg mnemonic technologies, such as cryogenic virtual dream programs, cerebral implants that capture a lifetime of memories and digital prophesy or cybershamanism – using computers to amplify supernatural visions of things yet to come. The central

questions that each film poses are not expressly concerned with authenticity or the real/unreal divide – instead these stories enquire about the unforeseen effects on human quality of life in the present, if and when we rely on computers to upgrade our ability to remember the past, to see the future or to imagine different futures.

The heroes of cyberpunk action-adventure films are deeply implicated in the regimes of prosthetic memory, and as a result of various kinds of system failures they are threatened with the loss of their freedom, family, friends, careers and potentially their lives, unless they unplug (from) the network. Of course in order to unplug, one has to be plugged in in the first place. Thus cyberpunk films feature tales of the digerati, including computer hackers and knowledge workers, with impressive technoskills, and who are normally engaged in keeping digital capital and culture online.[3] In the action-adventure cinema of Hollywood cyberpunk, it is the 'tech support' professionals, geeks and hackers who become unlikely heroes, responsible for saving the rest of us from the effects of network crashes and (much) more often, the damaging results of inadvertent system (mal)functions occurring because of human error (or evil-doers).

Interestingly, in each of the films reviewed here, major technological issues and system errors can be traced to an incompatibility between synthetic and organic memory. In cyberpunk narratives about high-tech prosthetic machine memory systems, it is often the case that powerfully persistent, embodied, human memory will bring the entire cybersystem to the brink of destruction – or at the very least it will reveal perilous unforeseen design flaws in the prosthetic memory network that could endanger humans. In effect, these films demonstrate the incredible power that the unconscious, repressed memories and dreams have, enabling them to interrupt even the most advanced virtual reality and prosthetic memory systems.

Virtual memory

In *Vanilla Sky* our hero survives a tragic car accident but is terribly disfigured. Despairing and in physical agony, David Aames suffers social ostracism and the loss of his lover. Contemplating suicide, he escapes via cryonisation – and enters a frozen tomb, but not before being plugged in to a virtual reality program. Like a high-tech Sleeping Beauty he is immersed in a much-improved version of his Life 2.0, fed a stream of happy artificial memories called a Lucid Dream. But rather than experiencing virtual bliss, our hero suffers horrific flashbacks and unsettling waves of the uncanny, as the transmission of digital memories and

synthetica is interrupted by negative feedback – namely, his powerful buried memories of pain, abandonment and guilt, which override and threaten to crash the Lucid Dream program.[4] While he lies prone and suspended in a network of life-extension cybersystems, David Aames is plagued by embodied memories and long-buried traumatic traces rear up and shatter the calm of any peace or pleasure he can virtually experience.

While his mind is jacked in to this digital dream machine, David suffers through what Freud described as 'the return of the repressed'. Involuntary recollections of trace memories interrupt the scheduled programming of the Lucid Dream willy-nilly. Wildly distorted through the psychic mechanisms of condensation and displacement, these embodied memories redirect Aames' virtual pleasure cruise onto a roller-coaster ride of topsy-turvy recollections, fantasies and fears. The result is that David experiences moments of virtual hysteria, accompanied by intense paranoia, as he desperately tries to make sense of the hetero-topic world he finds himself in. In the metanarrative of the film, what is actually occurring to Aames is the system failure of the virtual reality program he has subscribed to – but for an agonisingly long period of time, he is ignorant of the fact that his nightmarish machine dreams can be ended by simply unplugging and waking up.

The idea that memory work is about negotiating through multiple-layers of often-distorted vision can be found in *The Interpretation of Dreams* and elsewhere in Freud's writings.[5] Although the individual experiences memories as authentic building blocks in the foundation of identity, within a Freudian paradigm they are understood as anything but stable and solid. Although perhaps effective as a cushion for the emotions, Freud explained in his work on the 'mystical writing pad' that in fact memories are less established than they are slippery and extremely changeable as they distort and misrepresent (rather than mirror) the life experiences they are (mis)connected with. Admixtures of real and constructed trace recollections, sensations and experiences, memories are assemblages of residue from psychic processes, evidence of personal historical journeys and fragmented impressions of cultural objects and events. Moreover, memories are not only malleable, Freud argued, but they shift each time they are recalled. And as we see in *Vanilla Sky*, memory is a process involving both voluntary and involuntary acts.

Because money is no object for the exceptionally wealthy David Aames, he selects the most advanced (albeit experimental) cyberscientific life extension package he can find.[6] By leaving his broken body behind, David plans to transcend the meat and experience virtual

escape and pleasure via what is advertised as a 'revolution of the mind'. Thus David is understandably shocked that his real-world fears and anxieties follow him into cyberspace, since these lived experiences were supposed to be overwritten by the sweet-dreams program. In this sense the film engages discourses of posthuman consciousness and net-utopia, to inquire whether when we venture into virtual worlds, we take our bodies with us. In foregrounding the way that even digitised subjectivity is configured in part by embodied memory traces, *Vanilla Sky* engages some of the technoromantic[7] mythos that emerges in connection with virtual technologies and synthetic worlds – the idea that in cyberspace the particularities of embodiment and its construction via discourses of sameness and difference, norm and deviant, and ideologies of race, class, ethnicity, gender, regionalism, age, sexuality and ability – no longer matter.[8] The fantasies of an online world free of the distractions of the corporeal were part of the design dreams of the hackers who built the infrastructure of the World Wide Web, and have always been present in cyberpunk novels including the William Gibson's *Neuromancer* (2004), wherein the protagonist Case dreams of transcending the prison of 'the meat' and escaping into 'cyberspace' – the first recorded usage of that term.[9]

David Aames supplies data and preferences to the software designers who craft his personalised Lucid Dream. That virtual future is customised through accessing his organic neural network, and uploading selected motifs, moments and memories. These are interfaced with layers of coding composed of facts, fictions, fears and fantasies to create a dense digital pastiche or web of connections for the most realistic dreamwork simulation. As Daniel Rosenberg comments in his essay on 'Electronic Memory', the hyperreal effect of virtual reality depicted in *Vanilla Sky* is 'stitched together out of traditional fabrics of future and past: fabrics of progress, revolution, and millennium; of nostalgia, memory, and return'.[10] However one of the unforeseen effects of this postmodern memory remix is the unsecuring of David's identity – a kind of dissolution of the 'I' that grounds his subjective self occurs, and this accounts for a collapse in the psychic structures that order memory narratives. Images of a woman he loved and who made David feel safe are juxtaposed with images of a woman he greatly feared who placed David in mortal danger; his closest male friend suddenly shifts to become his most dangerous enemy – and the sting of this betrayal of brotherhood brings David to his knees, emotionally speaking. Experiencing a crisis of masculinity (a mainstay convention in cyberpunk film), David verges on hysteria due to the loss of any stable grounding perspective or

interpersonal relationship, as he desperately tries to make sense of the labyrinthine world of virtual fantasy spliced with the embodied memories he has tried to repress, and paid to forget.[11]

In its enquiry into the nature of human and computer memory, *Vanilla Sky* cites a central theme in the cyberpunk genre, namely, the constitutive relationship between the real and the synthetic. Questions that spring from this theme in cyberpunk film often involve some form of enquiry into what separates the organic from the machinic, humans from humanoids, the natural world from virtual reality renditions and the like. And as *Vanilla Sky* demonstrates, the subject of memory is an excellent case study of the dialectical relationship between the authentic and the fake, the original and the copy and human memories and machine dreams.

Vanilla Sky's enquiry into prosthetic memory technologies demonstrates the difficulty (if not the near impossibility) of deleting, overwriting or otherwise controlling the data of organic, embodied memories. On a similar note, *The Final Cut* is a cyberpunk film that considers the ethical implications of using high-tech tools to manage digital archives composed of a lifetime of human memories. It is to this next film that I now turn.

Mashup memory

In *The Final Cut*, those belonging to the moneyed class have their infants outfitted with a ZOE implant, a prosthetic memory chip that is surgically networked into the human nervous system. For the entirety of the wearer's lifetime, sensory data will be stored on this chip, in visual and audio formats – whatever they see, say, hear and do (even in some instances, what they dream) is recorded in living colour and real time. Upon death, the chip is removed from the brain via autopsy and securely stored. If the grieving relatives have the resources, the data of their lost loved one's ZOE implant can be digitally remastered so that they can view it; after locating images of special sentimental and memorable moments, the data is spliced together into a video to be screened publicly at the funeral wake (or 'rememory' service). The rememory event is a ritual of nostalgia, where friends and family seek an idealised version of the deceased, and by extension, a flattering representation of themselves as reflected through point-of-view footage from the vantage point of their lost loved one's eyes.

Our protagonist is a professional digital artist (or 'cutter') who specialises in this remastering process, reassembling, sampling, copying and

interpreting the massive assemblage of data stored on the ZOE implant and organising it into a coherent visual digital narrative. Mr Alan Hakman (Robin Williams) is considered by many to be the best in the business of rememory editing, and he considers his profession as a kind of calling, a deeply personal crusade. Importantly, Alan is renowned not only for his intuitive creative skill, but also for his discretion, since the cutter must be trusted by the surviving relatives to edit out selectively the unattractive, potentially damaging and awkward moments from the reams of data stored in the prosthetic device of the deceased. Hakman has a reputation for identifying and tactfully deleting the ugliest digital memory traces from the ZOE databases; he can be trusted to keep the secrets even of deceased perpetrators of domestic violence and incest. When hired to create a rememory video, Hakman is sure to select only footage that creates the impression that the recently departed was a devoted spouse, loving parent and upstanding citizen, for example.

But not everyone is impressed with the ZOE implant technology, and the concept of hiring cutters to harvest the intimate bio-data stored on them. Cutting and pasting someone's memories to reconfigure them into a version compatible with the family's vision of their loved one raises obvious ethical dilemmas. Moreover, anti-ZOE protesters insist that the growing ubiquity of the invisible implant is creating a culture of techno-surveillance, inspiring self-censorship – since all life experiences are (potentially) caught on tape, as it were. This cultural resistance is understandable, since as Jean Baudrillard explains in 'The Perfect Crime': if 'there is always a camera hidden somewhere,' and if we know that 'we may be filmed without knowing it' at any time – then we are not far from the panoptic regime envisioned by Jeremy Bentham (and later famously theorised by Michel Foucault).[12] In a culture in which there are hidden cameras recording (perhaps) always and anywhere, Baudrillard continues, individual subjects will begin to act as if they have a 'virtual camera in [their] head' (Ibid.). And in the diegesis of *The Final Cut*, many individuals in fact already do have a (ZOE) camera in their head, silently recording, witnessing and saving a copy of all they see, say and do – and as a result these subjects may become accustomed to seeing the world and themselves photographically.

Of course, it is worth considering that the individual outfitted with a ZOE implant has no agency to adjust, overwrite, delete, or in any way access information from their own internal digitised audio-visual database – it is essentially a memory back-up device available only in the event of massive system failure (for example, the wearer's death). Even so, as any digital cutter such as Mr Hakman could attest, those

who protest against the spread of ZOE technology on the grounds that it will change the way people act and relate, making human interaction unnaturally staged and enforcing good behaviour, are ill-informed. If everyone with a memory implant acted saintly, the cutters of the world would do a lot less deleting, and the sins of the faithfully departed would not need digital absolution.

In fact, what the cutter is doing is not so different from natural memory work, which as Annette Kuhn reminds us, 'is always already secondary revision,' and thus 'always involves ordering and organizing' subjective memory images in order to make sense of our experiences.[13] The process of narrating memory, staging it in visual or textual (auto) biographical form in order to communicate with others, inevitably involves a kind of editing. This selection process can serve a therapeutic aim, Kuhn suggests, insofar as 'these practices often embody, though not always explicitly, a wish and a conviction that the wounds of the past be healed in the very activity of rescuing memory from the oblivion of forgetting and repression' (Kuhn, 2000). In Naim's film, the construction of memory stories by the cutter operates strategically as a balm to ease the pain of loss experienced by the mourners. At the rememory ceremony, through the (camera) eyes of the deceased, those left behind see themselves as they were, present and participating in happier times – mobilising the power of nostalgia to help absolve lingering regrets.

Certainly digital memory work has a therapeutic effect for our hero Alan Hakman. A passionate workaholic, Alan is a loner by nature, having grown up as an orphan after the premature and accidental death of his parents. Hakman is a deeply private man, not only because of the discretion required by his job editing out evidence of the darker side of human psyches, but because he harbours a terrible secret of his own. Hakman is haunted by paralysing guilt connected to another traumatic event from his childhood: after witnessing a playmate fall several storeys, Alan gazed down at his friend's body lifelessly twisted on the hard concrete below, and in a state of shock, ran away rather than call for help. Over the years, instead of the vision of the friend's fall becoming faded and softened with time, Alan recalls it in hideous and increasingly embellished dramatic detail. In fact, as time passes and Hakman repeatedly re-evokes that shocking accident, his mind creates something akin to the Freudian concept of a *screen memory*, effectively obscuring the earlier and arguably more monumental loss of his own parents. Inventing details, adding colour, amplifying the fall and intensifying its impact in his mind, eventually Hakman 'remembers'

the event very differently from what actually happened; his recall of the awful plunge becomes a kind of composite recollection that contains elements of the fatal accident of his parents' death, and all the while, Alan's guilt grows and deepens – until these invented, false and embodied memories coalesce into an unbearable burden of shame. It is to atone for his transgression in running away and remaining silent that Hakman became a digital artist, dedicated to removing all evidence of the sins of others from their permanent ZOE record, so that others may forget wrongdoings, or be absolved of them, although Alan cannot achieve this peace himself.

Like David Aames in *Vanilla Sky*, *The Final Cut*'s Alan Hakman suffers through the trauma of repressed memory, developing neurotic behaviours including paranoia, persecution fantasies and immobilising guilt. In response, David Aames attempts to strike out or delete his tragic experiences, installing more pleasant virtual memories in their place while Alan Hakman opts to use a different set of mnemonic technologies, directing his energies to mashing up the digital memories of others, cutting and pasting over the ugliness of the human psyche – all in an effort to forget vicariously his own past. Similarly, *Minority Report* is a film about a cybersociety engrossed in gazing backward and forward, wherein prosthetic memory technologies are used to create a history of the future. It is to this next film that I now turn.

Prophetic memory

Minority Report is set in a futuristic version of Washington DC, in c. 2054. The metropolis is a cybercity built upon a web of high-tech visual surveillance technologies and information databases that together monitor the digital citizenry and create comprehensive computerised dossiers on individuals – tracking the populaces' information footprints.[14] The lynchpin of the urban network is the PreCrime system of policing and governmentality, which was established in 2047, and has virtually eradicated violent crime. The success of the PreCrime system is undeniable, as it puts an end to homicides in the district; yet the technology remains controversial, in part because it is extremely invasive to people's lives. It is thus imperative that the government sponsors public service infomercials designed to raise the profile of PreCrime in public opinion polls, with advertisements reminding the population of the dark days of lawlessness in Washington prior to the installation of this web of technovisuality. The memory of the former epidemic of violent crime is kept fresh in the public mind, to encourage their acceptance of

the expanding technologies of cybersurveillance in everyday life. The police force reiterates to citizens that the safety of the metropolis is courtesy of this perfect crime-prevention system, a high-tech modern detection network that amplifies the power of the old-world low-tech new age shamanism that lies at its core and translates visionary prophesy into crunchable machine-compatible data.

Somewhat contrary to expectations, at the heart of the high-tech network PreCrime system is not synthetic memory technologies such as silicon implants or terabyte databases, but supernatural prophesies. *Minority Report* is a film about a culture and its technologies for predicting future happenings, what we could call technoshamanism. The back-story is as follows: as an unforeseen result of genetic experimentation, a generation of children is born with supernatural psychic abilities, including prophetic powers, extra-sensory perceptions that are quickly identified, tapped and digitally amplified by the police. These clairvoyant children are kept incarcerated, drugged into docility and outfitted with high-tech prosthetic technologies networked to visual surveillance technologies. Known as 'pre-cogs' (for their paranormal precognitive abilities), the children are the backbone of the PreCrime system. If one of these child cybershamans envisions a crime about to happen, police will feed that vision into extensive computer databases, GPS systems, citywide always-on surveillance cameras and biometric scanners to locate the soon-to-be perpetrator, apprehend and incarcerate them for the crime they were about to commit. Digitised records of the prophetic visions are filed in a massive intelligence network mainframe; the heavily guarded and classified digital documents are held as evidence of terrible events that almost happened. These computer records form the official repository of a social history that never occurred, creating a situation that might raise concern, since as Susan Harding and Daniel Rosenberg put it, in this film 'lives are [being] constructed around knowledges of the future that are as full (and flawed) as our knowledges of the past'.[15]

Inevitably, someone challenges the ethics of the PreCrime incarceration protocol and its reliance on ESP; interestingly, that someone is intimately implicated in the system – it is one of the clairvoyant children themselves who instigates the dispute. Agatha (Samantha Morton), the whistle-blower is an insider-outsider whose visions of the future are accepted as fact, but whose memories of the past are discredited by those in power. Agatha is emboldened by the realisation that her embodied visions and memories of past events are incompatible with the official versions of the cancelled future stored in the PreCrime database, and she sounds the alarm that the PreCrime database has been compromised.

This disconnect between personal and mass-mediated memories featured in *Minority Report* corresponds to the mechanisms of memory work in everyday life. As Hodgkin and Radstone have explained, memories are never simply private, they are public sites of cultural struggle, open to challenge, revision, and negotiation.[16] Sites of memory construction are deeply political battlegrounds that take place 'on the terrain of truth' and involve many competing interests that correspond to relations of power, knowledge, and resistance.[17] Importantly, they point out that, 'contests over the meaning of the past are also contests over the meaning of the present and over ways of taking the past forward' (Hodgkin and Radstone, 2003a). In *Minority Report*, preoccupied as they are with high-tech progress, policing and prophesies, years pass and no one heeds Agatha's testimony. As a pre-cog her job is to look ahead, not backwards, to predict, not to remember.

But Agatha is not the only one who cannot forget the past. Both she and Police Chief John Anderton (Tom Cruise), another insider within the PreCrime system, are haunted by resilient embodied memories, nightmare visions of a terrible moment in years past. For Agatha, it is the vision of her mother's murder that is lodged in her mind, unshakable and vivid. Agatha cannot erase the scene of her mother's desperate struggle against an attacker nor can she forget the evidence she holds which confirms that an innocent man has been erroneously imprisoned for this homicide, while the perpetrator remains free. For his part, Anderton mourns nostalgically for a lost future, for a lifetime of domestic bliss cut tragically short by the abduction of his son and subsequent disintegration of his marriage and home life. Agonising over this tragedy, Anderton is walking wounded, and becomes a drug addict who sits late into each evening in his empty house watching digital home videos of his son and wife, high and drifting lost in the fog of chemicals and melancholy longing. In this film, beneath all of the celebration and publicity about a brilliant future and better living through digital technology, is a bedrock of private sorrows and secrets and a deep current of tragic memories and nostalgia – resilient even when the most high-tech tools attempt to delete or overwrite them. It is the fierceness of these embodied memories, and the desire to answer nagging questions that motivates Agatha and John to work together and test the PreCrime system's reliability. Their efforts are not in vain, as they find a loophole in network security and uncover a fatal design error that may result in erroneous incarcerations and let killers escape unpunished.

Minority Report is a cautionary tale warning us about (among other things) uncritical acceptance of and faith in the accuracy of high-tech

knowledge, while it encourages audiences to develop a healthy skepticism about the security and reliability of even the most complex and 'perfect' prosthetic memory technologies.

Conclusion

The Final Cut, *Vanilla Sky* and *Minority Report* all depict the difficulties and dangers of attempting to synchronise the synthetic (for example, Lucid Dream software) with the organic (for example, mind-body wetware). By focusing on representations of virtual, prosthetic and prophetic digitised memory, these films demonstrate that emergent cybertechnologies disrupt a host of binary logics: original/copy, past/present, real/ virtual, dream/nightmare and organic/synthetic. These cyberpunk films enquire about the impact of digitality and biotechnology on human subjects, and more specifically in the three films discussed in detail above, about the practices of technologically mediated memory work. Onscreen we watch as the spread of synthetic and cyborgian mnemonic technologies enlarges human functionality and in the process, also encourages subjects to see themselves and the world differently. As Tarleton Gillespie reminds us, because different technologies 'shape, urge, and constrain particular uses,' it should come as no surprise that mnemotechnics affect the memories that are produced, preserved and consumed.[18] In each case we watch as our heroes' identities are challenged and reconfigured through memory work, while at the same time their societies are shaped by new forms of technological narrativising, historicising and digital archiving.

This chapter has explored how cyberpunk cinema operates as a key site in popular culture for creative explorations into the political, ethical and theoretical implications of technologically enhanced memory work. Functioning as social commentaries, cyberpunk films deliver narratives about the fantastic expansion of human function through cybernetic and information technologies and the potentially prohibitive costs involved at the individual and cultural levels. In film and literature, the cyberpunk genre has always encouraged us to think deeply about our (ever-increasingly) computer-mediated relationships and lifestyles. Some of the mnemonic devices featured in the science fiction films considered in this chapter may seem rather far-fetched, but the idea that prosthetic digital memory tools are powerful social technologies is already accepted as commonsensical. In an information economy, wherein each individual's identity is largely configured through myriad public and private databases (including digital records of one's financial and health

history), few or none of which they have control over or even access to, the spectre of lost data or false data is a serious threat. The flipside of our networked economy, these films suggest, with its interlocking compusystems of digital information, is an increased reliance on machines to make us intelligible to each other. By extension, in a networked society, our digitised cultural and individual memory stores, whether they be criminal records, insurance claims, educational transcripts, credit card receipts, income tax files, personal computer hard drives, emails, Google caches or Facebook pages, make it increasingly difficult to forget.[19]

However there are crucial differences between memories and raw sensory data capture, as in the ZOE implant (in *The Final Cut*) or other raw data such as a bank statement or income tax return file. Computer scientists and researchers such as those affiliated with the 'Memories for Life' symposium, suggest that out of semantic memory – the storehouse of facts we know – we construct episodic memories of individual events.[20] The human mind can distinguish between these two kinds of memory according to relevance and irrelevance, sorting through and querying enormous data stores to make sense of the past, present, and future (Ibid.). To a computer, 1s and 0s might be equally relevant, and it is the human user who must identify schema and delineate categories of intelligibility to organise masses of data into useable knowledge or memory files. In Hollywood's cyberpunk films, intelligent machines are often pitted against ordinary human subjects and in films about digital memory, the battle waged is usually about the inability of machines to comprehend subtleties or the difference between data and knowledge.

Through the three cyberpunk films reviewed here runs a narrative about cybertechnologies in general, and prosthetic memory tools in particular, as part of an exploration into the bigger picture of the digitisation of everyday life. Computers are represented as equally intriguing and threatening, especially insofar as we can use them to transcend the body, and escape 'the meat' and the markers of our identity (race, gender, etc.), or to decide what kind of memories we would like to have. These films, like the rest of the cyberpunk genre they belong to, reflect *fin de siècle* anxiety about human nature and technology and can be viewed as cautionary tales concerning our over-reliance on cybertechnology. Interestingly, all three films focus on the persistence of embodied memory, its ability to haunt the subject and the difficulty of erasing or overwriting it. In fact these films demonstrate the incredible power that the unconscious, repressed memories and dreams have, enabling them to interrupt even the most high-tech virtual reality and prosthetic memory systems. Admittedly, this is not a surprising theme in the cyberpunk

genre, which almost inevitably privileges the human over the machinic. In these films we see the pleasures and dangers of digital memory systems – the marriage of mind and machine and synthetic and organic memories downloaded, remixed, technologically-amplified and decoded. As a result, some subjects are enlightened through access to rememberings, while other subjects are haunted by their inability to forget. In each case we watch as our heroes' identities are reconfigured through this memory work, while at the same time their societies are shaped by new forms of technological storytelling, historicising, and digital archiving. Since the films are social commentaries, they feature narratives about the simultaneous expansion of human function through cybertechnology, and on the flip side, the terrible costs involved at the individual and cultural levels. The dramatic tension in these examples of cyberpunk cinema concerns the terror of memory loss, negative feedback, endless loops, and an intense longing for the emotional cushion of 'real' memory – to comfort and reassure us of who we are.

Notes

1. Alison Landsberg, *Prosthetic Memory: The Transformation of American Remembrance in the Age of Mass Culture*. New York: Columbia University Press, 2004.
2. Fredric Jameson makes this claim in his work *Postmodernism, or, The Cultural Logic of Late Capitalism*, Durham, N.C., and London: Duke University Press, 1991. The argument is expanded in his more recent book, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*, London and New York: Verso, 2005.
3. For an extended analysis of the representation of hackers, knowledge workers and computer geeks in cyberpunk film, with attention paid to the gendered and racial implications of these cinematic conventions, see my book *Cyberpop: Digital Lifestyles and Commodity Culture*, New York: Routledge, 2006. Esp. Chapters 2 and 3.
4. This trope of implanted synthetic memories and subsequent terror via flashbacks and searing migraines was first explored in *Johnny Mnemonic* (Dir. Robert Longo, William Gibson, screenplay, 1995) and revisited in the more recent cyberpunk film *Cypher* (Dir. Vincenzo Natali, 2004). The persistence of this theme over a seven year period in cyberpunk filmmaking suggests that synthetic memory implants are generally perceived as a dangerous threat to identity and the body, capable of causing intense physical distress and loss of self.
5. Sigmund Freud's 'A Note upon the "Mystic Writing Pad"' (1925) appears in *General Psychological Theory*, New York: Scribner Paper Fiction, 1963. Freud's paper on 'Screen Memories' (1899) can be found in *On the History of the Psychoanalytic Movement: Standard Edition of the Complete Psychological Works of Sigmund Freud,* Volume 3, New York: W. W. Norton, 1966.
6. Similarly, in the cyberpunk films *Total Recall* (Dir. Paul Verhoeven, 1990), *Overdrawn at the Memory Bank* (Dir. Douglas Williams, 1985), and *Strange Days*

(Dir. Kathryn Bigelow, 1995), synthetic memories and virtual experiences are commodities available for sale to the elite class, promoted as better than the 'real' thing. By purchasing a virtual memory-experience, the consumer is buying a vacation from the mundane reality of their everyday life. In *Strange Days* we watch white men (including Lenny Nero, played by Ralph Fiennes) eagerly consume pornographic virtual memories of sex and even rape and murder. In *Total Recall* another white man (played by Arnold Schwarzenegger) jumps at the chance to buy the thrilling memory-experience of living as a secret agent on Mars whose partner is a stunning female assassin-prostitute. In both films the male protagonist buys virtual empowerment, excitement and pleasure with his manufactured memories. However, in *Overdrawn at the Memory Bank*, the protagonist is a Latino man (played by Raul Julia), who is so poor that he can only afford to buy the humiliating memory-experience of being a female baboon. In all three films, something goes terribly wrong with the synthetic memory technology, placing all three men in harms way.

7. Richard Coyne, *Technoromanticism: Digital Narrative, Holism, and the Romance of the Real*, Cambridge, MA: MIT Press, 2001.

8. For more on the idea of a post-gender, post-identity mythos and its connection to the hacker ethos, see *Cyberpop*, cf. note 4.

9. William Gibson, *Neuromancer*, New York: Ace Science Fiction, 1984. Also see Steven Levy *Hackers: Heroes of the Computer Revolution*, New York: Penguin, 1984.

10. Daniel Rosenberg, 'Electronic Memory' in Daniel Rosenberg and Susan Harding (eds) *Histories of the Future,* Durham, N.C., and London: Duke University Press, 2005.

11. The plotline in *Vanilla Sky* is quite similar to what we see in *The Matrix* (Dirs. Andy and Larry Wachowski, 1999), wherein another male cybersubject (played by Keanu Reeves) is forced to consume a steady diet of fabricated memories, while his body is incarcerated in a machine – though not by choice.

12. Jean Baudrillard, 'The Perfect Crime' *Wired*. Issue 1.02 (June 1995) Online at http://www.yoz.com/wired/1.02/if/perfect_crime.html. Accessed 20 June 2007. Also see Michel Foucault, *Discipline and Punish: The Birth of the Prison,* New York: Vintage, 1975.

13. Annette Kuhn, 'A Journey Through Memory' in *Memory and Methodology*, Ed Susan Radstone. Oxford and New York: Berg Press, 2000.

14. For more about the cybersurveillance in *Minority Report* see my article 'The Aesthetics of Tech Noir in *Minority Report*,' *OASE Architectural Journal,* Special Issue: From Science Fiction to Cyberfiction: Architectures of the Future, 65, (2005): 74–89.

15. Harding and Rosenberg. Introduction. *Histories of the Future*, cf. note 12.

16. Katharine Hodgkin and Susannah Radstone. *Regimes of Memory,* New York: Routledge, 2003.

17. Hodgkin and Radstone, *Contested Pasts*, cf. note 14.

18. Tarleton Gillespie, 'The Stories Digital Tools Tell', In John Caldwell and Anna Everett (eds) *New Media: Theses on Convergence, Media, and Digital Reproduction*, New York: Routledge, 2003.

19. For more on the difficulty of deleting, erasing, or forgetting data in a computer-mediated information economy, see M. Dodge and R. Kitchin, 'The

ethics of forgetting in an age of pervasive computing', Centre for Advanced Spatial Analysis. Working paper 92 (2005) London: University College. Online at http://www.casa.ucl.ac.uk/working_papers/paper92.pdf Accessed 17 April 2008.
20. Kieron O'Hara, Richard Morris, Nigel Shadbolt, Graham J. Hitch, Wendy Hall and Neil Beagrie, 'Memories for Life: A Review of the Science and Technology', *Interface: Journal of the Royal Society*, 3, (2006): 351–65.

Part II
Digital Memory Forms

Memory takes many 'forms', from the colourful knotted quipu[1] of the native tribes of South America to the key-ring-sized memory stick of the twenty-first century. These different forms are important to our thinking about memory. As Douwe Draaisma suggests, evolving forms through the ages have led us to describe memory through different metaphors: 'Reflected in theory, the memory came to look like the technologies it was modelled on' (Draaisma, 2000, p. 231). We are also reminded by Jose van Dijk that it is important to pay attention not just to the practices and processes arising with digital memory but to the actual cultural forms that we use to articulate our memories. It is the form, she suggests, that in some way structures and informs what we remember. She asks how digitisation changes 'the stuff that memory is made of' and how it may be altering 'the cultural practices and forms through which we shape our remembrance of things past' (van Dijk, 2007, p. 42).

This section of the book takes these insights further and explores the significance of digital memory forms in relation to the three tensions identified in the introduction: the relationship between history and memory, the relationship between the organic and inorganic and the relationship between 'old' and 'new' media. The chapters analyse the resulting adaptations, modifications and newly emergent memory forms arising from the digital media revolution. These new forms, the authors suggest, in various different ways, have important implications for human memory and for how we then conceptualise mediated memory in the digital age. Computer based forms, particularly, enable non-linear links and personal navigation through a combination of sounds, moving images, photographs and texts. Digital hypertext allows for 'a linked collection of statements expressing diverse perspectives on the

same event', as well as fluidity of interpretation and contribution from user-generated content (Morris-Suzuki, 2005, p. 217). Digitisation also allows for rapid copying and circulation. This section examines how digitisation may result in changes in memory forms within the specific media contexts of the World Wide Web, CD-ROM and mobile phones.

Chapter 4, *Memobilia: The Mobile Phone and the Emergence of Wearable Memories* examines the impact of the mobile phone on memory forms. The chapter is based on research on mobile phone uses by young people in London in 2006 and 2008, as well as an analysis of the camera phone witnessing of the 7 July terrorist bombings on the Underground in London in 2005. Reading argues that the multimedia, web-linked mobile phone has led to the evolution of a newly emergent memory form, the memobile or memobilia. The word, derived from a combination of me, mobile and meme, suggests the digital significance of these three elements: first, the self, me, or dialogic importance to data memories created using mobile camera phones; second, the importance of mobilities and mobilisations in the capturing, editing and sharing of mobile data memories; and third, the meme-like qualities of the material that virus-like can take on a life of its own as material is sent and shared between individuals and between individuals, the Internet and media organisations. The memobilia might include a personal archive of texts, an image of boyfriend at a party, an image of lecture notes on a whiteboard, a recording of a child singing or a video of a terrorist attack on an airport. What defines them is that these digital mobile-phone memories or memobilia are wearable, shareable multimedia data records of events or communications. They are carried with people virtually all of the time and characterised by the fact that they are captured on the move, they can be easily digitally archived and at the same time rapidly mobilised or shared with others. The term memobilia also has obvious echoes of the analogue term memorabilia, with its suggestion of material keepsakes and mementoes. Whereas prior to the mobile phone we might keep train tickets, menus and snapshots in a shoe box or album, memobilia is the digital version of these that people keep not at home, but with them, on the move.

In Chapter 5, *Remembering and Recovering Shanghai: Seven Jewish Families Reconnect in Cyberspace,* Andrew Jakubowicz examines how Web 2.0 has led to the development of what he calls the webumentary, a newly emergent form that he argues empowers people to move beyond being consumers or audiences of history to becoming researchers in which the interactive possibilities in memory creation are enhanced. Combining academic insight with practice-based research, Jakubowicz

focuses on the Webumentary, 'The Menorah of Fang Bang Lu' that he co-created (Jakubowicz and Pentes, 2002) to tell the less-well-known memories of the lives of the Jewish diaspora, whose paths crossed in Shanghai after fleeing Nazi-dominated Europe in in the 1940s. Many of the families then went on to settle in Sydney, including Jakobowicz's own family. The chapter approaches the question of how we should understand the webumentary as a memory form using the insights of historical sociology, with the memory form of the webumentary itself offering something new as a practice based memory research tool.

In Chapter 6, *Archiving the Gaze: Relation-Images, Adaptation, and Digital Mnemotechnologies*, Bruno Lessard examines the CD-ROM as a form. Lessard, as with Reading's chapter on mobile phones, and as suggested by the title of his piece, is critically reworking Jan Assman's idea of 'cultural mnemotechnique' or culturally and institutionally shaped memory that is different from communicative or personal, lived memory[2]. Lessard examines how the CD-ROM suggests not that one is being rapidly transformed to the other, but that we should resist understanding memory in terms of discrete 'forms' in the first place. Lessard examines the work of the artist Jean-Louis Boissier[3] and a particular CD-ROM archive creation of his of the work of the writer and philosopher Jean-Jacques Rousseau.[4] He looks at the significance of what Boissier describes as the 'relation-image', in which the image is understood not in terms of its discrete meanings, but rather in relation and through performance.

As with other work on memory and digital cultures (see van Dijk, 2007, p. 42) the authors here concur that while digital forms are not superseding older analogue forms they are resulting in changes to how we collect, recall, save and share memories of the past. As van Dijk suggests, 'Digital cultural forms do not simply replace old forms of analogue culture; weblogs only partly overlap with the conventional use of paper diaries, laminated pictures are still printed despite the rise of digital photography, and MP3 files are not exactly replacing our tangible music collections. New practices gradually transform the way we collect, read, look at, or listen to our cherished personal items' (van Dijk, 2007, p. 49).

Further, a number of additional insights emerge from these chapters on the digital and memory forms. The first concerns how the digital brings to the foreground the significance of relationality in understanding and conceptualising memory. Secondly, all three pieces foreground the tensions between history and memory, the organic and inorganic and 'old' and 'new' media. Finally, they suggest how conceptual binaries used hitherto within memory studies, such as the individual and

the collective and the cultural and the communicative are traversed and transformed with digital memory forms, requiring us to frame our understanding of memory so that it includes a sense of how memories in the digital area are mobile, changeable and immersive.

Notes

1. Quipu were a system of knotted coloured cords made from the wool of llamas used by the Inca empire 5000 years ago to record data, information and stories in the absence of a system of writing. See Hiram Bingham (2003).
2. Jan Assman made the distinction between communicative memory which comes from personal memories within groups, and cultural memory which through media and communication forms can be independent of people. He argued that the transformation between the two is what is important in modern societies (See Assman 1991).
3. Jean-Louis Boussier is an interactive artist born in Loriol-sur-Drôme, France in 1945. He has gained an international reputation for his research on artistic forms linked to interactivity. See http://www2.kah-bonn.de/1/28/0e.htm. Accessed 7 July 2008.
4. Jean Jacques Rousseau was a key thinker, philosopher and writer of the eighteenth century. He was born in Geneva in 1712 and his ideas concerned a theory of general will and the natural goodness of humanity. He wrote philosophical texts, autobiographies, novels and political essays.

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4
Memobilia: The Mobile Phone and the Emergence of Wearable Memories

Anna Reading

In the science fiction novel *Woman on the Edge of Time*, first published in 1976, Marge Piercy envisaged a future society in which the characters would have 'kenners', mobile communication and personal memory prosthetics strapped to the wrist and connected to a world wide electronic network. In March 2006, Piercy's kenner, in effect, became a reality when Nokia announced its 4G mobile phone designed to strap to the user's wrist.

This chapter focuses on evolving memory forms in relation to the digital media prosthetic of the mobile phone. It suggests that the mobile phone is no longer only a handy communication device but is significant in its contribution to an emergent form of digital memory, that I have named, 'the memobile'. Mobile digital phone memories or memobilia are wearable, shareable multimedia data records of events or communications. They are captured on the move, easily digitally archived and rapidly and easily mobilised. They may be saved as a personal note, shared via the mobile-phone handset with a chosen few or circulated to the many by individuals or via websites. They can include an image of a pet shared via the mobile handset with a co-present friend; keeping an archive of texts from a boyfriend; recording ambient sounds in a pub to listen to later or capturing a mobile-phone video of a London fire and sending it to the BBC.

This emergence of memobilia is unsurprising, given that one of the biggest drivers of mobile-phone developments in particular has been memory in relation to communication. It is also not unconnected to the digital media convergence that the mobile phone has undergone. The mobile has become a device with the capability to capture data in

multimedia forms, archive and share material in ways that are deeply personal and yet instantly collective through being linked to a global memoryscape of the World Wide Web. This has also been combined with the drive to increase the mobile phone's portability. Within a couple of decades, mobile phones have gone from being the size of a housebrick to devices that are slim, sleek and light, clipped to belts or slipping into clothing pockets and straps of handbags, with some models designed to fit on the wrist. In this respect mobile phones are unique in relation to most other interactive media because they 'can be worn on the body' (Campbell and Park, 2008). This *wearability*, as opposed to the portability of the laptop or camera, means that the phone is increasingly being used as and experienced as, an extension of the embodied self. In some cultures, this is encapsulated by the noun used for the device itself: while in the UK we stress the mobility of the device with the word mobile, in Japan the ketai suggests personal portability for the pedestrian and in many northern European countries the device is referred to as a 'handy' suggesting an extension of the hand itself (Oksman and Rautianinen, 2003).

Mobile phones are also important to our thinking about digital memory forms because of the rapidity with which they have been adopted worldwide, including in developing countries. Agar claims, for example, that they are now as common as the wristwatch (Agar, 2003, p. 3). This mobile take-up, resulting in individuals having a wearable personal media archive, makes the mobile phone and its associated networks of particular interest to governments as part of the shift from E-government to M-government (MGCI, 2008). As well as its potential as part of the drive for persuasive technologies in delivering personalised government messages, because of the ease with which mobile data is recorded and stored, the mobile is also part of a growing global panopticon (BBC, 2007). With mobile-phone technologies an individual leaves a trail of digital footprints, providing a data record and digital archive of their location in time and space as well as an archive or log of all mobile (non) communications and interactions.

Here I explore whether memobilia constitute a specifically new digital memory form as my coining of a new term might suggest. Or, rather, if memobilia may be better understood as a new combination or extension of older forms of memory. The word 'memobile' is a deliberate linguistic combination of me (individual/self) with mobile (on the move, mobilisation) with phonic echoes of the word meme – a unit of cultural information that is repeatedly transmitted and can self-propagate rather like a virus. It may be that memobilia constitute a radical break

with older memory forms. Or, as Campbell and Park (2008) have argued in relation to mobile communication practices more broadly, that what we are witnessing is the evolution of a personal communication society that builds on, rather than breaks with, Castells' notion of the network society (Castells, 2000). In this case, the emergence of memobilia may be understood as meshed with the deeper developments related to the personal communication society.

The chapter begins by looking at the uses and contexts of mobile development and uptake before examining some of the academic literature on mobile phones and the degree to which they discuss memory. I then draw on an ongoing research project on mobile technologies at London South Bank University and examine two contexts of mobile-phone use that focus on image-based memobilia. I discuss the ways in which people are using mobile phones as a wearable gallery and, secondly, how images captured using mobile phones are mobilised in the public arena, with the development of mobile witnessing, particularly in what has been termed the War on Terror. I then suggest that although we might distinguish between different kinds of memobilia that relate to various social contexts and mobile practices, the memobile may be distinguished in itself as a new memory form by elements arising from the social uses of mobile communication technology and its social contexts. These, in brief, may be characterised as the memobile's wearable mobility combined with the rapidity with which it can transform embodied, communicative memory into cultural memory and vice versa.

The mobile industry

Although it took from 1992 until 2004 for the sale of the first billion mobile phones, it took just another two-and-a-half years for the second billion to be sold (Hopper, 2007, p. 68). Since the 1990s, this rapid increase in mobile phone ownership reached the point where they are in use globally (Agar, 2004). This growth in developing countries meant that worldwide, more people owned a TV set than a mobile phone, according to Katz and Aarkhus (2002, p. 5). By the end of 2008 half of the world's population owned a mobile phone (Wray, 2008).

The Worldwatch Institute reported that mobile phones in developing countries provide poorer people with not only telephony but also digital access to photography, video and the internet (Hopper, 2007, p. 68). There have been some exceptions, such as North Korea, where, since 2004 mobile-phone ownership has been banned. But what is significant

then for digital memory is that in some cases earlier (analogue) memory forms that might require greater expenditure, or a more extensive technological infrastructure involving constructing national grids for electricity and cable networks, could be leapfrogged with the take-up of mobile technologies (Horst and Miller, 2006). As Hanson points out, mobiles may need charging, but they do not need a permanent electricity supply, which is particularly important for developing countries (Hanson, 2007, p. 130).

Mobile phones are communication devices that, although invented and initially advertised for use by an elite of business (men), are now used in both domestic and public contexts, by men and women equally, from all classes and ethnic backgrounds. Studies suggest that use by young people actually runs counter to the ways in which new technologies are usually adopted. Other digital media trends show a growing digital divide that corresponds with an established economic divide. In contrast, children with parents who are less educated use their mobile phones more often than those whose parents are more educated (Geser, 2006).

Technologically, mobile phones have gone from being devices primarily for one-to-one verbal communication to devices that allow for communication from many to one and one too many. They compress, change and reconfigure human beings' experience in space/time, through the inclusion of digital and video cameras, audio recording, music playback, radios, multimedia and text messaging. They include a range of obvious reminder data and archive functions such as an address book, diary, notes and organising facilities. The mobile phone's data is then globally shareable through its links to the Internet as well as via Bluetooth. Within the mobile communications industry itself, this personal memory dimension of mobile phones has been considered a central part of their technological development to be used in the marketing and sale of the devices. Thus, as early as 2004, in a press release from Nokia Ventures Organization, the Director of Multimedia Applications, Christian Lindholm stated:

> Imaging phones have become like life recorders, making it easy for people to collect life memories through images and messages. Nokia Lifeblog makes it easy for users to automatically keep, find, and share memories in a pleasant way. (Nokia Ventures Organization, 2004)

This particular trend of 'life caching' to which Lindholm refers has been made possible through Lifelog software, which automatically caches activities, messages and images and diaries them along a time

line (Trendwatching.com, 2008). At the same time, online software developments, particularly social networking (e.g. Bebo, Facebook), and blogging and photo-sharing sites allow for the wearable life cache to be put into the public domain on the World Wide Web with varying degrees of privacy and public access. In the next section, I address how these rapid developments in mobile technologies have been framed so far by academic studies on mobile communication and within these the ways in which memory is configured.

Memory and mobile communication studies

Worldwide, there is certainly a growing body of academic literature on mobile phones from a variety of disciplines including anthropology, sociology and communication studies. Studies, so far, have tended to focus on the impact that the phone is having on more general social and communicative practices (Ling, 2004; Rheingold, 2002). Studies have examined many different global contexts including mobile use in Japan (Ito, Okabe and Matsuda, 2005), India (Steenson and Donner, forthcoming), Finland (Puro, 2002) and Jamaica (Horst and Miller, 2006), as well as differences in use between socio-economic groups, especially youth and youth cultures (Green, 2003; Stald, 2007; and Lobet-Maris, 2003). Gerard Goggin has addressed how differentiated cultural practices are arising from mobile technologies (Goggin, 2006); Katz and Aakhus' (2002) edited collection brings together a range of studies from around the world that address different uses of the mobile phone in different national contexts.

Within mobile studies, the significance of memory, while hardly central, has not gone entirely unnoticed. A number of studies give an indication that something may be happening to human memory through the ways in which the mobile phone is resituating people in time and space. Jarice Hanson (2007, p. 39) who explores the term shows how the phone is used to fill 'spare time' through its means to share data and information immediately and spontaneously. A number of studies discuss how mobile phones are now used for the micro and macro coordination of meetings and meeting points in everyday life with requisite implications for this in terms of modifying our relationships to time. One study suggests that individuals are developing an 'extended present' whereby punctuality becomes irrelevant as phone users renegotiate the time they will meet. (Garcia-Montes, et al., 2006). Caron and Caronia argue that adolescents no longer have meeting places or meeting times but that these are created on the move, with young people continually

updating each other on their activities and whereabouts (Caron and Caronia, 2007, p. 157). Mobile phones are then used to create live narratives of the self in everyday life between people who are geographically separated:

> The present tense now governs storytelling on the phone. Narratives no longer inform others about what one did during the day but let them participate in what is going on while it is happening. (Caron and Caronia, 2007, p. 157)

This sense of how mobile phones are modifying self-narration within a new creative practice that involves live digital storytelling has been given particular focus in studies that examine camera phones and their impact on photography and self-identity. Daniel Rubinstein argues that the camera phone changes photography's relationship with memory in a number of ways. Unlike the conventional camera, the camera phone offers the user an immediate choice between keeping the image they have captured in the private circle of the address book or making it available in the public domain (Rubinstein, 2005). The camera phone also changes our relationship to our environment. Always armed with a camera (phone) we are in the position readily to perform the identity of being an observer (Rubinstein, 2005 and Gye, 2007a). The way that the camera phone is always with us thus changes photography as a process of record. Users are increasingly seeking to blur the boundaries between living and recording: 'The act of wearing a camera at all times opens up a differenth relationship to space, turning everything in one's immediate environment into a potential subject for a snapshot' (Rubinstein and Sluis, 2008, p. 21).

Studies show that memory in terms of personal reminders and in acts of commemoration figure highly in people's reasons for taking camera-phone snaps. In a study involving focus groups by Van House, one of the four major uses for the camera phone is the creation and sharing of group memories (Van House et al., 2005, p. 1845). Similarly, a study by Daisuke Okabe looking at emergent social practices with camera phone use found that of the sixty-five per cent who used the camera in their phone, seventy-five per cent used it for 'recording or commemorating moments with family, friends, acquaintances'; sixty-nine per cent stating that they used it commemorate 'interesting or unusual things in everyday life' and thirty-nine per cent were using it to remind themselves of scenery while travelling (Okabe, 2004, p. 3). Along with 'ambient virtual co-presence' where users 'inscribe a space of shared awareness

of each other', there is a form of personal archiving with cameraphone use in which users capture data in the forms of visual notes to the self and sometimes for others. They cite a young woman who took a photo of an old school friend at a reunion to show her mother, and a respondent who took a photo of a book he wanted but couldn't afford, so that he had the book details recorded for ease of borrowing later from the library (Okabe, 2004, p. 3).

Kindberg et al (2004) found that in a small sample of British and American adult men and women, respondents took eight photographs per week and three videos per month, receiving only two photographs per month on average. They found that most images were shared via the handset, on a face-to-face basis or by MMS, with most images taken as personal keepsakes with a view to sharing (sixty-five per cent). This taking and sharing of images and messages is part of the development of the phone as part of an extension of the self that concerns fun and play, according to a study by Daliot-Bul. In Japan, he argues, the mobile phone has gone from being a technological device into a 'little friend that is an intensely personal part of users' lives and is an outlet for fun and play-thrills' (Daliot-Bul, 2007, p. 955).

In contrast to this playful dimension of the mobile phone's memory being used for personal keepsakes, a number of studies examine the ways in which the mobile phone is used to make digital records of events that then become public news. The fact that people carry a phone with them routinely means that images of everyday as well as extraordinary events can be recorded, circulated and archived. Kindberg suggests that the every day use of the camera phone in this way is changing what people consider to be worth recording, and from this what is considered to be publically memorable and newsworthy. According to Yasmin Ibrahim:

> Mobile technologies and new media platforms offer spaces of storage in which a proliferation of narratives and images provide avenues for reading history differently, away from the institutionalised spaces of museums and official archives. (Ibrahim, 2007, p. 3)

News organisations have responded to the technology by soliciting material from mobile phones, with major news events, including terrorist attacks and natural disasters now being reported, initially, via mobile-phone witness accounts. Although an Australian study by Lisa Gye (2007b), suggests that the quantity of user-generated content submitted to news organisations via mobile phones is not as extensive as we are led to believe, the mobile camera phone is, nevertheless, firmly

accepted as contributing to a change in the public record of events through what has been dubbed citizen journalism (*see* Goggin, 2006).

From digital notes to digital witnessing

These findings, which suggest that people are developing new forms of memory through their everyday use of mobile technologies, are also born out by my own research project at London South Bank University on mobile-phone use and its relationship to memory. The research is addressing both how men and women in London use mobile phones as personal memory prosthetics and how individuals are using them as public witnessing devices in what has been termed the War on Terror. The data suggests that there are three aspects to mobile-phone use that are integral to the memobile as an emergent memory form.

First, because of the device's wearability mobile phone memories are primarily a dialogic about the 'me' or the self, I. Thus, when 180 media students at London South Bank University, aged between nineteen and forty-one, were asked in April 2007 to give one-word responses to how they felt without their mobile phones, their vocabulary suggested the loss of part of the 'me' or part of themselves. Words they associated with being without their phones included: *uncomfortable, isolated, lost, lonely, disconnected, unsafe, insecure, unguarded* and, interestingly, in terms of thinking about the phone as a memory prosthetic, *naked* and *without time*. At the same time, this part of the me they lose is also felt to be insecure and panoptical, since some also added that without their phones, they felt *free*, *more private* and *peaceful*.

The dialogic me of *me*mobilia was evident in an earlier qualitative study involving in-depth interviews and focus groups with twenty young people aged between twenty and thirty-two in London (2006). Respondents used the phone to capture and archive daily personal reminders, using the phone's organiser, calendar and note-taking functions, as well as using the camera for visual personal reminders in the absence of pen and paper while out and about. One respondent had taken a picture of a menu from a shared meal to remind himself later of what he had eaten; another had taken a photo of notes written on a whiteboard that encapsulated the seminar he had attended, and another had taken a photo of a text box in a museum. These visual notes, as Okabe (2004) has noted tend to be erased later and were treated as highly temporary. Our research also showed that the mobile phone was also used for personal digital souvenirs, or reminders of a place captured as part of narrativising the self or to be shared as a gift.

Hence, with one couple, the girlfriend took photos of the beach near where she was staying as part of a dialogic: 'D: I sent him quite a lot of photos and was texting them to him while he was at work saying I'm here and you're stuck there. And he texted me back a photo of his keyboard.' This was also found to be the case in a number of other studies (See Johnsen, 2003 and Ling and Yttri, 2002).

The second integral feature of memobilia is mobility. This is in terms of the obvious ways in which these are records that can be captured on the move, managed and edited anywhere at anytime, as well as how memobilia can be mobilised from anywhere with network coverage, with the data travelling via various communication levels and channels. Respondents described how some material was for a personal archive on their phone: this they considered they had personal ownership over since it remained with them. Other material was intended for mobilisation. This occurred through a variety of means, with most material mobilised directly via the handset with a co-present individual or between handsets via Bluetooth, and only secondarily via MMS, or uploaded to moblogs. Memobilia uploaded to a moblog or social networking site were understood to be publicly owned and were consciously being mobilised as part of the construction and projection of a panoptical 'me' that one respondent described as 'an ideal self that I *want* people to find' (Male respondent, twenty-four years old, London 2008).

These qualities of mobility and mobilisation associated with memobilia are also linked to their meme-like qualities. Thus, in our research we found that in some cases, such as the mobilisation of an image of friends out clubbing at night, respondents described how the image took on its own trajectory between a network of friends. The image became circulated not as an 'ideal self' but as part of a playful polylogue of identities in performance that rapidly traverse the usual boundaries of the private and the public.

The meme-like qualities of memobilia are most evident when they are mobilised by a digital eyewitness or citizen journalist. After the 7 July 2005 terrorist bombings in London some of the first images circulated had been captured by people using mobile phones and then uploaded to the internet and sent to news organisations. The BBC reported that on the day itself it was sent around thirty video clips and around a thousand images by non-journalists. What rapidly became iconic both of the bombings and the new phenomena of citizen journalism was a portrait of survivor Adam Stacey taken using his mobile phone. The image showed him escaping a smoke-filled Northern Line Underground station with his hand over his mouth. The image was uploaded to Alfie's

Moblog (*see* Alfie, 2008) An analysis of the posting strings to the blog evidence how within a few hours the image had achieved worldwide circulation with individuals copying it and sending it on to other individuals, as well as to news organisations. Thus, within half an hour of the image being posted to Alfie's blog, contributors had sent it on to Associated Press and Sky News. It appeared on the Sky Website by 13.22. The image is then sent on to LiveJournal.co.uk; by 13.36 it is on the BBC website. A blogger then sends it on to MSNBC Citizen Journalist: 'Hope you're ok. Saw this pic on livejournal.com/~uk It's travelling via email as well'. Over the next hour we see postings from the US, Canada, Spain and the Netherlands with people accessing the image from Flickr, the BBC and the *Guardian* newspaper. The following day, bloggers in Australia, Tahiti and Honolulu are responding to the image as well as people from Argentina, Mexicio and Brazil (see Reading, 2007).

(Re)conceptualising memory forms in the mobile age

Memobilia are an emergent memory form developing with people's use of the mobile phone with three integral features. The first is a dialogic or polylogic relationship to the self or *me*; the second, a range of *mobilities and mobilisations* enabling the capturing, managing and sharing of data while travelling, and the third, the ability to be copied as a unit of information giving it *meme* like qualities. The phone enables a personal, wearable archive of the everyday, that we can edit and archive, use on the move to remind ourselves or to share or mobilise at anytime. In this sense, the phone is a portable shoebox, a wearable album and gallery, a notebook and music box, yet instead of stuffing the box in the back of the cupboard, or leaving the album to gather dust on the bookshelf at home, we carry it in our pocket, belt or bag. My 2006 study showed that even at night, most respondents described keeping their mobile phones close to them, usually at the side of the bed, with it being the last thing they touch at night and the first thing they reach for in the morning, as the device beeps to remind them that its time to get up. At the same time, though, the mobile phone is clearly not an album, a shoebox or a notebook, because of the meme-like quality of mobile memories in which units of information can be copied, deleted, managed and shared.

What then does this mean for how we conceptualise memory forms in the mobile age? What these secondary studies and my own research suggest is that the mobile phone is accelerating our ability rapidly to transform our personal impressions into public memories independent

of the individual. With memobilia the form is enmeshed with a record of the self that traverses the usual binaries between the private and the public. As Campbell and Park argue, 'in essence, the boundaries between the private and the public are constantly being negotiated' (Campbell and Park, 2007). Jan Assman's differentiation between communicative memory and cultural memory is also useful to note here. In a growing mediated and digital culture, he argues that 'What is at stake is the transformation of communicative, that is, lived and in witnesses' embodied memory, into cultural, i.e. institutionally shaped and sustained memory, that is, into 'cultural mnemotechnique' (Assman, 1991 cited in Levy and Sznaider, 2005, p. 33). Mobile phones are the wearable link between the private and the public, with memobilia acting as both communicative and cultural memory. Memobilia are a memory form that is lived and embodied, as well as being transformed, or rather mobilised, into cultural mnemotechnique or memories selected and edited by media organisations and public institutions and – via networks cultures – memobilia are then easily transferred back to the domain of the private individual and lived experience once again.

However, it is important not to over emphasise the differences here from older memory forms. An important consideration with any 'new media' is its relation to the 'old'. De Landa, for example, argues that new media is autocatalytic, or an extension of pre-existing forms:

> The digital revolution should be thought of as one more element added to a complex mix, fully coexisting with older components (energetic and material), not all of which have been left in the past. In other words, digital machinery is simply a new node that has been grafted on the expanding autocatalytic loop. Far from having brought society to a new stage of its development, the information stage, computers have simply intensified the flow of knowledge, a flow which, like any other catalyst, still needs matter and energy flows to be effective. (De Landa, 2003, p. 98)

Although van Dijk in *Mediated Memories in a Digital Age* does not examine the development of mobile phones as wearable memory prosthetics, she does provide some useful pointers in terms of how we might rework established conceptualisations of memory in the light of digital technologies. She argues that the term 'mediated memories' better explains the relationship of memory to media in the digital age and mends the conceptual flaws inherent in the dichotomy of separating the individual from collective memories. Mediated memory sees these as mutually

shaping each other. Thus, with the particular digital development identified here of memobilia, memories captured via mobile phones are used, shared and archived via a variety of global networks in which the individual, social and organisational are intermeshed. These digital multimedia memories are mobile and mobilised for personal reasons, such as personal reminders or images of home, as well as for political and public reasons, as with digital witness images of the London bombings. But in both cases, they no longer quite fit with analogue-mediated memory forms, since they are simultaneously archived and travelling, and circulated with a social function or political agenda in mind. Memobilia in these ways traverse the established binaries associated with earlier conceptualisations of cultural memory such as the public and the individual, the national and the international, the body and the machine and the material and the virtual. They allow for a wearable archive that can be both deeply personal and playfully, as well as seriously, panoptical. With its features of the dialogic me, its mobilities and meme-like qualities, the memobile or memobilia is a newly emergent digital memory form.

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5
Remembering and Recovering Shanghai: Seven Jewish Families [Re]-connect in Cyberspace

Andrew Jakubowicz

Remembering Roy Rosenzweig, 1950–2007

How we remember and give meaning to the past are creative processes; we take fragments and try to knit them together into something approaching a logical flow. In personal terms, memory is always a reconstruction from the myriad moments of experience, forced by psychological dynamics into some form of narrative. History as a social process tries to stand back from the personal, to make sense of it against a broader fabric. It may include the personal stories of participants, but it will always be set in the political and social time in which it is articulated. History is therefore both a social science, in terms of methodological approaches, and a humanities discipline, in terms of its synthesis of emotional, aesthetic and intellectual responses. How individuals remember events will inevitably be more partial yet more intense than a more overarching account of the events, so that capturing individual memory into the form of digital capsules will in some senses sit against attempts to build digital historical narratives – although perhaps the possibilities of digital history can draw audiences closer to comprehending the tensions between the historian and the participant's interpretations of events than earlier more linear accounts.

This chapter uses a historical moment – the presence of diasporic Jewry in Shanghai during the 1940s – to address three related questions. How do we interpret this episode, using what frames of reference and in the face of what contemporary pressures? How can we communicate now (in the light of these pressures) the experience of people who lived in this period through the use of current digital technologies?

What might we draw from contemporary creativity to suggest how digital historical sociology might be enhanced in the future? How can the historical sociologist offer insights into how we think about both the sociology of the processes of memory in society, and the making of histories using the forms of digital technologies?

Historical sociology offers a cross-over approach to understanding digital memory and history. It is distinguished from the often posited a-historicity of sociology and a-theoretical narratives of historical scholarship, through an investigation of 'the mutual interaction of past and present, events and processes, acting and structuration' (Smith 1991, p. 3). In studying digital memory, historical sociology foregrounds present accounts of the past, in order to ensure that audiences are aware of the conditional nature of the stories presented, and the role of the story-tellers – be they participants or analysts – in the telling. Digital technology enhances the opportunity to present parallel and perhaps countervailing accounts of events, to allow the audience to test the propositions of both participants and analysts – and to move towards their own synthesis and reflection.

Shanghai lends itself to the development of historical methods and explanations that encompass diversity, multiple systems of often-competing meanings and a vividness of place and human life (Diglio, 2006). The advent of digital web-based technologies triggered my interest, as someone with a long interest in the use of audiovisual media in engaged social science practice. As a historical sociologist, I was interested in how the methodologies of sociology and history might be brought together in the production of web-based projects, so that the potential of new multimedia-generated data could be widely infused in scholarly publishing and be disseminated more widely to those outside the academy.

Three questions guide the structure of the chapter. First, I examine how the use of online memory forms enable particular innovations in relation to online research and scholarship, with specific reference to Shanghai and its Jewish histories. Second, I examine how this is articulated through the creation and realisation of the webproject 'The Menorah of Fang Bang Lu' (Jakubowicz and Pentes, 2002). Finally, I ask what lessons can be learnt from that project and what they suggest in terms of the significance of the digital form for doing memory work that involves interactive digital research and publishing (Jakubowicz, 2007). Insights from this analysis then provide a pathway into the wider questions raised elsewhere in the book about the forms of digital memory and their relation to historical 'truths' sought by historians and sociologists.

The memory battles of the everyday

With the advent of the digital era in 'memory repositories' (museums, libraries, archives, galleries etc.) (Heery and Anderson, 2005) there has been a growing interest in the intended and unintended transformations wrought on the stuff of history by the technological engagements forced upon it. As a historical sociologist I enjoyed the potential offered in the multiple narratives found through the interaction between biography and history. Yet, linear narratives such as those required by academic publishing conventions in analogue publishing technologies (papers, chapters and books) seemed to freeze the lives of my respondents into singular frames, demanding either multiple reiterations to draw out the implications of research findings, or a carving away of many important issues in the name of a simplified (although not necessarily simple) story line. When we seek to explore thematic approaches we lose the rich integrity of the individual life through time; if we seek to recount biography we lose valuable and illuminating thematic extrapolations in the separate narratives of individual life-worlds. The attraction of interactive digital forms is that they enable the multiple processes of accessing information to run in parallel, to expose the rich quality of deep exploration and to open to audiences a freedom of action to test their own perceptions against layers of data.

Often digitally preserved data for historical research – ranging from documents to testimonies – have been collected in repositories of one kind or another (often unable to communicate with each other because of different standards and protocols – libraries, museums, archives and web vaults). Memory repositories exist in the here and now. While they seek to recover or preserve what is seen as being from 'the past' (Hunter and Choudury, 2006), they are of course constructed by institutions that are working with contemporary agendas and the local and global political parameters that determine their resources, priorities and practices (Reading, 2003). As the web exudes across the globe and deepens into a multidimensional almost miasmic tangle, strategies to advance these agendas of memory have become more sophisticated (Crane, 2004). In the process of building web narratives, stories are told, and stories are found. These stories have become increasingly potent elements in wider socio-political struggles over legitimacy, authenticity and claims to truth. Many protagonists in these memory wars look for ways to foreground particular perspectives or truth claims, and elbow out their competitors. Arguments over the authentic historical record are particularly volatile in ethno-cultural and religio-political situations,

where 'truth' becomes a contested space. Both revisionist and orthodox interpretations vie for purchase on the mind and intellectual maps that users develop and mobilise.

One of the most obvious examples of this process can be found in Wikipedia, the 'user created' battleground for emergent knowledges. Numerous studies on Wikipedia have shown the trajectories of struggle over meaning and interpretation – and claims about 'facts'. Thus the entry on Islam reveals the aftermath of 9/11 and the push and counter push over the Truth of Muhammad's teachings, and the benign, malign or revolutionary implications of the Koran – to the point where Wikipedia's editors have posted a perhaps overly hopeful warning, 'This page is currently protected from editing until disputes have been resolved.' (http://en.wikipedia.org/wiki/Islam). Meanwhile the page on 'Jew' is semi-protected, by the page authors (http://en.wikipedia.org/wiki/Jew).

With the advent of Web 2.0, the opportunity for user-created content has dramatically increased. Wikipedia clearly demonstrates this process at work, where its most positive and negative features compete for attention. User-created content brings into stark relief the more general argument about memory being a process of the here and now, in which the past is sequestered into defended packages of claims to truth. Because digital technology in a sense democratises the process of memory-legitimation, or at least reduces to near-zero the costs of entry, it fundamentally transforms the dynamic of testing truth claims and securing overarching narratives against their competitors and critics. None of the battles are ever fully won or lost, as one of the characteristics of the web remains its scattered residue of dead stars. The functioning of the major search engines, especially the optimisation-sensitive Google, places a premium on how web developers design their sites and tag their content. Google places great store on the 'quality' hierarchy it produces through searches, using selection algorithms that privilege sites likely to possess higher qualities – as qualified by government, education or research criteria – as against individual or idiosyncratic sites. However the commercial 'push' on Google also means that sponsored links, while identified as such, will still appear high on a search and be given equal screen status or presence.

While accuracy is clearly a web-development goal, there are many situations where widely divergent points of view coexist, and the most effective website will secure the bulk of the audience. When many searches typically return hundreds of thousands of hits, gaining a position on page one is very useful and potentially financially important.

A Google search for 'Shanghai Jew' returns some 1,960,000 hits, the first page of which carries a Google message:

> If you recently used Google to search for the word 'Jew,' you may have seen results that were very disturbing. We assure you that the views expressed by the sites in your results are not in any way endorsed by Google. We'd like to explain why you're seeing these results when you conduct this search.
>
> A site's ranking in Google's search results relies heavily on computer algorithms using thousands of factors to calculate a page's relevance to a given query. Sometimes subtleties of language cause anomalies to appear that cannot be predicted. A search for 'Jew' brings up one such unexpected result. (http://www.google.com/explanation.html)

The disagreements and hostilities associated with the discussion of Jews sets a political context for any projects on the web that explore issues of Judaism and the Jewish people. Geo-political and historic tensions lie more or less silently behind such discussions and are of course exacerbated in the contemporary climate of apprehension about the future of the Middle East.

The nature(s) of interactive narrative

Digital technologies promise a number of avenues to build the quality of research findings, and to enable audiences/users to take greater control of their own learning/exploration (Woodbury, Docherty and Szeto, 2004). The interactive quality of the web environment has been said to offer an immersive experience, where the individual discovers pathways that expose the difficult questions and the extraordinary circumstances that typify reality (AEHRN – Australian e-Humanities Research Network, 2004). Rather than laying out an unencumbered narrative, web projects can demand that users find the clues and cues to drill down into the site, and make non-linear connections that open up awareness of issues not foreseen by the site developer.

In web research/documentary sites carrying data that can be explored by users, the data can be arranged and accessed in many different forms. A recent USHMM project on survivors of the Holocaust (http://www.ushmm.org/museum/exhibit/online/life_after_holocaust/exhibition/) uses a simple six-by-six matrix of people and themes to structure the data, most of which is based on audio-recorded interviews. Each interview is essentially cut up into six segments built around key questions – about

the events in their lives, how they told their children, what life was like in New York after surviving the camps, their role as memorialists and telling the story to others. The questions are available as themes, with each of the six interviewees listed – thus enabling biography and thematic narratives based on connected oral histories to be accessed.

However, the interactive form of the site, designed using Flash animation, constrains the user to move through the lives or the themes – to move between these streams one has to return to the navigation page and enter the alternate stream. It feels therefore more like a predetermined set of pathways, and searching for particular information is not possible. It is thus a museum site that has been curated; it does not allow independent research other than by listening and taking notes.

But discovery on the web can be enhanced through a different appreciation of the audience – viewing them as researchers undertaking their own voyage, not to be instructed or entertained, but encouraged to immerse themselves in the complexities, the minutiae and the awesome realities of the history and memory of another time and place, and thereby bring intellect and emotion together.

Story-telling on the web is of course much more creative and varied than has been suggested here. It cannot avoid the assumptions and orientations of its authors, but it can seek to minimise that pressure by ensuring multiple voices are reported and given the space they need to advance their own realities.

Shanghai Jews and the web

Shanghai Jewry offers itself as a particularly apposite topic, in that it allows for a consideration of many issues. These include but are hardly limited to global geo-politics, national histories, imperialism and the carve-up of China, ethnicity and religion, economic history, the Holocaust, anti-Semitism and philo-Semitism, alternative modernities, oral history and cultural representations on the web: a matrix emerges that links globalisation to culture, economy, religion and place. The Jewish communities of Shanghai were from every land of the diaspora – Middle Eastern Jews from Mesopotamia and Central Asia who arrived in the wake of British victory in the Opium Wars of the 1840s to establish trading and property companies (about 1000 by 1940), Russian Empire Jews (refugees began to arrive well before the Russian Revolution of 1917) coming in a second move from Harbin in Manchuria after the Japanese invasion of the early 1930s and creation of Manchukuo (about 5000 by 1940), and then the refugee Jews from Germany/Austria in 1938–9 (more than

20 000) and Poland in 1941 (about 1000), who could not get away from Japan before Pearl Harbor). By early 1942 when the Japanese took over effective control of Shanghai, there were somewhere between 25 and 30 000 Jewish residents – about ten per cent of the non-Chinese population, and about one per cent of the overflowing city's total population – only the 'allied' Jews were interned with other the 'enemy' nationals. In 1943 after pressure from the Nazis, the refugees from Germany and Austria were rounded up along with the 1000 or so Poles (a mix of rabbis and religious students, business people and left-wing Bundist artists and writers) and moved into a section of Shanghai that became known as 'the Ghetto' (though it was not designed as a preliminary stage to extermination as the European ghettoes were).

Such a research matrix immediately calls for an innovative process to enable audiences/students/scholars/users (the very term is contested) to bring their intellectual and creative engagement to the sites of emergent histories. Not surprisingly, there are numerous attempts to use web technologies to explore the Shanghai Jewish story. Igud Yotzei Sin (IYS http://www.jewsofchina.org), the Israeli-based organisation of Jews from China, lists more than thirty websites on its own links page, ranging from the geo-strategic policy documents of the Jewish People Policy Planning Institute (reporting on the project 'Enhancing the Standing of the Jewish people in Emerging Superpowers without Biblical Tradition', http://jpppi.org.il) to real-world and online museums such as Beth Hatefutsoth (http://www.bh.org.il) and the Babylonian Jewry Heritage Center (http://www.babylonjewry.org.il).

Then there are the 'community' sites, such as Rickshaw (http://www.rickshaw.org), which is run by ex-Shanghailanders (non-Chinese – Chinese are known as Shanghainese), and the IYS site with its own stories and links. Academic sites include the Sino-Judaic Institute in California, established in 1985 and now a major supporter of Chinese scholarship on Jews and Judaism (http://sino-judaic.org) and Vera Schwarcz's 'Bridge across Broken Time' (http://www.between2walls.com/), specifically dealing with a comparison of Jewish and Chinese cultural memory. Within China a number of Jewish sites about Shanghai advance specific agendas – from the omnipresent Lubavitcher Chabad houses (now in major cities throughout China) (http://www.chinajewish.org/) to the 'Shanghai Stones' project site run by Dvir Bar Gal, an Israeli who discovered a number of remnant Jewish gravestones (http://www.shanghaijewishmemorial.com/index_1.htm).

The most dramatic and well-resourced of the Shanghai Jewish sites has been created by the Holocaust Memorial Museum in Washington,

a major US public institution of memory. Arising from an exhibition held at the Museum in 2000, the 'Flight and Rescue' site created in 2006 brings together state-of-the-art technology, especially Flash animation, with a simple narrative about mainly Polish Jews and a underlying set of additional resources and links into the USHMM database of images, texts and audiovisual material (http://www.ushmm.org/museum/ exhibit/online/flight_rescue/index.php). The history is divided into four segments – the Nazi and Soviet invasion of Poland, the Lithuania experience and the issuing there of some 2000 transit visas for Japan, the short Japanese sojourn in Kobe, and then the Shanghai exile period of 1941–5. The narrative is essentially institutional, with emphasis on the role of US and international Jewish organisations in supporting the refugees, leavened by a series of personal stories, many from interviews of survivors commissioned by the museum. The presentation uses visual memorabilia from the refugees – passports, visas, letters, official documents, photographs, label-covered suitcases and similar triggers to the imagination.

The underlying argument of the website reflects the redemptive role that Jewish histories conventionally assign to memories of Shanghai. This is also exemplified in the many films that have been made since 1990 of the refugee experiences – among them *Escape to the Rising Sun,* 1990*, Exile Shanghai,* 1997*, The Port of Last Resort: Zuflucht in Shanghai,* 1998*, Refuge Shanghai,* 1997*, Place to Save your Life: the Shanghai Jews,* 1992 and *Shanghai Ghetto,* 2002. In these films, usually structured around the narrative of a small group of refugees – sometimes German and Austrian, sometimes Polish, sometimes both – the broad narrative is played out in a sequential chronology.

In the conventional narrative of the events, the Jews grow increasingly apprehensive as Nazism intensifies its hold – then they escape, through luck, perseverance, familial networks or the irony of the times. The Germans/Austrians take Italian ships to Shanghai, having been stripped of everything by the Nazis, and often after a stint in Buchenwald or Dachau. This escape route is finally closed in September 1939. Soon after, the Poles flee to the East to escape the invasion, then they are caught in a pincer movement by the Soviets, and so are squeezed north to Vilna and then through Lithuania. In Lithuania, those who survive are saved by 'two angels' as the USHMM site describes them, consuls Zwartendijk of The Netherlands and Sugihara of Japan, who issue the 'visas for life'. After trials and tribulations those who remain in Japan are sent to Shanghai in late 1941, and are caught there when the war in the Pacific begins at Pearl Harbor in December. By 1943 they have been moved into a ghetto area in Hongkew (Ristaino, 1990). Most survive the

war there, despite typhus plagues and American bombing, only to find that their families in Europe have been destroyed. In Shanghai, though, they have experienced no anti-Semitism from the Chinese and only random brutality from their Japanese captors.

In both time-based media forms and in websites then, the Shanghai Jewish story is presented as a small beacon of light in the howling darkness of the Holocaust. The version of the story of the events has come to have a special place in Jewish contemporary narratives of intercultural communion (Finnane, 1999 and James, 1994). It has been commemorated by the Chinese (the heart of the Hongkew ghetto area has been designated one of Shanghai's twelve preservation zones), and has been argued over by competing Jewish organisations (Jakubowicz, 2008). Many dozens of books recall the many dimensions of the experience, from elaborate biography to personal and familial memoir (Heppner, 1993; Krasno, 1992; Reinisch, 1984; Rubin, 1993; and Wakeman and Yeh, 1992). Since 1948 dozens of exhibitions have documented the many perspectives, from North America through Europe to Australia, while museums have special collections in New York, Washington, Berlin, Melbourne and Sydney.

In the next part of the chapter I discuss a project that has sought to use the possibilities offered by digital media forms to render the memory of the Shanghai Jews in more complex ways. Through the form of the online interactive documentary or webumentary we have sought to articulate a responsive analysis of individual lives caught up in huge events, while systematically seeking to comprehend the effect of these events on wider social groups and the political structures that constrain them.

The Menorah project

Fang Bang Lu (street) snakes its way through the middle of the old Chinese city of Shanghai towards the temple of the city, by the side of the Ming Dynasty Yu Yuen Gardens. Close to the gate at its northern end on Ren Min Lu (People's Street), stands a squat concrete building, a market in antiques, bric a brac and real and recreated residua of the Mao era. One October morning in 2000 my partner and I were digging through the piles of stuff on the tables upstairs; poking through a mishmash of brassware was a menorah, its Star of David visible in the dusty light. I pulled it out and discovered that its base held a clock-work music box in a hand-made shell. The tune it played was somehow Jewish and European, but disjointed (because as we later discovered many of the tines of the music box fork were broken).

Menorah safely in bag, we returned to our task of the day, to discover where exactly in the war-time designated area of Hongkew, across Suzhou Creek from the venerable buildings of the Bund, my parents and family had spent their sojourn during the Japanese occupation. Within minutes that afternoon we found the alleyway and the building – due to be demolished soon for the new Hongkou Metro station. I captured it on film, including the scattered remnants of a Chinese Monopoly board and cards in its deserted attic. Two weeks later the building was gone – six months later the alley and street had disappeared, razed into nothingness. The doorknob to my parents' apartment rests on a shelf in Coogee, Australia. And the project the Menorah of Fang Bang Lu was born.

The Menorah as an object has its own quasi-magic existence. The Shanghai halo casts multiple shadows. The Menorah's music box was manufactured in Switzerland probably in the early twentieth century. Contacting the electronic and engineering company that in 2000 carried its maker's name produced no result – there is no corporate memory of its earlier incarnation as a music-box manufacturer. Four years later I was at MIT and was caught up in a passing conversation with a colleague of a colleague – Tod Machover, an expert as it turned out on musical machines. I asked Tod about music boxes – about which he knew little except that north of Boston in Wiscasset Maine he had just visited a store that advertised it repaired them. I tracked down the store ('The Musical Wonder House') and its owner, Danilo Konvalinka, an elderly Austrian from Salzburg; by phone we organised for a repair, and a month later the refurbished box arrived. Now the tune was clear, the Hebrew Chanuka melody 'Ma'or Tsur'. So what was a music box, made in Europe, playing a Hebrew melody, doing in the reworked base of a brass menorah in a Chinese junk shop in AD 2000, long after the European Jews of Shanghai had departed? A trail began to open up….

Earlier on, the Sydney Jewish Museum had embarked on a major exhibition on the Jews of China, focusing on Shanghai as a crossroads on many familial and communal trajectories. As part of the exhibition team I had been researching the stories of many other families who had ended their global wanderings in Sydney. Seven families stood out – they covered the range of groups that had found a place in Shanghai, they had artefacts and memorabilia, and they were good interview subjects on camera. Throughout 2000 and 2001 the research and documentation continued; the menorah sat as an iconic prod. By mid-2001 it had become the central motif for a website to accompany the exhibition – the site to be called 'The Menorah of Fang Bang Lu', with each of its seven branches carrying the story of one family.[1]

The decision to undertake the research as an integrated academic/ museum/digital exercise required a very systematic methodology. The forms of publication and the experiences to which audiences would be exposed necessitated visualising some of the outcomes from an early stage. My research team began with a normal literature review, identifying the sorts of narratives that had been offered, looking for insights on which we could build, and uncovering points of contradiction, disagreement or dissent. The museum curatorial staff had already begun to interview people who they knew, and had commissioned a filmmaker to prepare an interview-based short documentary. The exhibition design team members were developing their first design concepts, in which Shanghai was to be 'recreated' complete with a café, a small cinema and cases of memorabilia, connected by large scrolls containing short narratives of the communities and the history. In one alcove audiences would be able to interact with a prototype of the website.

The process of selecting the families for interview was important. As a historical sociologist I wanted to portray the political and social structures that both constrained and offered opportunity to the families. I wanted to enable audiences to drill down as much as they might want to carry out their own research or extend our analyses. Much of the analysis we wanted to present would be contained in the comparative, thematic access offered by digital media, where users could work through themes and understand the mix of personal and political factors that affected the very different family stories. So we needed interviewees who were self-aware, who had tried themselves to make some sense of their own stories – we wanted to portray not only what they had experienced but also what narrative they had created to retain and contain their memories.

The themes were composed in our preparatory research, and refined through the interviews. Each family would be placed in the context of their own pasts – the societies and localities they or their forebears had travelled to reach Shanghai. These 'threads' give information about social class, occupation and family structure; they suggest influences, limitations and resources that people brought to bear on the situations they would encounter. The other themes track how they got to Shanghai, their social, economic, communal and political relationships (with other Jewish communities, Europeans, Chinese and Japanese and Americans) and their strategies for survival until they reached Australia – at various points from 1946 to 1975. Each element is documented through interview, family photographs, documents or other images sourced from the Internet or research data bases.

The Menorah project is created

The various elements came together in the project – Shanghai and its Jewish communities, Shanghai as a fascinating and intellectually complex cosmopolitan space, Shanghai as the site of many alternative modernities, the limitations of the museum exhibition in a digital age, and my own family story. A key contributor to the project's realisation was its designer Tatiana Pentes, someone who both understood Shanghai in her own way, and was a flexible and sensitive digital multimedia artist. Pentes' role is crucial in understanding the creative engagement that a digital history can evoke for its audience. While traditional analogue publishing (i.e., the book or the film) employ designers and artists to draw together content and convey the context and content through the style the object is given, digital publishing arguably requires something both more and different from a designer. The designer/researcher/producer triad becomes very intense, as the likely audience relationship to the project (such as multiple returns, 'dipping', need for clear navigational aids in deep drilling into the site) calls for attractive, meaningful and comprehensible access and content; every mark on the screen has to be considered, its meanings calculated, its positioning finalised and its relationship to all other elements clarified.

Pentes' own work began with a complex and creative interpretation of Shanghai as a story-ground . Her first exposition of Shanghai, the interactive CDROM *Strange Cities* (2000) (http://www.strangecities.net; http://strangecities.blogspot.com) builds on the life and work of her grandfather, Sergei Ermolaeff (Serge Ermoll), a Russian big-band leader in China and composer of the 1930s song 'Strange Cities', which serves as both title and soundtrack. The motif of a box of relics is used to 'open' the door into 1930s Shanghai and the permeable but dangerous borders between the International and French concessions, and the Chinese City. A Chinese night-club singer wends her way through the space, revealing the subtle divisions and hierarchies of race and gender. Writing of the city Pentes notes:

At the level of representation, Shanghai was an appropriated 'exotic' location, an orientalist back-drop, and the subject of a plethora of Western novels, literary and cinematic creations. The allure of Shanghai as a mysterious cultural locale wove its way into American Hollywood cinema and popular song as an orientalist fantasy and landscape upon which the West imagination could play out illusions. (http://strangecities.blogspot.com)

Pentes went on to produce 'Black Box', a more developed multimedia concept that explores memory and culture, again through the body and life of a dancer (http://epress.lib.uts.edu.au/dspace/handle/2100/357) where she evoked amongst others, a Chinese box, (http://www.strangecities.net/chinesebox.html) while painting a digital picture of documented memory.

The webumentary form of the Menorah site Pentes and I designed and created (http://transforming.cultures.uts.edu.au/ShanghaiSite) opens with two long scrolls, containing the intertwining emblems of four families – from Russia, Austria, Poland and Mesopotamia. 'Hard copy' versions of the scrolls hung in the real world exhibition at the Sydney Jewish Museum in 2001. Click 'enter' and the menorah appears, rotating slowly with the melody of the broken tines playing; this transmutes into a hagadda (Passover prayer) portion, sung by Shanghai-born Nissim Cunio. It is drawn from the Sephardic/Babylonian rite, and phrased to a tune written for it in Shanghai in the 1930s (it is very close to the melody of 'Keep the Home Fires Burning' and not surprisingly it turns out, as it was composed by a British Jew, a World War One veteran, and a teacher at the Shanghai Jewish School). The splash page is then revealed. A Chinese screen in a room – the screen belongs to one of the families and its carved edges are Photoshopped into a frame for the whole page. The room is a virtual composite, constructed from fragments of the Cathay Hotel and the floor of Cathay Mansions, both of which were once owned by the Sassoon family. On the rear wall is a historic black-and-white photo of the Bund – roll it over it and it becomes the Bund in 2001 alive with lights and red flags. The title hangs in the air – roll over and we see the menorah and read its story, shadowed by a Nazi swastika that appears momentarily on the wall; we also find out where and what is Fang Bang Lu. On another wall hang old maps, one delineating the extent of Japanese control of China in 1944 (Chi'en, 1944), the other marking out the voyage in 1938 of Australian journalist Frank Clune, who describes Shanghai as 'a bomby sort of place': he also describes Inner Mongolia as the place 'where the income tax is collected with machine guns' (Clune, 1941).

Along the side wall a chest opens on the catalogue of the 2001 Sydney Jewish Museum exhibition *Crossroads: Shanghai and the Jews of China.* A chest near the back wall supports a circular mirror, in which we can see the Bund reflected through the curtains of a Cathay Hotel window. However, it is only when the small menorah on the chest comes alight under our rolling cursor that we gain entry to the site proper.

'The Menorah of Fang Bang Lu' floats in a room, now clearly looking out over the Bund with the Angel celebrating the Allied victory of 1918

in dark relief. A painting of an eastern European shtetl (a Yiddish word for small town or village) street by artist Naomi Ullman opens to a gallery of Holocaust landscapes, scenes from stories of escape, each stamped with the Swastika used by the Reich post office on the postcards sent from prisoners in the ghettoes of Poland to their children escaping to the Rising Sun. A trunk opens to the 'back-stories' of research, production, resource links and the authors'/creators' biographies.

The menorah's branches now glow individually as they introduce us to the seven families – the violinist Rosner and his wife and daughter from Linz, the elaborate Sephardic family of Moalem from Mesopotamia, the elegant chess-player and his poet wife Krouk from Harbin, the Viennese chemist Gunsberger and his daughter, the mathematicians Szekeres from Budapest, the university graduate Kofman family from Harbin via France and the USA, and the middleclass Polish family from Lodz Jakubowicz/Weyland.

The webumentary site structure, a seven-by-seven matrix, prompted by the candelabra arms, contains the seven families and seven themes. The family stories are based on videotaped interviews (not yet fully installed on the site), often running well over an hour, with family survivors, and with photographs, documents and artefacts that illustrate their lives. These interviews provided the skeleton for the narrative that is introduced through the themes – threads on the family background, the journey to Shanghai, economic and community life in the city, relations with the Chinese and the Japanese and the exit from Shanghai.

Pentes designed the form of each family page so that it has an individual iconic centrepiece and the themes are accessed through smaller iconic images from the family or archival sources. Thus my own family page uses my grandmother's silver ring – showing the twin dragons of double happiness – that she bought in Shanghai. The Szekeres' page shows the young couple in 1939, fragments of their embroidered photo album, and their son at war's end on Garden Bridge, with dim Chinese graffiti heralding the (Communist) third way chalked on its beam, overlaid on a photo of Garden Bridge, Soochow (Suzhou) Creek and Broadway Mansions. The Krouks' page has a photo of them in the gardens of Hangzhou at the end of the war set within the silver frame of a wedding photograph. They are free at last from the Japanese and therefore able to move about until that freedom ends when the Communists take Shanghai in 1949.

On each page there is a small chrysanthemum flower – a symbol of China. This connects to the same theme in all the other families, whose names appear under rollover. Each page also carries five images – these

are programmed in Fireworks to open a mid-page larger image with descriptive text. Next to each image, three or four words link to a text window that provides more detail for the narrative. Some of the texts are quite short, while others (such as those for Gunsberger) are taken from interviews or autobiography.

Each family page follows the same basic concept but has been designed to foreground the individuality of the family's experience, while illuminating broader historical and cultural events. In some, red-framed images indicate more elaborate windows – detailed maps, Flash movies and other documents. In some cases pages have been designed to operate as scrolls, based on sketches by refugee artists of Shanghai street life. In other cases excerpts are included of rare archival documents – including recently discovered pages of an (incomplete) Japanese census conducted in the ghetto area in 1944 (Armbrüster, Kohlstruck, and Muhlberger, 2000). Gunsberger and Rosner are on the pages, Jakubowicz/Weyland are not. A video of the two Weyland children, by then in their seventies in 1999, records them singing a Jewish Polish cabaret song they remember from their teens, written and first performed in Vilnius in 1940.

The site thus presents both personal stories (biography) and thematic accounts (history). The user can track across the themes and people, weaving a unique catalogue of the trajectories that brought the Jewish people of Shanghai into the same space. It also provides material that other researchers can use for their own projects, and includes links to other sources, and an extensive bibliography.

E-research and publication: the next challenge

The emergence of Web 2.0 interactivity has transformed expectations, and begun to render archaic even recently developed sites constituted through earlier technologies. With the advent of XML, and the systematic working through of universal codes for identifying data (e.g. Dublin core http://dublincore.org), the web is becoming a more dynamic and distributed system. However the experience of the Menorah project demonstrates one remaining critical hurdle – the silos that separate e-research from e-publishing as well as the difficulties of integrating how we think critically about digital media forms and memory with what we then do with them to articulate memories of the past.

While rich multimedia data has become standard within the humanities and social sciences, and is the very stuff of online repositories and museums, it has yet to penetrate to world of academic publishing to any serious extent. Most e-journals pride themselves on the transparency

of the review process, yet they cannot easily accommodate multimedia (except as short inserts or clumsy web-links). They use hypertext to speed up reference finding, but it rarely goes further than that. While innovative on-line journals such as First Monday (http://firstmonday.org) are now including podcasts of talks about issues – online audio lectures – they are still unable or unwilling to do more than drop in illustrative images (e.g. http://www.firstmonday.org/issues/issue11_12/boyd/).

Even the very innovative American Historical Review, under the influence of the late Roy Rosenzweig of the Center for History and New Media at George Mason University in the USA (http://chnm.gmu.edu/staff.php?id=17), was unable to crack this problem. It was most prominently displayed in the decision to publish a traditional text article on the Valley of the Shadow Project from the University of Virginia, rather than find a way to publish the project or elements of it as an interactive article (Thomas and Ayers, 2003). There seemed to be two problems – there was the technical aspect of how the journal's servers would support the file sizes required, and how could it guarantee the links would be perpetual; and then there was the problem of assessing the quality of the 'paper', as there were no accepted criteria for refereeing a web-based project (and few qualified referees).

Meanwhile the whole issue of Open Source has overtaken earlier discussions. The development of D-Space at MIT (http://dspace.org), soon to become one of the standard formats for academic repositories, was occurring independently of other initiatives, such as the interactive XML-based Metamedia archive at the same university (http://metamedia.mit.edu). While D-Space can 'manage and preserve all types of digital content – text, images, moving images, mpegs, datatsets' (http://www.dspace.org/index.php?option=com_content&task=view&id=189&Itemid=120) it cannot easily be incorporated into a published outcome. Metamedia on the other hand is designed to allow archival publishing into more traditional 'academic' formats.

A project like 'Menorah' is very labour intensive, very craft-like and cannot be published easily in ways that secure scholarly recognition. One journal that has invested energy in addressing the problem of gaining scholarly recognition for digital media publishing, *Vectors: Journal of Culture and Technology in a Dynamic Vernacular* does so through a series of 'wraps' – authors' statements, designers' statements and editors' statements. Then each project/article is blogged, so that conversations can grow and envelope the piece. However, the editors, including Tara McPherson, have moved beyond this – using keywords, they encourage users/readers to explore the relationship between articles in an

extraordinary 'Vector space' (http://www.vectorsjournal.net/index.php?page=5%7C1&pageLast=4%7C1), where graphic imagery flows key-words between articles, showing how basic concepts can migrate across barriers.

Moreover the Vector projects (they are produced at the rate of one or two editions of the journal per year) encompass a broad range of humanities publishing, many re-purposed for the journal format. However they all require quite advanced web design skills and point to the emerging partnerships between scholars and designers in the form of new writing/production teams. These projects are truly the realm of artists and scholars whose emphases are as much on the creative expression of insight, as on the quality and depth of that insight.

Conclusion

The debates about the value of digital communication in relation to both the activity of research and how we think about digital media forms in relation to memory, and the dissemination of research results, point then to two challenges, and to extraordinary innovation should these challenges be met. The challenges lie in expanding the legitimacy of innovative research and publishing, while ensuring a more stable and accessible research and publishing environment.

The bridging of the silos of research and publishing has become eminently more feasible with the emergence of Web 2.0 (and the promise of its successors down the track). However as this chapter has shown, take-up of such innovation is hampered by the limited capacity in the academic world to assess the quality and impact of such scholarship and publishing. While information and knowledge management researchers focus on the socio-technical issues associated with building and securing multimedia repositories, researchers who use rich digital media apply it primarily in teaching, develop craft-like individualised projects or essentially use it behind linear textual meta-narratives delivered in traditional formats to traditional audiences.

The value of an integrated interactive research/publishing memory project can in part be illuminated by the frustrations experienced by audiences with projects that are not fully integrated, or not usefully interactive for the audiences that they attract. 'The menorah of Fang Bang Lu' was designed for an ICT-literate audience, already socialised, confident and competent in discovering its clues to navigation and exploration. However, it may be exactly these qualities that more neo-phyte users would find forbidding and older 'pre-digital' communities

would find impossible to comprehend and therefore use with any comfort. On the other hand, once users have 'cracked' the mode of use, they may be able to experience far more freedom and opportunity for creative imagining in relation to the research materials, than might be available in a more linearly programmed.

We are then in a digital moment (or maybe sequences of moments) in which we can perceive outcomes we may want to achieve, without yet feeling confident we have the methods and practices necessarily to normalise them to fully exploit the potential of digital forms of scholarly storytelling. Thinking about digital media forms in relation to the study of memory suggests how we might more effectively convey that intricate interplay of the individual and the social, the present and the past. When Dennis Smith wrote of the potential of historical sociology, he was doing so within an intellectual ferment over the tension between universal globalising theory, and specific, individual events and experiences; he hoped that it might 'offer a route to increased understanding and more effective action through rational, critical and imaginative inquiry (1991, p. 184). The capacity to put together through digital media forms what has been fragmented by history may provide a final metaphor as to the synthesis of the imaginary and the real we now need to perform.

Note

1. Even though the music box played a Chanukah tune, the candelabra was not the eight-branched chanukiah of the holy days, but the more pedestrian menorah of the weekly synagogue service.

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6
Archiving the Gaze: Relation-Images, Adaptation, and Digital Mnemotechnologies

Bruno Lessard

Let us begin by remembering two efforts at imagining archiving and storing practices that are strikingly different yet equally pertinent to the study of digital mnemotechnologies.[1]

The year is 1945. An American engineer named Vannevar Bush dreams of a technological device that would allow the quasi-infinite storage of all kinds of information. Imagining what today we would describe as a cross between the library and the computer, Bush will name his device 'Memex,' 'which is a sort of mechanized private file and library … A memex is a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility' (Bush, 2003, p. 45). Akin to the internet project called Xanadu and Jorge Luis Borges' dream of an infinite library in the short story 'La biblioteca de Babel', Bush's Memex pointed to impending relations between machines and the preservation of material traces.

Here is the second effort, which takes place fifty years after Bush first published his pioneering thoughts. In his remarkable cinematic meditation on the uncertainty of national identity and post-exilic memory, *Ulysses' Gaze* (1995), Theo Angelopoulos not only inquires into the difficulties of ascertaining a sense of self in the ravaged Balkans but also subtly archives the memory of early Greek cinema by filmic means. Indeed, embedded in the exiled protagonist's journey is the task of locating the supposedly lost reels of the first Greek shorts. Angelopoulos' film archives early Greek cinema in a very unusual manner: inscribed in another analogue film, whose absent centre addresses precisely the impossibility of recapturing an original gaze, are the first gazes caught on film.

Among the salient differences between Bush's and Angelopoulos' strategies for defining future archiving procedures lies a common wish to relate, on the one hand, materiality and visuality and, on the other hand, memory and technology. In light of contemporary concerns with preservation, what these two projects indicate is that finding a way to relate material objects or material inscriptions of memories, and the gaze that gives them symbolic meaningfulness, functions as the quintessential modality of remembrance in the age of global mnemotechnologies.

One could argue that neither the storing nor the gazing process is primordial in the account of Bush's and Angelopoulos' strategies. Similarly, I want to stress that it is the relational process, the one that links both information and the assessment of this information in the form of a gaze, that renders a mnemotechnological project worthwhile. As Bush succinctly puts it: 'This is the essential feature of the memex. The process of tying two items together is the important thing' (Bush, 2003, p. 45). Establishing signifying relations between objects, thoughts and memories is the key to thinking storing practices and gazing activities. Timothy Murray describes the ensuing critical situation:

> [...] critics need appreciate the historical and ideological complexity of the 'new' apparati of digitized electronic arts in relation to the future promise of the digital reconfiguration of historical methods, artistic icons, and cultural memories, not to mention the role played by new interactive art in addressing the challenges of lost memories, traumas, and their counter-narratives of vision and utopia. (Murray, 2000)

On such a renewed theoretical account, the problem of creating and navigating digital memories has become one of materiality and medium specificity. The scenario has changed a great deal since a 1950s observer remarked that the history of 'computing machines has been largely a history of improving memory devices' (Ridenour, 1955, p. 92). No longer content with noting memory improvements, twenty-first century commentators contemplate what digital memories are made of, where they are inscribed and how they are supposed to be accessed. A case in point would be that of the archive, a space traditionally meant as a repository for historically relevant written, audio and visual documents whose ontology and *raison d'être* have been greatly challenged by digital technologies. From a cultural standpoint, the archive is a peculiar space that preserves past memories for future subjects. However, traditional archival concerns such as materiality, continuity, tradition,

preservation, decay and temporality have to be reconsidered in the digital archive. What happens to the archive when it is digitised and apparently dematerialised? What is the new ontological status of the 'original' document and, in fact, does it exist at all?

A digital archive possesses specificities that distinguish it from the well-known material archive, as the following transformations demonstrate. First, the digital archive cannot be read without the help of a machine. Second, its (textual, visual or audio) information can be transmitted electronically anywhere in the world in a few seconds; the digital archive would thus de-territorialise the traditional archive. Third, the digital archive has to be related to a database of some form in order to retrieve information. Fourth, there is no such thing as an original object or an aura in the context of the digital archive; the ontological link to the materiality of the 'original' is absent. Fifth, the digital archive implies the updating of the archivist's training in terms of computer literacy. Finally, its longevity is associated with the longevity of the digital platform that can 'read' it.

How memory and the gaze can be archived by technological means and how digital technologies, in the form of mnemotechnologies, have rejuvenated fundamental activities that relate to archiving, collective memory and art is the subject of this chapter. I examine the recent digital work of the artist Jean-Louis Boissier who has sought to archive the memory of the eighteenth-century writer and philosopher, Jean-Jacques Rousseau, and has offered a renewed gaze at his legacy. Boissier's work has been exhibited internationally and he has curated several exhibitions. Since the early 1980s, he has been producing installations in which interactive devices play an important role. He is recognised world-wide as a theoretician and artist who is an expert in the field of interactive installations. The chapter focuses specifically on Boissier's artistic CD-ROM, *Moments of Jean-Jacques Rousseau* (2000), to help us understand the significance of relational strategies used to memorialise in the age of digital mnemotechnologies.

The relation-image

In his extensive theoretical reflections on digital technologies and interactive art, Boissier has developed the concept of 'the relation-image', that sums up both his artistic practice in general and the programmatic intention that undergirds his Rousseau projects. Inspired by Gilles Deleuze's two main categories of cinematic images, the movement-image and the time-image, Boissier has sought to define the type of image that would

appropriately correspond to interactive cinema. By proposing 'relation-image,' the artist alludes to the necessary human intervention that must accompany the reception of his works. His 'images' tend to function precisely as links between the computer program and the interactor in a way that makes of 'relation' an intermediary between form and transformation. Indeed, the purpose of the relation-image is to think change and transformative processes in the context of image-making strategies that do not solely rest on form. Whereas Erwin Panofsky's notion of 'perspective as symbolic form' did not allow the possibility for change, becoming or modification, Boissier's 'image as relational form' moves beyond issues of symbolism or representation in order to foster a sense of transformative agency within the confines of both Rousseau's thoughts on visuality and memory and Étienne-Jules Marey's[2] experiments in chronophotography. In Boissier's work, the debated issue of 'interactivity' in media arts and new media studies suggests more than the interaction between computer and interactor. The problem becomes of relating, or making interact, technologies in order to shed light on how memories can be rearticulated using digital technologies.

The relation-image, as the 'direct presentation of an interaction' (Boissier, 2004, p. 274), could be depicted as a rather simple addition to Deleuze's taxonomy, were it not for the fact that it mobilises a vast of array of discourses, apparatusses, texts, and technologies that an approach based on relationality can highlight. Thus envisaged, Boissier's relation-images tap into debates over adaptation in visual media less because they address issues of fidelity or repetition than because they tend to maximise and concretise desires embedded in Rousseau's and Marey's projects. The problem of adapting then becomes the problem of realising; it builds on new technologies not to represent but to perform, thus asking new questions of old media: what potentialities do they offer contemporary media spheres and how can older media provoke new relations now that digital technologies have the capacities to recreate older media environments? Boissier's most elaborate digital creation, the CD-ROM *Moments of Jean-Jacques Rousseau*, provides some answers to the preceding questions.[3]

Digitising Rousseau

The CD-ROM is indebted to two of Boissier's earlier installations, *Flora petrinsularis* (1993) and *Deuxième promenade* (1998), and precedes a third, *La Morale Sensitive* (2001), based on an unrealised project by Rousseau. Using Rousseau's autobiographical and theoretical writings

as an inspirational database of key memories, Boissier has designed a CD-ROM that recreates several crucial events or, as they are called on the CD-ROM, 'moments' in the writer's life. Drawing on two central texts, the *Confessions* and the *Reveries of the Solitary Walker*, the artist's CD-ROM does not require scholarly knowledge of Rousseau's works to be enjoyable. On the contrary, on the CD-ROM the interactor will find the complete texts of the *Confessions* and the *Reveries* to which s/he will be able to refer or mayread *in extenso* the literary passage evoked in the visual sequence. The CD-ROM offers these two complete texts in the prestigious Pléiade edition of Rousseau's works and several passages in other non-fictional writings. What the CD-ROM emphasises implicitly, however, is the combinatory and relational function of source text and hyperlinked visual sequence.

The digital work, as its name suggests, is devoted to illustrating important *'moments'* referred to in the Rousseau corpus. Boissier selected several key episodes in Rousseau's writings and went on location between 1997 and 2000. In order to memorialise and archive Rousseau's experiences and feelings, the artist visited small towns in France and Switzerland where he 're-staged' the *'moments'* that occurred more than 200 years ago, events that are depicted in the writer's works.

There are two reading/viewing paths from which to choose upon entering the CD-ROM. First, with the help of 'shifters' [*embrayeurs*] – words that are found in certain of Rousseau's texts and which are hyperlinked to filmic sequences that allow the visualisation of the scene described by the writer – Boissier has created a digital reverie that uses Rousseau's words and their recurrence in his corpus. For instance, the word *'monde'* [world] occurs on several occasions in Rousseau's texts. Boissier's strategy has been to shoot a short sequence for a particular occurrence in, for example, the *Confessions*, and link this occurrence to another occurrence of the word in the *Reveries*. The interactor goes from sequence to sequence according to the words s/he selects. The second possibility is to read the complete texts of the *Confessions* or the *Reveries* and to click on a passage that is hyperlinked to a sequence. For example, the interactor decides to read Book II of the *Confessions*. On page 86 of the Pléiade edition, where the Marion episode is described, the interactor clicks on the highlighted passage and is able to see the sequence Boissier shot to adapt it.

With the help of young actors and actresses in modern dress who play the roles of Mme Lambercier, Marion, Mme Basile, Sophie d'Houdetot, Mme de Warens and Zulietta, among many other characters on the CD-ROM, Boissier has successfully re-created Rousseau's *'moments'*

without denaturing or trivialising them. Indeed, the CD-ROM presents a conscious will to reproduce Rousseau's (mis)adventures in their complex psychological intensity. Retaining the indexical nature of analogue cinema and combining the hypermedia potentialities of digital art, Boissier's new media adaptation is a challenging form of visual reconfiguration that joins performance and reshaped textual material. Finally, it allows the reconceptualisation of the archive as a creative adaptation that revisits the history of visual media.

In hindsight, it may not appear that peculiar for a media artist to turn to Rousseau to envisage the production of digital cinema on a CD-ROM. Rousseau's writings offer famous examples of looking, seeing, beholding and gazing that can fuel any form of meditation on sight. One way to begin could be to compare and contrast Rousseau's theory of the senses to Boissier's conceptualisation of vision and touch in order to serve as an introduction to the two men's radically different visual cultures. It is to Rousseau's apprehension, rejection and adoption of certain visual devices and objects that we should turn in order to foreground Boissier's own use of the visual tools available in digital culture. However, what it amounts to for Boissier in his digital adaptation is not so much Rousseau's characters and settings as the theoretical justification surrounding visual devices in Rousseau's theorisation of sight, which he recycles to contextualise his work. In other words, the digital refashioning of Rousseau concerns the transition from Enlightenment visual devices to photography and cinema rather than the actual characters or plots found in the writings.

Rousseau's fictional, autobiographical and theoretical writings abound in allusions to, and concrete uses, of visual technologies and devices. From the mirror to the camera obscura and the telescope, visual technologies are evoked so often that the writer cannot but be perceived as an important witness to the changes in the various modes of production and reception of still images in the eighteenth century. However, Rousseau is not a theorist of the visual media or the visual arts *per se*. Visuality in Rousseau is a pretext to discuss his own work in a way that, as one soon realises this, ultimately enhances his discursive manoeuvres or at least helps to explain his artistic procedures. Rousseau's thoughts in 'Sujets d'estampes' on how to illustrate *La Nouvelle Héloïse* allow a glimpse at the author's conception of visual adaptation and sets the stage for Boissier's project.

Rousseau's 'Sujets d'estampes' begins with an interesting comment that pertains to the paradoxical representation of movement in still images. Rousseau suggests the following: 'Similarly, in figures in

movement, one must see what precedes, and what follows, and give the time of the action a certain latitude, without which we will never grasp the unity of the moment to express' (Rousseau, 1959, p. 761). This still image that contains a past, a present and a future will be reworked in Boissier's use of sensitive sequences that play with Rousseau's triple temporality and the artist's capacity to suggest the unseen, recalling what Rousseau could only have imagined in his wildest dreams: cinematic montage. As Philip Robinson has commented: 'Lack of life, lack of movement, are the inescapable weakness of visual art. Rousseau does not dream that one day, in the movie film, such a capturing of each "instant of life" will be possible. It is a matter of speculation whether he would have approved of the invention' (Robinson, 1984, p. 201). For the time being, one observes that Rousseau's description of the aforementioned scene certainly confirms his interest in the representation of moving images and the visual inscription of performance. This concern will resurface when we look at Boissier's own representation of Rousseau's important '*moments*'.

The shift from readership to spectatorship expressed in Rousseau's remarks should give us pause, for it implies the assessment of a new function in the visual economy of the writer's media environment. Desiring to go beyond the intrinsic limitations of the still image (that is, for Rousseau, painting), his predilection for the print stems from a certain imaginary (inter)activity. According to Rousseau, the print allows a preliminary identification with the image, and it forces him to supplement the image by whatever his imagination may desire: 'the print permits the two-way traffic of identification and illusion' (Robinson, 1984, p. 206). Rousseau's main concern thus becomes that the spectator be allowed to contribute something to a visual representation. The type of print Rousseau has in mind is intended to illustrate his epistolary novel, *La Nouvelle Héloïse*, and it is noteworthy that his indications perform the task of making visible what Rousseau himself cannot seem capable of rendering on paper. Was Rousseau dreaming of an expanded form of book?

Boissier's digital prints

Rousseau's recommendations in 'Sujets d'estampes' to illustrate *La Nouvelle Héloïse* cannot be taken lightly. This essay serves as the rare occasion on which Rousseau allows the reader to penetrate his theoretical positions on the role of the artist, the creative input of the reader/ spectator and the difficulty of representing movement and time in the

still image. Moreover, in the context of this chapter, they draw our attention to Boissier's own meditations on the function of the reader, spectator, and interactor in the digital age and orient the analysis of the artist's achievement in his reconsideration of cinematic time, as relates to Rousseau's dream of a 'still and fluid' image. Boissier will take up the task of producing an artistic archive of Rousseau's 'still proto-relation-images', which contain a plurality of intertwined temporalities and demand the involvement of the interactor in order to unfold.

As mentioned above, there are two sources that fuel Boissier's creation. The challenge for the artist is to combine Rousseau's dream of a 'moving' print with Marey's overlapping, temporally flexible chronophotographic images. As Boissier has expressed his artistic practice's indebtedness to indexicality and chronophotography, it is not farfetched to claim that the artist draws directly on Marey's investigations in the representation of movement. Boissier's digital chronophotography provokes a meditation on the fate of movement, time and repetition in the CD-ROM environment, and, de-familiarising cinematic time, the artist's strategy prolongs Marey's experiments in the archiving of time. Discussing Boissier's archaeological perspective on cinema, Raymond Bellour has made an important comment that refers to Boissier's reliance on chronophotography:

> We also know that, doubled by the 'new images', from video to infography, cinema tends nowadays to return to its origins and its archaeology in order to test its singularity within a history larger than its own, during the course of which images have been assembled and shown according to less closed and historically less successful 'software.' For example, Marey's chronophotography, on which Boissier has claimed to draw. (Bellour, 2000, p. 25)

Boissier will call his ambiguous form of cinematic time, inspired by the work of one of the forefathers of cinema, the 'interactive assembling of still images' (Boissier, 2003, p. 403). In Boissier's writings the assemblage of photograms bears several names: interactive cinema, interactive moment and interactive print. What these names share is the relational quality of the 'moments' they propose and the rather intriguing linkage between digital cinema and chronophotography: 'The interactive-video substance of which our moments are made is rendered by a montage closest to the photograms, discrete and constitutive elements of cinema or chronophotography, of which it could be a new genealogical branch' (Boissier, 2004, p. 249). Moreover, Boissier demands that we stop and

look back at projection shows and early cinema to put in perspective the digital productions that captivate us today: 'And we could as a consequence take the time to observe those apparatus [sic] which, along with new media, ground newer genealogical branches of the cinema "species," often appropriating those traits abandoned: stereoscopes, panorama, moving projectors, variations in the placement of the spectator, and so on' (Boissier, 2003, p. 404). What Boissier has called the *relation-image* is the embodiment of this interactive mode of visual storytelling and counter-historical view of the development of moving image production.

Boissier's experimental interpretation of Jean-Jacques Rousseau has been described by the artist himself as the result of 'a strategy of research into interactive cinema' (Boissier, 2003, p. 398). Drawing on chrono-photography, Boissier uses separated frames to construct another form of cinematic time that progressively unfolds on-screen camera movements. These 'moments' are not put together as a linear montage; on the contrary, Boissier likens his 'moments' to 'a passage through associations of ideas, a daydream or *reverie*' (Boissier, 2003, p. 402; emphasis in original). These relation-images do not begin or end; even though there are entry points, as Boissier has pointed out, they use the loop as a temporal modality of repetition: 'the image carries on in infinite loops, oscillating or circular, which invert, bifurcate, flowing into other loops, all according to the common actions of the *mise en scène* and the current, actual reading' (Boissier, 2003, p. 402).

It is with these thoughts in mind that Boissier endeavours to realise Rousseau's book of images. Adding to Rousseau's remarks on how to illustrate *La Nouvelle Héloïse*, Boissier tries to depict a multitemporal print in which the spectator becomes involved in the image. Moreover, Rousseau's desire for a print that would display performances is activated in Boissier's 'dramaturgy of interactivity'. Indeed, it is not enough to confer movement upon the print; Boissier wants the interactor to activate the images of Rousseau's '*moments*'. From Rousseau's conceptualisation of the print as potential performance, Boissier has retained the writer's wish for a fluid print that will capture performances. Marey's achievements will be kept in such prints that preserve their indexical link to a given geographical setting where actors performed before the digital camera. It is a gaze versed in media ecology that must come to terms with such an indexical archive turned digital mnemotechnology, for it 'operates in and around the index, the local, and the focal, thus producing forms that are an amalgamation of analogue and digital, or that reflect on the analogue through digital means' (Bowen, 2006, p. 544).

Leaves of glass: botany's mirroring effects

In the *Reveries*, the Isle of St Pierre is a sanctuary for Rousseau. It is the place where he can escape human concerns and contact and, mostly, where he can (re)create a symbiotic and unmediated natural environment. More importantly, Rousseau's herbarium will try to supplement the ageing man's fading memory and embodied affectivity. Unable to visit the places where he practiced botany, Rousseau will rely on the herbarium and the '*signe mémoratif*' to allow him to relive past experiences:

> I will never again see those beautiful landscapes, forests, lakes, groves, masses of rocks, or mountains whose sight has always touched my heart; but now that I can no longer roam about those happy regions, I have only to open my herbarium, and it soon transports me there. The fragments of the plants I collected there suffice to remind me of that whole magnificent spectacle. (Rousseau, 2000, p. 67)

Here again, memory is linked to a visual supplement, the herbarium, that is meant to bring past memories back to life. In fact, Rousseau goes on to describe the very relation that I have emphasised between sight and memory: 'This herbarium is for me a diary of plant excursions which permits me to begin them again with a renewed pleasure and produces the effect of an opticon [*optique*] which paints them anew before my eyes' (Rousseau, 2000, p. 67). In this complex description of the herbarium, the 'optique' – a visual device that gives depth to the coloured images it presents – makes of memory not only a 'memory book' but also a visual database in which repetition is never a simple repetition; it always seems to add an element that was not present in the original. The herbarium provides Rousseau with a visual spectacle in smaller form; nature is reduced to an album that is meant to replay the past for a solitary audience.

In the *Confessions*, Rousseau gives a personal account of the power of vision when linked to memory. Arguing that visual 'memories' are not sufficient to call back to mind past moments, he says: 'But all the same I do not know how to see what is before my eyes; I can only see clearly in retrospect, it is only in my memories that my mind can work … All that strikes me is the external manifestation. But afterwards it all comes back to me, I remember the place and the time, the tone of voice and look, the gesture and situation; nothing escapes me' (Rousseau, 1971, p. 114). Rousseau's rendering of his complex mnemonic processes establishes a dynamic relationship between what the eye sees and what

memory will be able to remember or archive. Personal memories act as that which can trigger 'exterior signs' that in return bring forth all the characteristics associated with an event or person. The preceding quotation opens the door to the examination of Rousseau's memory's hyperlinked functions.

The aforementioned description is given a more succinct treatment in Book IV of the *Confessions* where Rousseau makes the often-quoted remark to the effect that his memories are more forceful than things themselves; that his ideas are of a visual kind; and that his cognitive behaviour recalls (hyper)linkages: 'As objects generally make less impression on me than does the memory of them, and as all my ideas take pictorial form, the first features to engrave themselves on my mind have remained there, and such as have subsequently imprinted themselves have combined with these rather than obliterated them' (Rousseau, 1971, p. 169). The combinatory quality of Rousseau's memories allows us to link the revelation that all of his ideas possess a visual quality to the internal mechanism that seems to make images and memories interdependent.

What singles out Boissier as digital archivist is the finding, already in Rousseau's reveries, of an indeterminate archive that triggers visual memories. This would be explained by Rousseau's own irrepressible will to archive. As puzzling as it may sound, Boissier's task then becomes to adapt the indetermination at the heart of Rousseau's texts, thus opening new windows onto what has been traditionally linked to the 'adaptation' process. Moreover, Rousseau seems to prefigure hyperlinkage when he clearly describes how he thinks memory functions. He writes: 'I am attached to botany by the chain of accessory ideas. Botany gathers together and recalls to my imagination all the ideas which gratify it more. The meadows, the waters, the woods, the solitude, above all, the peace and rest to be found in the midst of all that are incessantly retraced in my memory by my imagination' (Rousseau, 2000, pp. 67–68). There is no doubt that botany serves as a supplement to a memory that will no longer be able to serve Rousseau. However, what should draw our attention is the way in which the writer describes the workings of visuality and memory. His 'chain of accessory ideas' points to the hyperlinked function of his memory and the hyperlinked quality of the digital herbarium Boissier has created.

Boissier's prints, in the form of a digital archive of Rousseau's herbarium, motivate an even more fundamental reconsideration of the role of the herbarium if it is to serve as a digital mnemotechnology. What emanates from Boissier's photograms is a conceptualisation of digital

archiving that moves away from the natural environment in which the herbarium was created in order to memorialise the sensations that Rousseau felt when he turned the pages of his herbarium. Traditionally possessing aura as the re-collector of past experiences, sensations, and objects, what function can the herbarium occupy in these digital circumstances? Archiving Rousseau's plants in the temporal dissemination of the print, the writer's prosthetic memory is threatened by the unreliable nature of such an archive that no longer preserves the original. However, Rousseau's *Reveries* is not the herbarium *per se*; it represents it in textual rather than visual signs. The digital print being a 'copy' of an absent original, Boissier's chronophotographic archives reorient Rousseau's concept of memory toward what is always already repeated and repeatable. No longer attached to a past experience or moment, the digital print as archive accentuates the ambiguous wish to preserve against temporal decay while using time to set in motion these very moments.

Reconfiguring memory as technology

Performing what Jacques Derrida has said of the archive's future-oriented disposition in *Archive Fever* (1996), Boissier's CD-ROM does not engage Rousseau's past as past; it concerns the revivification of Rousseau's past as seen from a future perspective that digital media now allow. Boissier's project does not repeat Rousseau's moments; it plays with them using the CD-ROM environment that allows the creation of an updated form of chronophotography, and it emphasises the hybrid form archives take today in order to establish unforeseen relations between eighteenth-century visual media, Rousseau's writings, fin-de-siècle chronophotographic procedures, and the digital mnemotechnology of the CD-ROM.

As a digital mnemotechnology, the CD-ROM is a Read-Only-Memory device that cannot accept new information; it is a medium that is supposedly complete. What artists who use the CD-ROM as a creative medium have grasped is the relational qualities of the platform with which they work. In other words, the importance of the medium in contemporary visual culture would lie in its expressing of the tension between saturated or complete digital information and the way in which it compels the interactor to navigate this information. The type of memory it creates thus reveals the playful relation between the determinism of the medium and the indeterminate reception strategies that accompany it. On this account, CD-ROMs tend to question Friedrich Kittler's

claim to the effect that media cultures would ultimately signify, in some grand teleological design, the 'reordering of memory from ROM to RAM' (Kittler, 2002, p. 411). In so far as a medium is never completely closed or open-ended, the task of media critics becomes the task of locating how information is configured in metastable patterns that relate inspirational sources and a given medium's modes of engagement.

In the last few years, a number of cultural critics and philosophers have taken up the task of challenging traditional conceptualisations of media and memory. The goal has been to think of machinic memories and embodied memories in terms of coextensive entities rather than irreconcilable spaces. Memory has been depicted as always already technological, both *physis* and *tekhne*, and finer-grained accounts of memories have been proposed to render how memories can be either created from scratch or simply borrowed. In our media-saturated age, memories possess a technological substrate that determines their mode of appearance in the world, but they nevertheless leave open their destination as commodities in the virtual field of appropriation.

It appears that the CD-ROM is a peculiar medium that stages, rehearses and complicates these issues in media design. As Boissier's work shows, the memory of Rousseau in the twentieth-first century cannot be a mere duplication of the past. When Rousseau's memories, thoughts and experiences undertake their media migration, they unwittingly reflect on the potentialities of digital environments to enhance their often unexpressed or unrealised desires. Boissier's impressive familiarity with the workings of media ecology certainly helps him to foreground his project in a way that combines a non-teleological media history, a renewed technological subjectivity and a digital archive of relation-images that revisit Rousseau's most cherished memories.

Notes

1. Digital mnemotechnologies refer to digital artefacts such as a CD-ROM storing textual, visual, and audio information that is to be accessed in a de-linearized manner. Digital mnemotechnologies differ in both content and form from analog, temporal objects such as films or television programs that flow with one's consciousness as they unfold. Such digital mnemotechnologies are commodified artefacts often found in the marketplace, but they can also be put to alternative use in the hands of new media artists and designers who offer artistic experiences that will take advantage of and question the material limitations of the medium.
2. Etienne-Jules Marey (5 March 1830–21 May 1904) was a French scientist and chronophotographer. He is seen as a pioneer of photography and important in the early developments of cinema.

3. Boissier's CD-ROM runs on PCs, and on Macs that can emulate the 'Classic' (OS 9) environment. As is the case with most of artistic CD-ROMs, it has been created using Macromedia.

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Part III
Digital Memory Practices

As has been argued throughout the previous sections, developments in digital media have stretched out, integrated and re-mediated memory-making and the digital practices have been redirected away from the corporation, the broadcaster and the institution. History from below is now a commonplace and such personal and collective histories grounded in the production of memories by individuals and communities intermingle almost seamlessly with official discourses and forms. Democratised digital practices of prosumer (the combination of producer and consumer) memories are active, collaborative and self-branding. To a certain extent, digital memory practices challenge a notion of memory as totally mediatised, as audiences become users and producers of memory not essentially passively and cognitively realigned along media pathways. This is not to privilege practice as a get-out-of-jail-free card for escaping the structuring of contemporary memory within digital media discourses and forms. Rather, in concluding this book with a section devoted to how individuals and communities actively remember and forget using digital media, it is a reminder of the human desire to sustain and maintain memory. It provides one more vital dimension to our integrated understanding of how digital media produce memory by interlaying structural (forms), semantic (discourses) and pragmantic (practices) arenas.

The chapters in the final section of this collection, concern the use of the Internet by users for generating memories and histories: personal digital archives, wikis, blogs, web pages, online museums, digital stories, digitised oral histories and social network sites (SNSs). Such practices require access to digitised archives, increased data storage, the convergence of digital technologies and the creation of 'new' archives. The convergence of cameras and videorecorders, with wireless technologies, computers and data

archives means that time and narrative are no longer limited to the single image witnessed during the reign of cinema in the twentieth century. The current demand for a multifaceted, interactive and instantaneous visual interface for representing the complexity of human interaction has meant that digital media function as an escape from the sequential structuring of daily life. Culminating in a significant shift in human culture as well as computer culture, online practices of memory and history replace the Fordist approach (after Henry Ford's system of mass production and consumption in 1940s USA) with 'the object-oriented approach': the latter used 'to program the original Macintosh GUI that substituted the "one command at a time" logic of DOS with the logic of simultaneity of multiple windows and icons' (Manovich, 2001, p. 326). As Bolter and Grusin have argued '[m]any web sites are riots of diverse media forms – graphics, digitised photographs, animation, and video – all set up in pages whose graphic design principles recall the psychedelic 1960s or dada in the 1910s and 1920s' (Bolter and Grusin, 2001, p. 6). Therefore, in terms of digital practices, users are remediating memory. They now have at their disposal a digital toolkit that allows them to refashion memories and histories in multiple ways in order to tell multiple versions of events.

As this section is concerned with computers and networked online practices it is worth putting the technology into a media context before thinking about memory. It goes without saying that computers are interactive. They are built and function on this premise such that 'the Web experience is that consumption and reception rival qualities that are closer to production' and the Web user is 'drawn to produce their Web experience' (Marshall, 2004, p. 50) in ways they were not able to with radio, television and film. However, all media are interactive to an extent and one does not have to press a button or click a link to interact with media. So we cannot simply state that digital media externalise mental life and provide a new approach to memory practices because users experience them interactively. Nineteenth-century scrapbooks (collage) and early twentieth-century avant-garde film (montage) also achieved a level of interactivity. They too imagined human experience as spatialised and navigable and it is these two features that have reasserted themselves so strongly in the early twenty-first century and raise important challenges to thinking about memory and history.

Clearly, there is currently a digital archive fever at work, fuelled by memory-hungry technologies, increased memory capacities of databases and faster, more reliable networked connections. The proliferation of digital media tools in the average household has meant that consumers are now having really to think about how they organise their files, how

those files can be archived and how those archives can be shared with others: as password-protected 'digital vaults', as personal websites, as blogs or on social network sites (SNSs). Joanne Garde-Hansen's chapter *MyMemories: Personal Digital Archive Fever and Facebook* focuses upon the SNS www.facebook.com and theorises the site in terms of Jacques Derrida's *Archive Fever* (1996). While myths of interactivity, freedom, heterogeneity, personal control and individuality pervade the promotion of SNSs, Garde-Hansen highlights that Facebook is an archive of archives that performs archivisation in ways that reveal the corporate memory of the controlling principle. 'There is no political power without control of the archive, if not of memory. Effective democratization can always be measured by this essential criterion: the participation in and the access to the archive, its constitution, and its interpretation' (Derrida, 1996, p. 4). How much Facebook users genuinely participate and interpret the Facebook interface is of crucial importance for thinking about the production of personal memories and histories on an SNS.

Active participation and sharing is key to thinking about digital memory practices. When considering practices, we should be aware of a significant shift in political and ideological thinking regarding issues of access, education, affordability, skills and demographics of digital media usage. We have moved away from the 1990s debate over technological haves and have-nots. Digital media technology delivery systems: satellite television, laptops, Macs, PCs, digital cameras, camera phones and digital radios proliferate and the issue is not whether you have such a device but whether you are skilled enough to use it in deeper and more innovative ways. As Henry Jenkins has argued: 'As long as the focus remains on access, reform remains focused on technologies; as soon as we begin to talk about participation, the emphasis shifts to cultural protocols and practices' (Jenkins, 2006, p. 23). Jenkins states that those with the greatest access to new media technologies in the West, are 'disproportionately white, middle class, and college educated' and they 'have mastered the skills needed to fully participate in these new knowledge cultures'. In fact, 'these elite consumers exert a disproportionate influence on digital media culture in part because advertisers and media producers are so eager to attract and hold their attention' (Jenkins, 2006, p. 23).

But what about a media producer that shifts its focus to the unrepresented majority, who may not even have access and if they do have access certainly do not have the skills to participate in their culture through the use of digital media? When the BBC started its CaptureWales digital

storytelling project in 2001 it did so with the concept of a 'participation gap' firmly in mind. Jenny Kidd's chapter *Digital Storytelling and the Performance of Memory* challenges the perception of the Internet as a commercially driven space by exploring what happens when public service broadcasting meets user-generated content in terms of memory. While it may seem that 'the internet has become commercialised and has succumbed to the patterns of revenue and profit generation that are endemic to our contemporary media, it has also permitted new forms of contestation that have been foundational to understanding new media cultures' (Marshall, 2004, p. 59). Such contestation can be found in the hundreds of digital stories produced during 2001–2007 at www.bbc.co.uk/wales/capturewales/ by members of the public of all different ages and capabilities, some elderly with no experience of using a computer. At stake here are the issues of truth, faithfulness, authenticity and community that also underpinned the first chapter on social network sites. Unlike the commercialisation of Facebook, the personal digital memories produced by CaptureWales may be performances of memory but they are legitimated by the authority of the BBC as enabler and website host.

The often cathartic narratives demonstrate digital memory practices as global narrative witnessing, allowing participants to share a story told internally over time with an unseen audience able to connect with that story personally (again internally) and publicly (by posting a response to the story on the website). The will and desire to produce something meaningful drives digital storytelling and fits neatly with the modus operandi of the World Wide Web more generally. 'Each day new websites are produced and existing ones are transformed. [...] it is evident that the web has catered to a desire in the populace to produce and to make something, and ensure that whatever is produced has the possibility of being seen'. This is unique to the web because it 'is simultaneously a place for production, distribution and exhibition in a way that no previous media form has ever permitted' (Marshall, 2004, p. 51).

Margaret Clarke's chapter *The Online Brazilian Museu da Pessoa* continues the theme of recovering the voices of the historically unrepresented, but significantly from a non-Western perspective. Unlike Facebook, which appeals to the masses and is user-produced, and digital storytelling that is as much about enabling audiences in the use of technology as it is about telling stories, the Museu da Pessoa (Museum of the Person) has curators of memory. The museum manages the life stories of those excluded, those unlikely to ever have a Facebook page. The recovery of voices here comes in the form of episodic memories, stories

and narratives that are designed to engender pluralism, democracy and social change. Drawing out the history and development of the Museum of the Person, Clarke makes clear the importance of the technological advances and practices for generating a history from below. Citizenship, national identity and personal testimony produce a digital archive with quite a different relationship to memory and biography to that found in Facebook or CaptureWales. These are digital memory practices with deeply politicised and historically specific motivations that provoke conversations about digital division, participation and the homogenous whitening and westernising of memory practices in online worlds.

The need to remember and recover memories using digital media intrinsic to the first three chapters in this section is squarely and rightly pitched against the final chapter *Remixing Memory in Digital Media* by Shaun Wilson. Theorising remixing, versioning and simulation of the past, Wilson weaves together digital practices of blogs, wikis and the production of 'user histories' by web pages and search engines with the archival instruments of DVDs, MP3s, PDAs and mobile phones. Together, these technologies ensure that nothing is forgotten. Despite the lamentations from archivists and librarians all over the world about information loss though the fast-paced development of digital technologies, Wilson taps in on an argument that the problem might not be memory at all. It will not necessarily be digital amnesia that we suffer from but quite the opposite, a surplus of memory. As Gleick has suggested:

> Anyone wandering through the Internet might begin to feel that memoryloss isn't the problem. Archivists are everywhere, in fact – official and self-made. The leading online bridge service has recorded every detail of the bidding and card play in each of the millions of hands played since the 1990s. (Gleick, 1999, p. 251)

If, as Gleick argues, the network distributes memory (Gleick, 1999, p. 252), such that Derrida's archive is no longer centralised and authoritative, then what are we to do with digital memory practices that no longer seem to have forgetting as their binary opposite? While the other chapters in this section might celebrate digital culture as a place where memories are infinitely recordable, storable and retrievable, the final chapter proposes the concept of the over-versioned artefact. In remixing versions of the past it becomes increasingly difficult to determine reliability, which challenges the artifactuality of the artifact. Potentially, there is no 'trustworthy' domicile (like Facebook, the BBC or the museum) for consigning memories, histories and narratives.

More fundamentally, the final chapter of this book poses forgetting as a necessary function of digital media in order to make memory practices meaningful and productive.

Each of the chapters in this section focus upon practices that challenge media and cultural institutions that have for decades determined how personal and collective histories are produced and consumed (the broadcaster, the museum or the publisher for example). Not all of the chapters take on the Herculean task of revealing how users individually and personally participate in digital memory production from the user's point of view. In a fairly new area of research it pays to map out the theoretical terrain and issues at stake initially, before embarking on detailed and nuanced research paths. This crucial area of audience/prosumer research needs to be addressed in future projects on digital memory practice. In order to practise digital memories, one must be fast enough and skilled enough to deal with the proliferating range of hardware, software and applications that were once ringfenced by professional media organisations but which are now fair game.

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7
MyMemories?: Personal Digital Archive Fever and Facebook

Joanne Garde-Hansen

> The present epoch will perhaps be above all the epoch of space.
> We are in the epoch of simultaneity: we are in the epoch of
> juxtaposition, the epoch of the near and far, of the side-by-
> side, of the dispersed. 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.
>
> (Michel Foucault, 1986, p. 22)

Social network sites (SNSs) such as Facebook could pose serious chal-
lenges to the hegemony of the historical imagination that has domi-
nated Western thought in the last century. They should not be dismissed
as frivolous, time-consuming, dangerous, addictive or as the claiming
of a bit of cyberspace for the marketing of a youthful self. As Foucault
makes clear in a prophetic statement that imagines the networking of
individuals constructing geographies of human interaction, such sites
appear to re-animate 'a spatialization of thought and experience' (Soja,
1999, p. 114). If memory and identity can be seen as coterminous and
SNSs involve literally digitising ones' self into being (Sundén, 2003,
p. 3) then what is at stake when memories and identities are practised
on Facebook? This chapter will not focus upon the actual digital arte-
facts that Facebook users produce on their sites: their profiles, messages,
photographs and 'friends'. It goes without saying that the allure of the
site is in its drawing together in one place memory practices: creating
photograph albums, sharing photographs, messaging, joining groups
and alumni memberships, making 'friends' and staying in touch with
family. Previous chapters in this collection have drawn attention to
these practices as stretching and integrating memory in personal and

collective ways. That it achieves this through remediating other media: news feeds, daily updates, family albums, podcasts, blogs, camcorder footage and mobile phones attests only to the all-encompassing nature of the site as it integrates people, places and practices. Rather, this chapter will present a theoretical framework on the politics of archives for understanding the 'memory practices' and 'technologies of memory' that are experienced and produced as 'dynamic, contagious and highly unstable' (Sturken, 2008, p. 75).

Thus, for memory in its ideological conflict with history, SNSs could be seen as a significant move toward understanding personal digital archiving as the expression of memory rather than history. However, this chapter is intended to remind the fanfare cheering on SNSs as an articulation of the personal and private, that we cannot ignore the powerful politics of archiving and friendship at stake in SNSs. In fact, we may not be experiencing a 'mythic radical disjunction from history, but a strengthening, albeit in a different mythic climate, of old forms of power' (Mosco, 2004, p. 83). Facebook may not be liberating personal memory at all but enslaving it within a corporate collective in order to shore up abiding ideologies through its public sphere and commercial activities.

This chapter explores the digital interface that Facebook projects to its users in its exteriorisation of personal digital memory making and archiving. Facebook's visual and textual interfaces are analysed in terms of theories of archives, memory and space/time. It is vital to admit a disclaimer; like all online interfaces, Facebook evolves and at the time of writing, the site has evolved into www.newfacebook.com. The change does not disrupt the analysis to follow but it does highlight the instability of theorisations on digital memory, which like memory itself can be fleeting. It also accords with the central thesis within this chapter; that SNSs like Facebook can restructure, at will, how your life is organised, regardless of your objections and those of other Facebook users who create groups declaring those objections to the Facebook Company.

Significantly, Facebook interrupts the theorisation of the World Wide Web as a McLuhanesque 'global village' where an American corporate high-flyer might unwittingly make memories with a North Korean student. Rather, as more recent research (boyd, 2008; Licoppe and Smoreda, 2005) has argued, SNSs like Facebook serve to shore up the relationships between already existing, or once-existent friendships in very niche ways. In our fast-paced world of work and play, such sites appear to ensure that personal and collective memories are maintained and preserved. However, these memories are juxtaposed with the global and

corporate-designed systems that project them as well as being crafted in rule-bound and homogenous ways despite the addition of applications to enhance a user's profile. At stake, therefore, is a recycling of Jacques Derrida's theorisation of the centralised and organised archive in *Archive Fever* as a commencement and commandment contained within the root of the word *arkhe*.

> This name apparently coordinates two principles in one: the principle according to nature or history, *there* where things *commence* – physical, historical, or ontological principle – but also the principle according to the law, *there* where men and gods *command*, *there* where authority, social order are exercised, *in this place* from which *order* is given – nomological principle. (Derrida, 1996, p. 1)

Derrida is important for thinking about SNSs because he grapples with memory and its institutionalisation through evoking the issues of authenticity and authority and it is these two issues that concern SNSs most. Furthermore, Derrida's thinking through of the process of archivisation highlights the importance of technical structure for producing digital memory practice:

> No, the technical structure of the *archiving* archive also determines the structure of the *archivable* content even in its very coming into existence and in its relationship to the future. The archivization produces as much as it records the event. (Derrida, 1996, p. 17)

Thus, SNS users do not simply attend a party, gig or meeting offline and then post their photos or thoughts as a memorable record online. They actively engage with the archiving archive of the SNS, whose technical structure determines how those private memories come into public existence and allows the user to produce those digital memories in very specific ways that shore up the corporate memory of the SNS. How a user remembers and archives a rock concert in Facebook would be very different from how that same user remembers and archives it in Myspace. As 'archons', SNSs 'do not only ensure the physical security of what is deposited' but they are also 'accorded the hermeneutic right and competence': in short, SNSs 'have the power to interpret the archives' in that 'they recall the law and call on or impose the law' (Derrida, 1996, p. 2).

Anyone in any doubt as to Facebook's hermeneutic rights need only read its 'Proprietary Rights in Site Content' which disallows 'site content' to be 'modified, copied, distributed, framed, reproduced, republished,

downloaded, scraped, displayed, posted, transmitted, or sold in any form by any means' without written permission (Facebook, 2008). While the user retains ownership of their 'user content', family photographs (memories), for example, Facebook has far more rights over the user's content. In fact, Derrida's theorisation of the archive is more than relevant here for Facebook has an:

> irrevocable, perpetual, non-exclusive, transferable, fully paid, worldwide license (with the right to sublicense) to use, copy, publicly perform, publicly display, reformat, translate, excerpt (in whole or in part) and distribute such User Content for any purpose, commercial, advertising, or otherwise, on or in connection with the Site or the promotion thereof, to prepare derivative works of, or incorporate into other works, such User Content, and to grant and authorize sublicenses of the foregoing. You may remove your User Content from the Site at any time. If you choose to remove your User Content, the license granted above will automatically expire, however you acknowledge that the Company may retain archived copies of your User Content. (Facebook, 2008)

Hence, breaches of privacy, identity fraud, control over personal information and surveillance have cast light upon how SNSs like Facebook are centralised and organised. More than this, institutions (and Facebook is a unique blend of the corporate and academic) have a corporate memory that produces their thinking and behaviour in the media marketplace. Their brand identity is a function of this corporate memory. The myths produced by Facebook (fraternity, privacy and trustworthiness) are not only constructed through the contents of their data architecture but are reified (and challenged) by SNS users in the production of their own personal digital archives as they traverse (and break) the rules, codes of conduct, and narratives that Facebook encodes. This encoding is an important act of signification on Facebook's part because it accords with Derrida's principle of 'consignation' inherent to archiving power. Facebook does not only consign in the sense of providing a home to users who wish to dwell there, but it con-signs, brings together signs. '*Consignation*' says Derrida 'aims to co-ordinate a single corpus, in a system or a synchrony in which all the elements articulate the unity of an ideal configuration' (Derrida, 1996, p. 3). The ideal of one place where all your memories are digitally stored is supported by an infrastructure that creates the ideal of communities of shared beliefs, thoughts and actions, even if that group, under the banner of

'Beliefs and Causes', is called 'Facebook versus Copyright', has more than 7000 worldwide members (as of August 2008) and seeks to petition against Facebook's archival power.

Therefore, it seems on the surface that we could quickly point to SNSs as perfect examples of the commencement of personal digital archives of human lives: where things begin, where powerful and immediate versions of the self emerge and interconnect with others. But this would be a cyberculture fantasy. These sites are not really the beginnings of friendships, these already exist in the real world and become digitally and corporately smoothed out by the generic 'friending' of members (despite their different relationships) and the enframing colours and textures of the particular SNS that houses them. New users may also appear uniform and grey as they replicate their friends' profiles and 'fit-in' with the existing digital collective they feel thrilled to be invited into. As boyd has noted in her ethnographic research of Friendster users:

> The first act of a new participant is to create a profile and to connect it to others on the service. Most people join after being invited by a friend. Upon entering the service, newcomers visit their friends' profiles to see how they chose to present themselves. The profiles signal social norms within groups and newcomers generally follow suit in crafting their own profiles. (boyd, 2008, p. 140)

Clearly then, one should not forget the 'commandment' principle of Derrida's theory of archives, the organising and pre-programming element that threatens those digital myths of interactivity, individuality and freedom from history (Derrida, 1996). Users of Facebook are implicitly expected to follow social norms (use realistic photographs, not to lie and to avoid pornographic content) as well as commercial imperatives (not to profit from friends, not to use copyright material and to maintain the Facebook brand) and produce profiles that show very specifically who they are and who their friends are. Such transparency may be a one-way street. Initially, when such sites emerge the possibility of subcultural practice is high but as Facebook becomes part of the everyday (with all its moral panics), the rules are enforced and the digital performances made safe and consumable. Thus, the memories may become formulaic, as boyd has concluded:

> The social structure is defined by a narrow set of rules that do little to map the complexities and nuances of relationships in other contexts. Formula-driven social worlds require everyone to engage

with each other through a severely diminished mediator – what I have elsewhere called autistic social software as a metaphor to signal the structured formula that autistic individuals learn to negotiate social contexts. (boyd, 2008, p. 145)

How far SNS users are able to employ 'tactics' as Michel de Certeau described them in *The Practice of Everyday Life* (1984) in constructing their pages to negotiate the SNS not designed by them, is important. As P. David Marshall has argued, some web-users assume a pirate-identity that 'has drawn the user into a new tactical and strategic counter position to the emerging new economy and its imperatives' such that it is now fair to say that 'the interests of larger powers and corporations are not necessarily in alignment with the many users of the internet' (Marshall, 2004, p. 50). Yes, a key question of Facebook is whether such personalised 'trajectories trace out the rules of other interests and desires that are neither determined, nor captured by, the system in which they develop' (de Certeau, 1984, p. xviii) but it is beyond the scope of this chapter to account fully for how users experience the digital functions, structures and architectures of SNS interfaces. Rather, the focus here is to apply theory to how Facebook and its users are engaged in a process of archivisation and what this might reveal about technologies of memory. Ultimately, if, as Derrida argues, archives are homogenous systems where synchrony and transparency are the principles, then it is incumbent upon researchers of SNSs to reveal 'the bundle of limits which have a history', which are inscribed within digital memory practices of users (Derrida, 1996, p. 4). This is particularly important in the case of Facebook, as some users begin to make claims that the site tracks users' internet behaviour allegedly 'silently' collecting information as a form of social profiling (Berteau, 2007).

Clearly, the design of the Facebook interface appears to privilege the written word. The largely non-interactive textual structures of the pages are coloured light and dark grey, while hyperlink functions and the user's uploaded textual content are coloured blue. The fact that Facebook's colour-coding is so homogenized (dark and light blue and dark and light grey on a white background) is meant to convey very specific meanings about how this interface should be interpreted. Even with the change to the newFacebook site in 2008, the colour remains unchanged. It is semi-professional, innocuous, vague, academic and corporate. A new user can take this site seriously and as such it appeals to an older demographic of mainstream web users as well as the usual younger users. The visibility of Facebook as a pre-programmed set of

pathways to a database fades to grey, the emphasis is placed on the user's content (text in blue) and, in fact, the user's uploaded non-textual content (their profile image, the profile images of their friends, shared photographs, functional icons, gift images and application icons). The message is clear: this is not about what the technology can do or what can it do for me but what can I do with it: the average person in the street (as soon as Facebook opened itself to anyone with an email address) who wants to present their life, past and present, in a simple, effective and networked way.

User-friendliness has been the foundation of Facebook from its inception. Launched in 2004 by Harvard student Mark Zuckerberg, Facebook functioned as an alumni SNS restricted to Harvard students but quickly absorbed memberships from other North American universities, universities outside North America and then eventually in 2006 any individual over the age of 13 with Internet access. With approximately 100,000,000 registered users by the end of 2008, Facebook was proven to be immensely popular and in October 2007 Microsoft purchased a 1.6% share of the company for $240,000,000. The name of the site recycles the American paper facebooks (old media) that signified membership and stood as hard-copy visual records of institutional affiliation. Largely college student in its demographic it is, like MySpace, youth-oriented in its perspective as the 'gift' icons, which can be purchased and sent to another user, demonstrate. Such icons, whether representative of Facebook's rapidly expanding demographic or not, speak to a central myth of digital culture: 'Be young, be digital, be equal, be free from history' (Mosco, 2004, p. 81). Yet, it seems, remembering is key to the gifts' iconicity: annual celebrations, nationhood, memorials, charities and personal relationships are all represented and endlessly supplemented as Facebook designers regularly launch and promote new gift icons (often during seasonal celebrations).

One would like to say that Facebook's emphasis upon memory, both personal and collective, allows for an escape from history and, therefore, linearity, order and narrative. In some ways it does, particularly when we think about the computer logic that underpins any such website. Facebook is a database *of* users and *for* users; each user's page is a database of their life, making this social network site a collection of collections and collectives. Like many digital media objects, it is based on computer database logic rather than the narrative logic of older media. Databases, in themselves, do not 'tell stories; they do not have a beginning or end; in fact, they do not have any development, thematically, formally, or otherwise that would organize their elements into a sequence'

(Manovich, 2001, p. 218). Highly complex though it is, Facebook's database logic still appears to users as a collection of images, text, links to other users' pages, links to other sites, iconic hyperlinks, messages and movie clips that can be endlessly edited. Yet, if, as Manovich argues, database and narrative are natural enemies, the former refusing order and the latter insisting upon it, how does Facebook tell the stories of people's lives, how do you tell your life story using Facebook (Manovich, 2001, p. 225)? Is it even possible to do so if there are so-called 'friends' on your page who you felt obliged to add but would not really call your friends and would not really wish to share your memories with?

Clearly, the interface that Facebook has created to its database is supposed to be about telling stories, beginnings and endings, developments and organisation. These narratives rely upon the database logic of computer culture and are presented to the user through the cultural interface that Facebook designers have created. Yet, the constraints of the SNS may be such that digital memories are practised and performed rather than simply recorded and shared. While SNSs project a space of disinhibitions it would be naïve to think that users were not acutely aware of their self-projections and the awkwardness of knowing so-called friends could see your profile. If, as boyd suggests, the binary logic of computer culture encoded by Facebook as accept or reject friend means that 'participants feel pressure to accept connections with people they do not regard as friends simply so that they do not have to face the challenges of rejection' (boyd, 2008, p. 146), then Facebook friend networks may be limited, incoherent or contrived in their production of personal and collective memories.

The personal stories one can create using Facebook do not necessarily present a person's life as a history. Rather, as Manovich argues, the visual interface of digital media relies upon a concept of spatial montage that has an underpinning logic where all the 'shots' or images appear at once (Manovich, 2001, pp. 322–3). This logic – which is not new, as collage and avant-garde cinema also experimented with spatial montage – is presented on a typical Facebook page. It consists of the user's visual handle or profile, which may or may not be the user's image at that moment in time, their photo albums of past and present activities, photos they have commented on from other user's pages, and their Wall of discussions with friends. While the Wall-to-Wall messages suggest a certain sequential structuring in so far as they appear chronologically, their content rarely does. Occasionally, a user draws their friends' postings together by posing a question that they would like answered to their network, or perhaps numerous friends may comment upon a

photograph from their album. Sometimes users create mini-archives of photos that are added to and shared by multiple users on a specific theme, for example, an archive of bad hair cuts from the 1980s, and these stand as testament to a collective memory of a cultural moment. Yet, these moments of integration also reveal the differences inherent in any individual's life. Likewise, when reading a user's Wall where much of the daily activity takes place, one is not able to understand the multiple contexts of the interwoven and often juxtaposed discussions unless one actually is the user or knows all aspects of their life extremely well. The wall, then, has a fractal effect and the structuring of a Facebook page is ultimately not decided upon by the user but is constructed by a pre-programmed logic of spatial montage that conjoins disjointed discussion postings in a multifaceted way and is only really meaningful to the user. Hence, it is intensely personal rather than collective and connective.

Manovich's emphasis upon spatial narrative is extremely pertinent to thinking through the emergence of SNSs and how these sites remediate personal and collective memory. Thinking spatially rather than sequentially certainly challenges the rise and predominance of history from the nineteenth century onwards. The power of the written word, of organised linear narrative and the ability to decode the past in an ordered temporal manner are at odds with the way memory operates and can be represented spatially. In fact, now that the technology allows for multiple windows, vistas and objects to appear at once, one can better exteriorise memory while challenging the twentieth century's emphasis upon the single, unadulterated image (think cinema).

> Time becomes spatialized, distributed over the surface of the screen. In spatial montage, nothing need be forgotten, nothing is erased. Just as we accumulate endless texts, messages, notes, and data, and just as a person, going through life, accumulates more and more memories, with the past slowly acquiring more weight than the future, spatial montage can accumulate events and images as it progresses through its narrative. In contrast to the cinema's screen, which primarily functions as a record of perception, here the computer screen functions as a record of memory. (Manovich, 2001, p. 325)

Unlike the camera and the camcorder, which only allow a single image or single moving image to represent the personal memories of an individual, Facebook simultaneously conjoins texts, images and messages, which orbit around and criss-cross each user, intersecting with others

in the network. Nothing is forgotten (which may be a stumbling block to getting that great job in the future) as nothing need be erased, not even those who were once friends. As each Facebook user's page is built by the user and the contributions of their friends, a personal and collective digital archive emerges that is supported by the convergence of Facebook with other media such as digital camcorders and the ubiquitous camera phone. Facebook can be seen then as sine qua non of digital memory-making and personal archive building.

Of course, the designers have capitalised upon the 'interactivity' that is built into any GUI and have created pathways through Facebook that ask us to recall, remember and reacquaint ourselves with old and current 'friends'. Yet, it is a stealthy interactivity as users quietly observe and monitor. The well-controlled News Feed, detailing the recent and past activities of friends (questions they have asked and had answered, thoughts they have written on their Walls or photographs of events they have shared), creates a timeline and archive of textual and visual communications. Images of friends function as hyperlinks to their profiles and pages so each user can quickly and easily navigate their network. As most users register with a network (initially university-based when Facebook began), pathways through the activities and sub-activities of the user's network are identifiable as hyperlinks. This hyperlinking is a crucial function of interactive media as it is where we witness the exteriorisation of history. Manovich suggests that this hyperlinking is a form of Louis Althusser's (1971) theory of ideological interpellation, largely because we are 'asked to follow pre-programmed, objectively existing associations' and 'to mistake the structure of somebody else's mind for our own' (Manovich, 2001, p. 61). Mark Poster's work concords with this:

> In repeated enunciations individuals become interpellated and recognized as coherent selves who function in a social world. Increasingly the process of interpellation occurs through mediations of information machines in addition to face-to-face interactions. First printed pages, then broadcast media, and now networked computing shift the scene in which the individual becomes and continues to practice selfhood. (Poster, 2001, p. 9)

The focus upon hyperlinking in Facebook is particularly important for thinking through the exteriorisation of making personal histories with digital media. If one takes a typical and averagely used Facebook page, my own, that is part of a UK university network, the opening page

consists of the News Feed. This remediates any online newspaper that details the latest events chronologically, as if my life were just as newsworthy as national and international events (like a newspaper the structure of the feed is controlled by the media producer). On my two-page News Feed there are more than 100 blue hyperlinks, some of which are constants (the de-emphasised corporate links to Facebook's infrastructure or specific Facebook applications). Some are generic website functions such as 'see all', 'hide', 'browse all', 'contact', 'show' 'find'; thus, exteriorising mental processes. While others are specific to Facebook: 'see Wall-to-Wall', 'give today's gift', 'browse gifts', 'invite your friends to join Facebook' and 'show friend updates'. A significant majority of the hyperlinks reveal Facebook's emphasis upon a discourse of friendship (rather than social networking *per se*), which is further consolidated by the boldened blue hyperlinking of my friends' names.

Friendship is key to Facebook's security, community building and trustworthiness. In particular, the maintenance of existing friendships in an increasingly globalised world, the development of existing friendships within a restricted work/study environment and, as with FriendsReunited, the additional benefit of rediscovering old friendships through alumni networks all focus upon friendship and by extension memories. Even giving Facebook 'gifts' of friendship, poking (nudging potential or past friends online, who can accept or reject 'the poke') and joining or creating new networks speak clearly to a discourse of fraternity, homogeneity, belonging and community that Derrida questioned as conventional and undifferentiated in *The Politics of Friendship* (2005). The politics of Facebook is fraternity-based and as such allows users to share and consolidate personal memories into collective memories in order to shore up familial, social and even national allegiances. These are not friendships without the face-to-face interaction that is seen to be liberating for the subjects of internet chat in Annette Markham's (1998) research, mainly because Facebook users' pages are largely made up of links to current or past friends encountered in daily life as, Lampe, et al. (2007) have discovered, and this concords with the results of the Pew Project (2000). This found that the 'Internet reinforces the strong interpersonal bonds among family members and existing social ties, particularly those separated by distances (Marshall, 2004, p. 56).

As danah boyd's (2008) research into Friendster uncovered, 'friend' is not a neutral term in any culture and soon this early SNS produced a user profile that challenged the rules as well as the architecture of the site. Fakesters sought to accumulate as many friends as possible in an

indiscriminate way and constructed tactical profiles that revealed the constructedness of the site:

> Through the act of articulation and writing oneself into being, all participants are engaged in performance intended to be interpreted and convey particular impressions. While some people believed that 'truth' could be perceived through photorealistic imagery and a list of tastes that reflected one's collections, the Fakesters were invested in using more impressionistic strokes to paint their portraits. If we acknowledge that all profiles are performative, permitting users to give off a particular view of themselves, why should we judge Fakesters as more or less authentic than awkwardly performed profiles? (boyd, 2008, p. 153)

Such acknowledgement of artificiality, and the Friendster company's backlash to eradicate fakery from the service explains the later Facebook's institutional image and fierce defence of rules, codes and behaviours. This is consolidated by Facebook's more strident privacy codes compared with MySpace and gives users the sense they are able to trust Facebook and share more of their lives on it (Dwyer, Hiltz and Passerini, 2007).

The emphasis in Facebook is not only upon the personal but also upon the opportunities to connect and perhaps more importantly, re-connect with other individuals, creating myths of community. These myths can be traced back to the sense of a private community fashioned in the early days when Facebook allowed only university email addresses to join. This does not mean that Facebook is power-neutral for '[m]yth creates the condition for social amnesia about old politics and older myths' (Mosco, 2004, p. 83). Facebook recycles myths about 'youth culture' to a youth that is getting older and lamenting the loss of contact with past acquaintances as a result of the migration and mobility inherent to a knowledge economy. Thus, it is a performance of connectivity and communication while making transparent the construction of making memories with technologies such as digital cameras, camera phones and digital video. In terms of memory, Facebook like many SNSs can reveal the contrived, cynical and constructed nature of mediated memory. As stated above, the homogenous colour-coding of Facebook pages reveals a cultural interface that draws upon its institutionalised beginnings and encourages users to seek their identities through friendship and idealised conventions of belonging. The predominance of blue increases when one accesses a user's profile where the most editable content is produced. On the surface it appears

that the SNS allows the user to construct their Facebook page through hyperlinks, icons, photograph albums, film clips, Wall-to-Wall discussions, etc. in their own way. However, the vast majority of Facebook user pages remediate the corporate colours of the Facebook brand (blue, grey and white). Obviously, this allows Facebook pages (unlike MySpace pages) to be consistently and instantly readable through clear structuring. Yet, this homogeneity suggests that the mental structure of the production team of Facebook remains intact and is not disrupted unduly by the millions of users' differentiated mental structures. 'If the cinema viewer, male and female, lusted after and tried to emulate the body of the movie star, the computer user is asked to follow the mental trajectory of the new media designer' (Manovich, 2001, p. 61). This is important if Facebook, its designers and serious users are not to suffer the same fate as Friendster when it found itself submerged in a war with Fakesters, Fraudsters and Pretendsters who challenged the rules of authenticity, identity and copyright.

Having said this, each user's page content is unique in as far as the visual and textual memories and archives are specific to their life. A weblog feature that is remediated from stand-alone blogs on the Internet is incorporated into every user's page as The Wall. It is a space where users can narrativise their lives as well as an archive of messages between users. At first glance it may appear narcissistic, but it is also evidence of the production of personal identity through social interaction that takes into account the multiple pasts and presents that the user has occupied/is occupying. Marshall has argued that the weblog feature has seriously challenged how, where and by whom cultural and social meaning is produced:

> Much like how a front garden can be an expression of the occupants of a house, or how a mantelpiece or bookshelf is designed to reveal the identity of its owner, the weblog is an elaborate presentation of the self. [...] With the weblog, the personal website with all its meanderings becomes a public testament, a proclamation of significance and an expression of individuality. (Marshall, 2004, p. 56)

The emphasis on the personal and individual is seen as a necessary evocation of history from below that comes in the form of increasingly individualised and unique archives of personal memories, generated by SNSs. A shift in power relations is occurring, such that the powerful archiving force of the institution (museum, government, church, law or mass media) and corporations that may seek to preserve knowledge

and history on their own terms seems to be challenged by the personal archiving power of increasingly popular and easy-to-use digital media. Clearly, the latter is being propelled by, and disseminates, certain myths: mythologies of liberal democracy, the end of history, beginning of personal agency, the predominance of youth culture and the emergence of the *prosumer* of media (the combination of producer and consumer). This is consolidated by a continual emphasis upon a generation gap and a participation gap: 'for the first time in history,' states Tapscott 'children are more comfortable, knowledgeable, and literate than their parents about an innovation central to society' (Tapscott, 1998, pp. 1–2). Yet, this myth does not account for the fact that Facebook's demographic is increasing in the thirty-five-plus age range and that other media producers such as SAGA magazine (excited by the success of SNSs) has met demand from over-fifties Internet users by producing its own site SAGAZone. One can imagine that this demographic would certainly be producing and sharing digital memories.

Clearly, SNSs are a symptom of a need: for identity, for memory, for stories and for connectedness. We are suffering from archive fever, says Derrida, and are in need of archives (Derrida, 1996). This need is not entirely met by SNSs such as Facebook. In fact, communicating our life stories online leaves us with more questions than answers. Are we witnessing a personal digital archive fever, an obsessive desire to document and share our life histories and memories and a history from below that challenges the authority of the instutionalised archive? Or is this the performance of mediated memory, the SNS as a stage for 'digital flâneurs' engaging in them as 'a place to see and be seen' (boyd, 2008, p. 155)? Whose memories and whose mental architecture are being projected here: those of the users, the digital designer or the media corporation? Are they even worth observing if SNSs produce a landscape of exclusive and specific text and images that make no sense to those outside the group of friends and may make limited sense to those within it? Does the corporate memory of Facebook produce only those digital flâneurs who are like Walter Benjamin's (1969) angel of history, facing backwards being pushed into their future as the digital flotsam and jetsam of their lives piles up uncontrollably before their eyes? We are only at the beginning (the commencement) of personal digital archiving and SNSs are just one public option among many. If everything is saved and nothing is deleted then along with treasured digital memories SNSs will produce the detritus of personal histories. Thus, the SNS as archive may shelter itself from the memory of the name *arkhe* (the commandment), as Derrida argues, but users will not be sheltered from

the fact, nor forget, that this digital space may well forever store memories they would prefer to forget.

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8
The Online Brazilian Museu da Pessoa

Margaret Anne Clarke

> From the beginning, our objective was to construct an international network of stories capable of contributing to social change…Our principal objective was to create a new space where each person could have the opportunity of preserving their life story and become one of the many voices of our social memory. We believe – and we still believe – that social memory, constructed in a democratic way could contribute to different perspectives concerning our society. A life story or biography is, without doubt, a powerful way of understanding another human being. More than that, to get to know – through listening or reading – a group of life stories is an incredible way of expanding our vision of life; they are unique pieces of information, which show us how different people create their own realities.
>
> (Museum of the Person, 2008, 'Our History')

Introduction

This chapter will present an overview and analysis of the virtual museum and online digital archive of the Museu da Pessoa or Museum of the Person, founded in São Paulo, Brazil, in 1991, and, from 1997, freely accessible via the Museum's portal www.museudapessoa.org (Figure 8.1). The museum's original purpose, as defined by its founder and director Karen Worcman, was to record, collect, organise and archive the life stories and personal histories of the nation's citizens into a public databank and resource. Throughout a period of seventeen years, and within the development of more than one hundred thematic projects designed to integrate and frame over six thousand narratives

Figure 8.1 A virtual museum of life stories: the homepage of the Museum of the Person

Source: http://www.museudapessoa.net (2007).

collected from the nation's citizens, the 'virtual network of life stories' (Worcman, 2002) has been extended to a project of national and, since 2004, international scope.

The musuem's operations and methodologies were originally based on the principles informing the oral history movement, which was founded on personal testimony as a means of creating 'history from below' and a means of achieving political and cultural recognition for marginalised groups. Taking as a starting point the definition of oral history as 'the search for a connection between biography and history, between individual experience and the transformations of society' (Portelli, 1997, p. 135), the museum's programmes invite further critical consideration concerning the extent to which ICTs, the 'new' media and digital networks can provide frameworks for 'the radical transformation of the social meaning of history' (Thompson, 1978, p. 248). Internet projects based on oral history, language preservation and digital storytelling have emerged in tandem with social movements and the affirmation of pluralistic cultural identities, fostering 'entirely new interfaces with communities and citizens' (Loader, 1997, p. 9). The genre of recorded digital narratives, stories and autobiographies mediated by institutions such as the Museu da Pessoa become a 'cultural

democratic practice' (Lambert, 2002, p. 110) for the benefit of people who have been excluded from the channels of economic and political access on the basis of race, ethnicity, income and gender, and form the building blocks of what Burgess, et al. (2006) have defined as 'cultural citizenship' and a vehicle for integrating their multiple perspectives into community, social and political frameworks.

Digital social and cultural projects with these specific aims have evolved in conjuction with the construction of democratic frameworks in Brazil after the '*abertura*' or opening-up of the nation to civilian government in 1985. The foundation of institutions such as the Museum of the Person has been principally supported by Brazilian non-governmental organisations and municipal networks, supported by charitable and corporate foundations, who have taken up the cause of access to ICTs as a civic right (Albernaz, 2002, p. 6). While the Internet itself was made public in Brazil in 1995, the origins of these projects can be traced back to the 1970s with the formation of grassroots social movements aiming to transform the national and municipal governance of Brazil, a country that has long been associated with 'a long electoral history but little democratic tradition' (Luna and Klein, 2006, p. 4). Within these broad trends in the nation's development over the past thirty years, a concomitant search has taken place for alternative truths concerning the nation's past as a counterpoint to 'official narratives' of Brazil's fundamental identity, direction and future as defined by the nation's elites.

Widely diffused stereotypes of Brazil as 'the land of the future', and other slogans designed to embody modernity and progress, spring from the positivist ideals established and diffused by the nation's oligarchies during the late nineteenth century. These ideals surfaced in other forms throughout the developmentalist enthusiasm of the 1950s, and were accelerated still further in subsequent decades. They were also underpinned by an economic model of development characterised by neo-colonial dependency on Western industrial powers and enforced by a repressive military regime. Throughout the 1960s and 1970s, national networked television, not relieved by local and regional programming, was employed by the state in the propagation of official nationalism, and further exacerbated 'the fragmentation of communities into isolated regional forms of expression' (Straubhaar, 1992, p. 217). Media networks at this time articulated and consolidated a vision of Brazil as predominantly white, upwardly mobile and consumerist, and almost wholly unrelated to the realities of Brazil's populace, who were defined further in terms of demeaning stereotypes of folklorism and provincialism. Thus, the introduction of computer mediated technologies from

the period of the '*abertura*' and the opening-up of the Internet to public access in 1995, prompted the formation of alternative media networks and programmes for digital inclusion. These were inextricably linked to the ongoing construction of an alternative national identity based on the affirmation and inclusion of Brazil's heterogeneous, ethnically and regionally diverse populations and, in particular, new concepts of society as lived experience, pluralism and collective voice.

It is against this background that an independent tradition of recorded stories, episodic memories and life narratives, created by Brazilian citizens themselves, has evolved in Brazil. The recovery and placing of citizens' stories within digital projects such as the Museum of the Person must also be a component in the reassessment of the nation's past and the construction of alternative historical narratives. These projects have spatial as well as temporal dimensions: they aim to achieve social integration within the nation's communities, municipalities and regions, creating networks across a country characterised by the geographical and human diversity of its five major regions, 'likened to islands in a huge archipelago' (Levine and Crociti, 1999, p. 3). Moreover, as media and information technologies such as the Internet, podcasts, local radio and television networks have proliferated and diversified throughout the period of the Museum of the Person's existence, so too do the means by which the nation's most diverse communities can be linked, enabling new forms of democratisation and cultural multiplicity.

This chapter, then, will trace three principal phases in the Museum of the Person's trajectory: first, its foundation and development from 1991 as an archive and collection point for oral testimony, and the embedding of narrative within community and institutional contexts; second, the broadening scope and range of these activities enabled by the transfer of the museum's operations to the Internet from 1997; and finally, from 2004 onwards, the extension of these projects into programmes of national reach and scope. These phases also correspond to the evolution of information technologies at the museum's disposal, from the video and CD-ROM available in the early 1990s to mobile and interactive communications such as weblogs or podcasts presently integrated within the museum's site. Enabled by these technologies, and against the background of the nation's contemporary reality and future direction, the museum's projects have engaged throughout with the nature and conceptualisation of 'history', in its diachronic and synchronic aspects. The amassed and archived collections of memory narratives of many kinds and from many sources not only recover and problematise concepts of the past conceived as chronological time, but

are also means of creating a 'relational space' (Froehling, 2003, p. 169), characterised by openness, multiplicity and heterogeneity; decentring and rebuilding alternative visions of the nation and its peoples.

Origins and development (1991–1996)

Prior to the creation of the museum's web portal, the work of curators and activists focused on producing text publications, books, video documentaries and CD-ROMS; 'producing content, organising the stories and developing resources' (Museum of the Person, 2008c). At this point, two fundamental considerations underpinned the museum's mission to act as a catalyst for social change through the recovery and affirmation of pluralist perspectives. First, the museum's projects and methodologies have developed the questions posed by Ronald Grele (1991, p. xv): at what point and by what means is the transition effected from the episodic remembrance of one individual or a group of individuals to material of historical import and social relevance by the community, that is, a 'usable past' that 'affects the consciousness of the teller and hearer, and of the community itself' (Grele, 1991, p. xv)? Second, once these perspectives have been embedded within the thematic structures constructed by the museum's site, how do the practices disseminated and implemented by the curators enable users and participants to exercise their own agency in constructing a 'usable past'? Individual narrative and memories of the past become usable in the truest sense, according to Grele, 'when a context is formed for the dialogue' of oral history, that is 'a human community's [...] conscious knowledge of its existence, as one that has emerged, and of its identity vis-à-vis the other, neighbouring, or more remote communities [...] and a task [...] for its present and future' (Grele, 1991, p. xv). In order to construct 'cognitive networks of thinking and remembrance' (Wertsch, 2002, p. 25) and to create a 'usable past' then a further task for the museum was the creation of synergies between both the use of textual, multimedia, digital and other resources and mediated action on the part of individuals and institutions.

Operating on several different fronts, the museum became itinerant and mobile by installing recording cabins, open to any participant, in public places such as metro stations, squares and street corners. Besides amassing stories in this way, the museum's curators began to effect the transition from individual memory to social memory by framing the narratives collected by the museum's curators within the institutional contexts within which Brazilian citizens worked and operated. Stories were collected from among immigrant communities, health workers,

employees of subsidiaries of national and multinational corporations, football clubs, trades unions, and other associations. Thus, the defining characteristic of the projects developed in this period was their construction, strategically and operationally, around pre-existing social networks. The articulation of memory, and the construction of narratives by diverse groups, enabled by the museum, formed the first step in the 'transition from remembering to knowing' (Millar, 2004) and facilitated the intersection between the individual and the historical, and the transition from individual to collective memory. The stories were then archived along thematic pathways that enhanced the potential to form further networks, while at the same time, perspectives and voices: 'never previously listened to and who could not have formed any part of any official narrative of history' were continuously sought (Museum of the Person, 2008c).

Memory, history and narrative (1997–2004)

The focal point of the museum moved to the Internet with the construction of www.museudapessoa.org in 1997. The archiving and organisation of the museum's resources on the dedicated website expanded public access to the amassed stories and narratives, and opened up several other possibilities. 'A year after the creation of our site on the Internet, we understood the great power of interactivity' (Museum of the Person, 2008c). The computer interface could now act as a transmissive medium and achieve greater integration of the artefacts, stories and photographs collected by the museum. The capacity for storage, random-access modes and the modularity inherent in the hypertextualised stories of participants meant that a near infinite number of autonomous narratives could be added, retrieved and organised in different thematic combinations by both the users and constructors of the museum. This in itself facilitates a different understanding of the past in relation to the present, through the 'translation effects' that occur when shifting from one medium to another (Staley, 2003, p. 29). These principles underpin numerous projects, of which one example is '*Ontem e Hoje*' ('Yesterday and Today') whose weekly narratives of participants cross-cut and relate recent events in the present to their historical contexts and programmes such as '*Memória Institucional*' ('Institutional Memory'). These are oriented towards the preservation, organisation and dissemination of the histories of any Brazilian institution of whatever sort, and the creation of resources to be distributed for activities in schools, communities and social organisations. In a more general

sense, the citizens' narratives, once embedded within these frameworks, 'should be used to extend reflection, perceive different forms of articulating and extending reality' (Museum of the Person, 2008b).

'Insitutional Memory', then, forms part of a broader ideological orientation that insists on the connection of memory with social, as well as, chronological ties, the experience of people which is, at least in part, constructed by their use of the past (Baert, 1992). This orientation also entails at least the potential for ongoing historical transformation and the individual agency of any citizen in effecting that transformation. More specifically, the broader aims of the museum throughout have been to resolve and synthesise the tension between concepts of memory and chronological historiography which, according to Klein, 'pits memory against history even though few authors openly claim to be engaged in building a world in which memory serves as an alternative to history' (Klein, 2000, p. 128). The linear concept of history, defined as a sequence of interrelated events over chronological time, has been especially associated with literacy and the evolution of certain types of critical discourses. It is constructed through the codification, synthesis and interpretation of documents by a third person or 'objective' researcher, a process necessary for the documents and primary sources to acquire historical significance. The history which is created by each individual narrative is defined by Karen Worcman as:

> microhistory, capable of destroying prejudice and opening up the vision of the other. Each person is unique and their experience of life translates this uniqueness; at the same time we are historical beings. We are an intersection between our historical moment and our particular form of filtering it and living it. (Mariuzzo, 2008)

Therefore, according to this interpretation, memory processes, and their synthesis into more extensive frameworks of collective and social memory, are not related only to the present social context. They are constructed in dialectical terms with broader social and institutional frameworks, and in relation to paradigms of knowledge within which the individual recollections take place. They are also formed by a process of interpretation by the individual viewer or the community, which further problematises the nature of time and its relation to history and memory.

The individual projects within the overarching framework of 'Insitutional Memory' illustrate the ways in which individual recollections, once accumulated, may be converted into social and collective

memory when mediated through digital networks, acquiring further connotations, relevance and other dimensions in relation to both referential and dialogic functions. One example of the projects carried out under the programme's aegis is the institutional and oral history of Petrobrás, Brazil's sole state owned oil producing and refining company until 1997, and a joint initiative involving the collaboration of both the company itself and seventeen affiliated trades unions. The forty-two life stories and 217 shorter individual narratives of workers and other participants within the site are fully contextualised in relation to three diachronic time frames. These list relevant historical events in chronological order, as they have evolved since the company's foundation in 1953, and in each timeline, it is possible to view the content, or events, organised according to decade, year, or theme (Figure 8.2). One timeline traces key events, year by year, in Brazil's political history, society and culture, beginning at the date of the company's foundation. This timeline contextualises the development of Petrobrás' activities within a national framework and background. The second timeline presents the key events within the general history of the exploration and extraction of oil and gas in Brazil, in chronological order; and, in conjunction with this a linked index of the most salient themes relating to the company's activities: energy supply, excavation and the environment. Finally, the third timeline takes the form of a chronological history of

Figure 8.2 Brazil's oil company Petrobrás: stories of workers and unions
Source: http://memoria.petrobras.com.br/internauta/index.jsp (2007).

each of the affiliated trades unions to which Petrobrás workers belong or have belonged. This timeline is again connected to an index of thematic networks pertaining to labour history: 'Security', 'Strikes', 'Legislation' and 'Environment'.

The testimony and history of each individual employee of Petrobrás is embedded within this schema. The key themes informing the individual stories and narratives also form an organising principle around which the employees' stories, or micro-histories, are arranged: the worker's education, early years, professional life and working relationships, reflections on the interview process and oral history itself. Each story also has its own searchable index, enabling the reader to extract the most salient and relevant excerpt from the narrative, in relation to both a chronological event and a specific theme. Thus, the stories also relate to synchronic dimensions of history, the human experience of time and place. These dimensions provide a detailed cross-section of the simultaneous happenings of a particular event, including the perceptions and experiences of Petrobrás' multiple happenings and protagonists. They also enable the detailed examination of events or phenomena, and cross-cultural comparisons, which may not necessarily lend themselves to ordering in a narrative sequence. The hyperlinked multimedia, photographs, pictures, and other realia add 'thick description' (Geertz, 1973) that further illustrate and explain the context of the discourses, practices, themes and relevance of Petrobrás within national life. The interweaving of the two approaches to history, diachronic and synchronic, enables the site to create a portrait of Brazilian history and its multiple protagonists and perspectives in fine detail, illustrating the complexities of events and their protagonists, and so lead to a fuller understanding. Because far more content can be included in this way, the site presents a more democratic approach to history that includes the texture of lives and events often disregarded according to traditional historical criteria.

Nonetheless, certain 'hierarchies of access' (Rodman, 2003, p. 33) still remained at this point in the museum's development, not least the hierarchy of power inherent in both the architecture of individual websites and the powers of ownership and distribution of the digital stories on the part of the museum's curators. If, as theorists suggest, archival or museum institutions act as repositories of power by controlling evidence of the past (Millar, 2004), this is of particular relevance in a nation where an estimated sixty per cent of the population lack formal literacy skills (Rocha, 2000, p. 37) and whose many cultures of both indigenous and African descent are based on oral discourse,

mythologies and traditions. It was necessary, at this stage, to 'assist the process of strengthening the identities of these communities, avoiding the neo-colonial appropriation of cultural artefacts and the replication by the digitization process of 'the western conception of storing in "museums and libraries" what those in the west deem to have cultural value' (Worcman, 2002). Of particular relevance in this context is the integration of memory narratives within social and pedagogical movements whose broader aim is to bridge the barriers to access to economic and educational resources known currently as the 'digital divide'. Many claims have been made for the inherently democratic, egalitarian and participatory properties of digital networks and their potential capacity to provide citizens with both access to information and data and the ability to distribute their ideas, participating actively in the public sphere as both 'speakers' and 'listeners' (Rodman, 2003, p. 28).

Nonetheless, formidable obstacles still exist between the realisation of that democratic ideal and the reality of access in Brazil. The term 'digital divide' has been applied to the nation, as an issue for public attention and a critical social problem. (Albernaz, 2002). Almost half of the country's municipalities, principally in the rural areas, have no access to private telecommunications or Internet services (Woudhuysen, 2007). Across the country as a whole, Internet penetration and usage patterns conform to major social and economic inequities; barely a quarter of Brazil's population have access to the Internet and fewer than four per cent of the population have access to broadband connections (Internet World Stats). Resolving the 'digital divide' in Brazil is perceived as inextricable from economic and social inclusion; the integration of the opportunities afforded by the Internet and ICTs into broader issues of concern to the communities they could potentially serve (Warschauer, 2004, p. 126). The Museu da Pessoa's programmes have evolved within this overarching contextual framework: that both access and social inclusion through the dissemination of Internet technologies may be brought about by establishing communities of practice on a local and national level. The creation of networks of memory within social contexts of the present is ultimately to enable individuals and communities to pursue goals in the spheres of democratic participation, cultural affairs, civic activism, and community-based initiatives.

A series of questions was framed by the museum's curators: how could both the practices of the museum and the methodologies used to collect oral histories and construct memory narratives be made both sustainable and expansive, enhancing the principle of interactivity beyond the 'virtual' in a broader sense and rendered into an active tool

to empower marginalised or excluded groups in society. The museum, thus, created new contextual frameworks within which the experiential knowledge generated by the museum's resources, practices and methods could be utilised and extended within communities and through future generations, mitigating both immediate obstacles to access and possible media redundancy in the future. 'Culture Points' were set up, functioning as an open space for the community, where any and every person could register their story and consult the Museum of the Person's archive. The museum initiated further programmes, such as '*Agentes da História*' (Agents of History), which aimed to train participants in the methods of oral history, focusing on literacy and digital inclusion in the public schools in Brazil, and training of '*multiplicadore*s' (multipliers) within communities and municipal and civil organisations. One example is 'Project Oldnet', which aims to bridge both digital exclusion and alienation between generations. Students in private and public schools assume responsibility for training residents in care homes in the use of the computer, the Internet and e-mail. Under the supervison of the museum's educators, the residents' life stories, photographs and other memorabilia, are placed and organised with thematic reflections from both old people and students on the nature of life, ageing and other relevant themes. In this way, according to the museum's site, 'the project is, in effect, the construction of an oral memory workshop, in which history, memory and working methodologies are developed through the collection of life stories' (Museum of the Person, 2008d).

Networks of time and space: constructing bridges between tellers and listeners (2003–2007)

> In this phase, the museum began to develop further its overarching aim of the transformation of concepts of 'history' within projects of national scope and reach. Thus, fostering further dialogue between frameworks of power and citizens' voices previously marginalised from 'official' histories of the nation. How can communities of people who have produced their histories with the purpose of bringing about effective social change employ them to construct networks between those who talk and those who listen? How to create a real global community between tellers and speakers? Using the power of life stories to connect generations, communities and different levels of power in society is an essential step.
>
> (Museum of the Person, 2008c, 'Our History')

The dissemination of the museum's practices began to take place within multilevel frameworks of projects aimed at promoting further participation and social inclusion of Brazil's heterogeneous peoples and communities, resident within the subcontinent's regions.

From 2003 the Museu da Pessoa formed the '*Rede Nacional de Memória*' ('National Memory Network'), which expanded further the work of the Museum's main project of national scope, '*Memória dos Brasileiros*' ('Brazilian Memories'). Based in each of the nation's five major regions, the Amazon, the North-east, the Centre-West, the South and Centre-South, the project 'Memory Network' is an initiative 'which aims to constitute a national network of institutions and people who value the use of memory as a tool of social and cultural development in the country' (Museum of the Person, 2008a). It exchanges experiences, maps existing initiatives, and foments collective action among the participants throughout the geographical expanse of Brazil. Under the banner 'The Expedition of Rediscovery', the task of the museum at this point was to bring together both the numerous initiatives promoted by the organisations 'who work with oral tradition in order to bring about social transformation', and the advantages of many-to-many communication which the museum's digital networks, now augmented with the flexible modes of delivery and narration that weblogs, podcasts, and web radio had to offer.

In this way, the museum attempted to resolve the fundamental dichotomy, seen in previous projects, between the identification of 'history' with dynamic temporal sequence and diachronic narrative, and geographical space, identified with synchrony and structure, often conceived as fundamentally static in nature (Massey, 2005, p. 37). These two defining concepts are often conceptualised as opposites, even though historical narratives must necessarily derive their materials from the patterning of events and contexts within social space and physical landscape. Within the framework of the 'Brazilian Memories' and 'Memory Network' sites, multimodal presentations, consisting of bricolages of video, text and photographs enable the oral narratives of the projects' numerous protagonists to intersect further with depictions and representations of the spaces, places and cultures of Brazil (Figure 8.3). In this way, the stories of the projects' protagonists are transformed into a means of mapping the dynamic and heterogeneous realities of Brazil's regions and peoples, emphasising synthesis, rather than stasis:

> We consider ourselves, the explorers, continuing a tradition which
> has been reinvented through the centuries, since the original

Discovery of Brazil. [...] What do our valiant discoverers wish to see today? We still don't know. But we know in the meanwhile that the Brazil which they will discover is different from the earthly paradise which the European ships sought. The memories have multiplied. (Museum of the Person, 2008a)

The memories and narratives have now become 'topographies' which, according to J. Hillis Miller's definition (1995), are performative speech acts that simultaneously map and create a territory. In the process they

Figure 8.3 Topographies of memory: Brazil's Memory Network
Source: http://www.museudapessoa.net/blogs/memoriadosbrasileiros/ (2007).

affirm the pluralism of the nation, reversing the traditional patterns of Brazilian historiography. The regions of Brazil, once marginalised and fragmented by the teleological one-way narrative of 'modernity' and progress, open up through the interrelation of multiple memories, narrations and trajectories within space. Brazil's contemporary reality is presented both as a dynamic and holistic structure and a heterogeneous world in a process of becoming, and as mutual discovery on a cultural plane: a precondition for the social goals of social integration and pluralist participation promoted by the museum.

The final conclusion of this overview, then, is that the distinction between individual oral testimony and chronological narratives of the nation's history, communities and places and national and regional insitutions, are not conceived as a series of binary oppositions, but a series of complex and interrelated articulations, that, when mediated through digital communication networks, form alternative visions and horizons of possiblities for Brazil, its heritage and its future. Since 2004, the principles and methodologies informing the original museum have been expanded to an enterprise of international scope with independent Museums of the Person established in Indiana, Canada and Portugal. In common with similar projects in other nations, the museum aims to establish inclusion and dialogue between citizens on a global scale. Networks of memory created by multiple communities of individual actors, citizens and communities, and the interaction of these communities with the global networks enabled by the Internet, counteract the inherent dangers of homogenisation, loss of local cutural identities and widened social divisions brought about through govermental or corporate control, which the process of 'globalisation' may entail. The international project of the Museu da Pessoa illustrates that the vast increase in channels of communication across national and cultural boundaries enabled by global information technology networks holds at least the potential for new forms of democratisation, pluralism and participation. While, as the Brazilian experience illustrates, the transfer of new media on a global scale is highly unequal, the Museum of the Person's practices also demonstrate that many possibilities exist for cultural democratic practices based on the multiple expression of personal experience and memory, diffused and disseminated, but also integrated through digital networks in the twenty-first century.

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9
Digital Storytelling and the Performance of Memory

Jenny Kidd

Digital media are recognised as having a sizeable and ever-increasing effect on the ways in which memory can be, and is being, represented and reconfigured in the early years of the twenty-first century (see, e.g., Amelunxen, et al., 1996; van Oostendorp, 2003; Rabinovitz and Geil, 2005). Our very ideas about the form, permanence and malleability of memory are being infinitely and creatively explored through new and multi-media. We are now able to encounter many differing forms of re-presentation independently and/or simultaneously (visual, textual, aural and even sensual) that coherently (or otherwise) constitute representation (van Oostendorp, 2003). The current 'memory boom' (as recognised by Andreas Huyssen, 2003a) should not be looked at in isolation from the technological play and investment, that have, in part, enabled it. As Huyssen says: 'We cannot discuss personal, generational, or public memory separately from the enormous influence of the new media as carrier of all forms of memory' (Huyssen, 2003a, p. 18). This *carrying* of memory for a presumed infinitum is a task the digital media ably take on, at the same time as they aid the collapse and shrinkage of time and space resulting in what Huyssen calls 'the crisis of temporality' (Huyssen, 2003b, p. 21). *New* digital media thus have an integral role to play in what is remembered, the form in which it is stored and, later, how it will be retrieved.

Digital archives are exemplary of this shifting focus. Be they public or private, such archives have an increasing role to play as holding places for those artefacts which contribute to our sense of cultural and individual significance. They also take on a wider, collective significance as source materials and 'content providers' (Tan and Mülle, 2003, p. 55). This development and its implications for both *professional* and *amateur* media producers have yet to be fully explored or (no doubt) exploited.

As we all become archivists, so too we all become curators in a process of musealisation and as a part of this process questions are inevitably asked about the place of truth, accuracy and authenticity. This is a primary concern with archives defined as autobiographical in focus where the 'memory archive' can easily be dismissed as a 'cabinet of delusions' (Huyssen, 2003a, p. 6).

This chapter seeks to explore how one such archive can be understood in the terms broadly outlined above. The BBC *Capture Wales* Digital Storytelling project and resultant archive will be recognised as a memory practice (although not exclusively so) utilising autobiographical materials and combining them as multimedia in order to tell stories of personal significance. I hope to go some way to providing a context-based answer to the question posed by Martin Conway in 1990: 'If autobiographical memories are not veridical or true representations of events, then what sort of representations are they?' (Conway, 1990, p. 2).

Background to the project

BBC Wales, as a part of the British Broadcasting Corporation's Nations and Regions output, is bound by the same public service responsibilities as have shaped the BBC since the 1920s, with a cast-iron commitment to 'inform, educate and entertain' (BBC Wales, 2007). The UKs current transitory media landscape, however, has forced the corporation to re-assert itself in recent years as a vital and indispensible means of media provision: responsive to licence payers, with community and equity of representation at its core. Thus, projects involving collaboration with members of the public are increasingly common, with those people enjoying more imaginative input than ever in the corporation's production and distribution processes. *Capture Wales* demonstrates how such a commitment is being actualised through the use of digital media. In Wales, a nation of only 3,000,000 inhabitants, it was felt that a significant impact could be made with the available resources and *Capture Wales* was launched in 2001. Since that time, the project team has facilitated the making of more than 500 stories by members of the Welsh public (at the time of writing, the project continues), and has been both the catalyst and archival framework for the larger Digital Storytelling movement in Wales. Numerous examples of the form can be accessed online, but for an understanding of the tone and framing of stories in the *Capture Wales* model visit www.bbc.co.uk/digitalstorytelling.

Digital Stories are short multimedia pieces recognisable by their 'scrapbook aesthetic' (Meadows, 2004). More often than not, they consist of

a voiceover and images (photographs, clippings, scans and home video) and are sometimes accompanied by a musical soundtrack. At about three minutes in length, and with a script of approximately 250 words, their tone is often intensely personal, and their narrative deliberate. Digital Storytelling in the *Capture Wales* model is facilitated through group workshops, with up to ten stories being made simultaneously on individual laptops. The ten participants will have a mix of technical competencies; with some having limited or no experience of using computers, and most having no prior appreciation of the particular utilitarian and artistic implications of the digital media. Workshop participants take part in group sessions devoted to story development (the Story Circle) and Image Capture, followed by training in the use of software for image manipulation and video editing purposes (Adobe Photoshop and Premiere respectively). This broadly follows the Californian model of the Center for Digital Storytelling (see www.storycenter.org), which was introduced to Wales via Lecturer and Photojournalist Daniel Meadows (see www.photobus.org). *Capture Wales* workshops run over five days (non-consecutive) and culminate in the public screening of all stories for storytellers, their friends and families. These screenings are invariably charged with emotion, because of both the affective resonance of the stories, and the climax of group investment and endeavour. Stories are told on any and every topic imaginable, most frequently on family, memories, journeys, passions, communities (of all sorts), and local history. Thus, it can immediately be seen that the emphasis is very much on personal and collective memory.

Before looking at Digital Storytelling as a specific new media form in which the performance of personal memory is encouraged and framed, I will begin by outlining in brief the theoretical terrain of narrative memory, particularly the uses and impact of autobiographical memory.

Narrating the self

Narrative memories can be differentiated from more routine or habitual memories of the everyday in that 'they are affectively coloured, surrounded by an emotional aura that, precisely makes them memorable' (Bal, 1999, p. viii). The fact that such memories are accompanied by often physical responses and seemingly tangible feelings makes them of continued relevance and ongoing personal investment. The telling of these narratives is often rehearsed and almost universally socially constructed (as 'socially appropriate narrative forms' according to Zerubavel, 2003, p. 5). This allows the teller to maintain a sense of mastery and authority

as the 'director-narrator', a term used by Meike Bal to describe the role of the 'rememberer' in these instances (Bal, 1999, p. viii). The majority of research undertaken in this field has concentrated on narratives of trauma as a specific psychological practice (Bennett and Kennedy, 2003) with the most vivid and ongoing discourse concentrating on the Holocaust, and more recently, the attack on the twin towers on 9/11. Trauma narratives are increasingly recognised by the public and in the media, and are not insignificant when looking at a form such as Digital Storytelling which is increasingly employed as a tool for narrative therapy or even digital 'healing' (See e.g., http://www.silencespeaks.org or http://storiesforchange.net).

There has been significantly less research, however, on the subject of autobiographical or personal memory (which is not to suggest that the terms are interchangeable), and the ways in which such constructions utilise aesthetic practices. The definitions, significance and appeal of autobiographical memory as a practice of episodic memory remain contested (see Conway, 1990; Larsen, 1991; Ross, 1991; Conway, et al., 1991; Beike, et al., 2004, for example), and there are a number of aspects of these discussions that can usefully inform our thinking about Digital Storytelling.

Life story creation has never been more encouraged than in our current social climate where 'self stories proliferate' (Frank, 1995, quoted in Crossley, 2003, p. 109). Numerous books, websites, television programmes and museums encourage the telling of personal narrative in the hope that individual and social coherence can be achieved. The creation of 'life story' as a practice of identity construction and solidification (particularly in the latter stages of life) is seen by Dan P. McAdams as an 'act of psychosocial and social *responsibility'* (McAdams, 1993, p. 268), the result of which can be a positive ordering of experience and even *healing* (for more on the creation of life-story or narrative healing see White and Epston, 1990; Finnegan, 1997; McLeod, 1997; Crossley, 2003). Recognised by Zerubavel in 2003 as 'emplotment' (a term first used by French philosopher Paul Ricoeur, 1984), the purposeful making of connections and imposition of narrative form can help individuals to locate meaning. This type of undertaking thus becomes a 'retrospective mental process' (Zerubavel, 2003, p. 13), itself perhaps an integral part of the life narrative being created. This process is not without criticism and is open to accusations of nostalgia, escapism and even narcissism, at the same time as the rhetoric surrounding such practices focuses on responsibility and empowerment.

Whatever one's opinion on the motivation behind and individual or social consequence of such activity, it does seem clear that autobiographical memories can be characterised and are facilitated by self-reference. Although there is no absolute and accepted definition, Conway (1990) usefully highlights the following as features that such memory might include: personal interpretation, variable veridicality, long memory duration, imagery and something of the experience of remembering. To Singer and Blagor (2004), 'self-defining memories' are vivid, affectively intense, repetitively recalled, linked to other similar memories and often represent unresolved conflicts or enduring concerns. In both of the above theoretical scenarios, autobiographical memories begin to take on some of the inherent qualities of multimedia. The variable veridicality, (possible unfaithfulness to fact), which Conway sees as inherent to autobiography, does not serve to undermine the process of life writing. However, it becomes an interesting, crucial, and revealing aspect of it: the unreliability of constantly rewritten memory and the inescapable selectivity of life writing are less usefully viewed as problems than as integral parts of the enterprise of making meaning of one's life as narrative (Neilsen, 2006). It perhaps follows that selective representation (whether viewed as integral or problematic to the process of life writing) is more easily achieved through the use of digital media, with their layering, duplicity and disregard for the 'aura' of the original (Benjamin, 1969).

It also follows that digital media frustrate the notion of the *audience* for the 'written' product. It has been suggested that in order for autobiographical memories to become authentic or even felicitous there needs to be an element of 'narrative witnessing' (Kacandes, 1999, p. 55). That is, there must be a teller and a listener in order for narrative of this kind to be successfully created. The opportunities afforded by the digital archive indicate a potential for *global* witnessing, but there is little or no evidence to suggest that this might be felicitous in the same way that immediacy of witnessing and response might be.

Autobiographical memories make up a high percentage of the Digital Stories made in the *Capture Wales* model. The emphasis on both personal memory and artefacts (photographic, video, objects and the teller's voice) and thus often a sense of *the past* translates into stories that are affectively intense, often of enduring personal import, yet *true* only in so far as the teller deems appropriate. As has been referenced above, such memories might be constructions, creations or even manipulations, but the process of 'emplotment', as individual venture, and as collective

experience, remains significantly under-researched: 'What do personal memories feel like? How do they make the rememberer feel?' (Beike. et al., 2004, p. 7).

These questions were at the heart of a three-year empirical investigation into the *Capture Wales* project and its participants. In this investigation 118 storytellers were followed up on their experiences of taking part in the group Digital Storytelling workshops through surveys and interviews in a longitudinal study. At the time of carrying out the research, this represented a significant proportion of project participants, with a response rate of more than seventy per cent (attesting to the positive experience of thinking and talking about the workshop process for most). Other findings relating more specifically to the BBC as orchestrator of the project (the aims and objectives of the project and how these relate to notions of public service), and what participation tells us about the implications of Digital Storytelling for democracy are presented in Kidd, 2005, and Kidd, 2009. The remainder of this chapter will focus on how their responses inform debate about digital memory practices more specifically.

The workshop process as performance of memory

The Capture Wales workshop is principally a group process, and as such is informed by a discursive community particular to that very time and place. The use of group story sessions encourages, indeed necessitates, the externalisation in spoken narrative form of experiences and memories of personal importance. This is achieved in part through the playing of dramatic games; telling a story in the time it takes for a match to burn for example, or making seemingly nonsensical stories using random words donated by group members. The emphasis here is not on the writing of stories (often there are people in the room who find this uncomfortable or challenging) but on their telling. Only after taking part in these activities are participants encouraged to talk through their story ideas one by one. It is hoped that they will now feel confident in using their *real* voice and respond to each other generously and sensitively in what Barbara Kamler terms a 'group conference' approach to feedback (Kamler, 1999). As a result, all individuals in the room suddenly find they are both interested and invested in the final look and feel of others' stories, engendering a unique and supportive environment that many liken to a family.

There is no doubt that these activities and opportunities for group feedback impact upon the story individuals choose to tell, and the ways

in which they present it for optimum clarity and significance beyond the *self*. In this sense, it is true that 'individual psychology and group psychology are inextricably intertwined' (Brewer and Miller, 1996, p. 21). In all but one instance I have encountered, participants have felt this to have a positive impact on their storytelling experience. The practice of converting the externalised story into solidified digital form in turn encourages further consideration of how audiences will receive it, and the constructed stories (perhaps unsurprisingly) begin to take on 'socially appropriate forms' and conventions. Philip Neilson, in writing about his own experience of taking part in a Digital Storytelling workshop recognises such conventions: 'Once a self-story is externalised, people do to some degree automatically begin to perform to genre expectations' (Neilsen, 2006). It is this notion of 'performance' that I would like to consider in relation to Digital Storytelling and memory.

Richard Schechner (performance theorist and practitioner) highlights the functions of performance as follows: 'To entertain. To make something that is beautiful. To mark or change identity. To make or foster community. To heal. To teach, persuade or convince. To deal with the sacred and/or the demonic' (Schechner, 2006, p. 38). We have seen that the use-value of autobiographical memory has much in common with these functions, and so too does that of a Digital Story. Participants, in contributions to the research study, highlighted a number of motivations for, and outcomes of, creating a story in this manner; that it might be entertaining or aesthetically rewarding (for both teller and witness) in its finished form, that it can explore and contribute to ideas of *self*, that it might provide catharsis or therapeutic value or pass on a message born of experience.

That performance is capable of arousing emotion and providing possibilities for 'cathartic uplift' is recognised by Martin Esslin in his study of *The Field of Drama*: 'The release of deep emotion and profound insights ... can be, frequently has been and still often is, an important objective of dramatic performance' (Esslin, 1987, p. 133). The *Capture Wales* workshop process encourages such performance within a number of different frames; the initial Story Circle session, during the recording of a soundtrack and in the replay of the story in different (perhaps infinite) contexts. All of these performances will be influenced by the unique cultural, social and historical *present* within which they take place and the differing audiences who *witness* them.

For example, the use of dramatic techniques to encourage individuals to voice their memories in the Story Circle inevitably impacts upon the construction of those memories, their final form and their relative

coherence. This process could be described as a performative remembering, that is, that the vocal utterance itself significantly impacts upon the solidity of that memory. Not only has it been spoken, but it has been witnessed also; you have performed the memory. These memories will also have been rehearsed over time internally, and as they are told to various other audiences. Once a script has been finalised, it will again be rehearsed, both within and outside the group, before being recorded as audio and used alongside other media in contribution to the finished piece. These 'considered narratives' (Meadows, 2007) are more deliberate and concrete as a result of these various processes, and perhaps more meaningful both to the storyteller, and that story's various witnesses. As in Barbera Kamler's *Stories of Aging* project, the piece becomes 'a highly crafted text – rather than an anguished outpouring of self' (Kamler, 2001, p. 58).

The story will go on to be performed time and again within the archive available online, viewable by anyone with the means and the motivation to watch. Some of the stories will also be shown on the Welsh digital television channel (BBC2W), on *Wales Today* (the regional evening news programme) and very occasionally in network slots. More recently they have also been available to view in the UK under the *Your Stories* red-button option on satellite and cable. To unpack something of the use-value of Digital Storytelling as a performance of memory I intend to highlight some of the responses of individuals involved in the creative endeavour of *Capture Wales* workshops, concentrating on how this kind of memory work can contribute to notions of self, and on the ability of many participants to enact a catharsis through these means (although not exclusively in narratives of trauma).

Digital selves

It will continue to be the case that any adequate conceptualisation of the self will have to take into account the capacities and limitations of human memory, while on the other hand, any adequate theory of memory needs to take into account the central role of the rememberer who has goals and emotions, rather than a straightforward and impartial system for recording events (Baddeley, 1991, p. 17). The notion of *self* has been much debated, moving from a notion of 'whole'-ness to an increasingly fractured, contradictory set of *selves*, an unstable positioning; the *subject* of external forces (Sarup, 1996; Hall, 2000; Crossley, 2003; Weedon, 2004). It is perhaps fruitful, in this discussion, to imagine *self* in those terms used by Alan Baddeley above, and by Martin Conway

in his study of autobiographical memory – that our idea of self 'refer[s] to a set of memory structures which represent specific-self knowledge' (Conway, 1990, p. 90). That is, that self and memory are complexly intertwined, with both having personal significance particular to the individual. Narrative remembering is one way in which we can come to know our selves, a process which is informed by the specific social and cultural context within which we remember.

These multiple fractured selves are perhaps more easily and urgently represented through digital media than any other; being involved in digital practices enables us to explore such dislocation and multiplicity with unique personal significance, and as publicly or privately as we wish. One must be careful before asserting that such exploration is universal or, in actuality, even very *new* at all. As Rabinovitz and Geil assert, it is crucial to avoid the myopic 'rhetoric of newness' and an outright denial of continuity in these practices (Rabinovitz and Geil, 2004, p. 2). That said, many respondents to the research found the *digital practice* of specific value in telling their particular story. For example: 'I am quite proud of it because it was, they help you, but you do it, the editing and using all the software. So whenever I am feeling useless or something I'll think 'Oh yeah, I did that, and that was alright' [all respondents are quoted anonymously].

The focus of *Capture Wales* on stories of difference and variability and not on commonality (beyond the notional boundary of *Wales*) encourages reflection on individuality and not the collective as core narrative. Within our various social and personal realms, we are rarely, if ever, encouraged to think crucially and critically about the nature of our *self* and how it has been informed by our individual *histories*, (a concern with the personal often being dismissed in favour of dialogue about community and inclusion). But artistic work can inspire such reflection: 'I do believe that the process of storytelling often engendered by participatory video gives light to instances of intense self-investigation' (Rodriguez, 2001, pp. 118–19). This certainly rings true for many of the *Capture Wales* participants I questioned about their experiences. Two respondents who articulated the process very clearly as being in some way about *self* exemplify this: 'It was uncomfortable initially to be so open about yourself with a group of strangers but it was an incredibly beneficial, self developing experience' and:

> I found the process of telling impromptu stories produced most remarkable results and a great deal of unforeseen emotion all round ... normally I am not the most forthcoming of people about personal

matters, yet I joined in. There was a degree of catharsis all round … to encounter so many tears amongst what were basically strangers is something I find novel.

Indeed, it is often precisely because this is (initially) a group of strangers that one feels enabled to be so open.

It is no surprise then that we see the 'self-defining memory' taking prominence (although not universally). It follows that the use of 'considered narrative' can lead to *the* story of one's life being the focus – the one-off statement that one feels able to contribute that (crucially) might make you feel you have made a difference. This is especially true given that most participants are making a one-off story, and possibly even a one-off intervention, into their own personal photographic archive as a source. The motivations participants give for deciding to tell their particular selected narrative bear this out:

> I wanted to tell this story in the hope that it might inspire people and make them realise that life is there for the taking.
>
> I wanted people to appreciate how important and how fragile we all are and how it affects us when we lose those very special people in our lives.
>
> I feel that if my story gives just one victim, man or woman, the courage and incentive to get out of a similar situation and turn their lives around too, then my story will not have been made in vain.
>
> I hope it acts as a deterrent for other young people who are thinking of following the same road as I did.

The 'I' of the director-narrator comes through very strongly here, as does recognition of the witness. Also evident are participants' beliefs in the transformative possibilities of encountering narrative, both for the storyteller and the audience (narrative has the power to 'document', 'capture' and even 'relive', but also the power to 'incentivise', 'inspire' and 'deter'). The personal reference is also evident in their consideration of story-making (including self-investigation as outlined above) as something that will impact upon them well into the future:

> Telling my story felt as though I had lifted a heavy burden from my back. The slate was clean and I could move on. That period of my life now had a line drawn under it.
>
> It changed my life.

[The story intends to] officially announce the end of my dream – a bit of self-therapy if you like.

'I feel I have left something which will still be here for others to see long after I'm gone.'

These vocalised rationales are both concrete and autobiographical in their focus, as are the resultant narratives. Stories such as 'Self', 'Who am I?', 'Family History/Lies' and 'Unanswered Questions' (all available at www.bbc.co.uk/capturewales) give unique insight into the importance of creating a coherent life story and the frustrations inherent in discovering that this might never be possible.

The occurrence of narratives of trauma, although not actively encouraged, is unavoidable in such a context. In narrative therapy techniques, the externalisation of personal stories can help one to recognise and escape the oppressive dominant narratives of *normal* social life (White and Epston, 1990), and to resolve ongoing problems and tensions. The re-establishing of a sense of control over and order in experiences, the recasting of chaotic experiences into causal sequences and the retelling of stories can all aid problem-solving (McLeod, 1997, p. 36). Public disclosure of this process has become an increasing practice (in the media and in cultural institutions more generally) and we increasingly learn to speak the language of therapy. As we have started to see above, many of the *Capture Wales* participants utilise this language in order to describe their experiences of the Digital Storytelling process:

It was pure chance, coincidence or fate even that I made my film [...] Yes, I had a story to tell and in a strange way telling this story would be putting the past to sleep, a moving on process.

Telling and making the story was a kind of a catharsis.

Personally I gained a lot emotionally from my experience because of the story I told. It was therapeutic for me and my family.

In a way I won't go into detail over, it has helped to lay a personal ghost.

One-third of respondents recognised the experience as being of value in these terms, although none were prompted by the researcher to give such an analysis. This is perhaps unsurprising given the emphasis of the form on personal (often photographic) archives. Stories about overcoming events, illness, literal and metaphorical journeys, bereavement, grief, family and childhood are common, particularly with participants

who are older and might be considered to be more inclined to 'retrospective mental processes' as part of the formation of their overarching life story:

> Being a photographer you left us the legacy of your pictures [...]. As the eldest I have vivid memories of helping you to make prints in the darkroom.
>   I never wanted to be a Dad but sometimes the things we think we don't want are the ones we need the most.
>   This is my message in a very new bottle, set adrift in time
>
> [The above are all extracts from stories]

The last quote above explicitly references story making as a digital memory practice, acknowledging its 'new'-ness, direction of influence and supposed permanence. Younger participants are more likely to tell stories concentrating on their passions (often hobbies), or to talk about negative power relations and stereotypes as complicating factors in their lives. Again this is in keeping with their status within the chronological formation of life-narrative (for a detailed exploration of this process see McAdams, 1993):

> If you think this is all I am, stop, take note.
>   I'm…a regular 14 year old but with a very big pink obsession. I'm in love with the colour pink.
>   So what do others think of me? [...] who cares! This is me!
>
> [The above are all extracts from stories]

The variable veridicality inherent to autobiographical memory is an aspect of the Digital Story that it is impossible and, I contest, undesirable to quantify. As Conway says:

> …it may be an important feature of autobiographical memories that they are never true in the sense that they are literal representations of events, and in this respect it makes little sense to ask whether an autobiographical memory is true or false. (Conway, 1990, p. 9)

Such memories may be true only in so far as the teller recalls or the photograph can be interpreted and this has ramifications for the *authenticity* of the archive as a whole. One particular Digital Story exemplifies this, taking the unknowability of past truths as its central exploratory

tension. Alys Lewis' story 'History or Mystery' opens with the line: 'The following stories bear little or no resemblance to the truth'. How can she know, she asks, which if any of the contradictory stories she has been told about her family are true? She concludes thus: 'I will probably never know for sure who some of these people are and whether the tales they told me are true. But to me it doesn't matter'. Although the various tales that are presented are true to Alys' own personal memories and meanings, there is no assertion of accuracy in their use and nor does she desire such objective knowable truth. Alys is able to explore the blur between fact and fiction with great clarity and conviction through the use of digital media: their ability to manipulate and reflect multiple layers being integral to the story and its telling. For another storyteller, Sharon Coates, the process of making her Digital Story 'Scrapbook Storytelling' is an exploration of memory in an entirely different way. Sharon's story details her time spent in hospital and resultant problems with memory: 'my memory has slowly been deteriorating and the most basic things are difficult to remember and never to come back…So, I've taken up scrapbooking'. In this sense, the Digital Story gives Sharon another way of scrapbooking life; a sense of permanence and an antidote to amnesia (rightly or wrongly) entrusted in the new media.

Thus, *Capture Wales* participants' stories, their motivations and reflections tell us much about the impact of performing memory through this particular process and form. The BBC Wales workshop team, in collaboration with the group of storytellers and a raft of digital tools, engenders a positive and reflective space for individuals to engage with their memories and often, as has been seen, to lay their personal ghosts to rest. Interestingly, this does not stop at the workshop door. The stories, once on the website and accessible worldwide, often inspire *the audience* to reflect on their own memories and experiences, hinting at the potential for ongoing dialogue and interactivity:

> As someone who has MS I found this story inspiring [online comment from Hemel Hemstead, UK]
>
> My own memories were dragged out from deep within looking and listening [Panama City, US]
>
> I enjoyed the story because it was so 'true' and 'real' [Swieki, Malta]
>
> Memories are flooding back [Penarth, Wales]

Thus, exemplifying how global narrative witnessing might begin to further affirm digital memory practices, and the rememberers themselves.

Conclusion

The infinite creation and re-creation of memory can be recognised as a performance in the present. The stories produced as part of the *Capture Wales* initiative exemplify the use-value of this kind of practice for individuals who are not only unfamiliar with narrating their *self*, but also with using multimedia as a means for achieving such exploration. For most participants whom I have been in contact with, this remains a one-off investment of time, emotion and creative endeavour. But with Digital Storytelling groups now in motion all around Wales, it is increasingly likely that this growing practice will result in the creation of multiple narratives more truly reflecting the fragmentary nature of self, complicating the idea of the collective and frustrating the idea of the knowing archive.

Memory, although recognised as a personal act 'belonging to a psychological sphere', is simultaneously 'culturally *mediated* through language and convention' (Bennett and Kennedy, 2003, p. 7); in this sense, the differentiation between personal and collective memory is flawed, and the notion of an archive dedicated to either a spurious one. There is no desire to assert the *Capture Wales* archive as a collective knowable memory of Wales as a nation or a people, only to see the stories as extraordinary individual achievements that sit within a common frame of reference. As we have seen, the notion of the archive in the digital age is hugely problematic:

> But how reliable or fool-proof are our digitized archives? Computers are barely 50 years old and already we need 'data archaeologists' to unlock the mysteries of early programming [...]. Indeed, the threat of oblivion emerges from the very technology in which we place our hopes for total recall. (Huyssen, 2003b, p. 25)

The idea of permanence itself has become myopic, and archives (full of *wholes* yet simultaneously full of *holes*) go against the very notion of memory in the twenty-first century.

What the *Capture Wales* project does achieve is recognition of the differences and variability between people; at the same time, it does not discount the possibility of grand universal narratives. Stories are spoken in the individual voice of the teller, who is responsible for their tone, truth (or otherwise) and relative personal ongoing use-value. Hamish Fyfe recognises this in his analysis of *Capture Wales* as living memory:

> It seems to me that every community has a memory of itself...a living memory, an awareness of a collective identity which is woven

from a thousand stories. The sum of these stories creates a meta-narrative that is far greater than the sum of its constituent parts. The 'stuff' of this narrative is the quotidian experience of people's everyday lives. (Fyfe, 2007)

Memory *may* be unreliable, autobiography *may* vary in veridicality, the 'stuff' is most certainly constructed, but there is no doubting that the *Capture Wales* 'living memory', enabled by digital media and growing day-by-day, is more democratic, responsive, aware and in this respect ironically *true* than any other within the mainstream media in Wales.

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10
Remixing Memory in Digital Media

Shaun Wilson

> When I was in Rome in the fall, I became more preoccupied
> than normal by the idea that machines might unforgivingly
> record and store all memories. What would we do if certain
> words or events were not allowed to pass? How would we, how
> could we, face the present, the future, ourselves and each other
> without the imprecision of human (social/cultural) memory?
> Can we even say that what machines remember is what we nor-
> mally call our memories?
>
> (Galloway, 2003)

Since the advent of Photoshop, digital remixing has introduced the
practice (and acceptance) of unlimited copying, which brings into ques-
tion the legitimacy of authorship and an ongoing issue of memory. As
Galloway proposes a notion of machines remembering in ways that are
not affected by 'the imprecision of human (social/cultural) memory'
(Galloway, 2003), then remembering processes employed by machines
are not unlike the synthesis of manipulation located at the core of post-
modern culture throughout the late twentieth century. To use such
practice in context of documentation brings into question the validity
of history and the memorialised past that further poses a larger issue:
which version of the past are we articulating?

As humans have, for millennia, sought to document histories through
the forwarding of information by means of story telling, pictures and
written text, technological methods have introduced metanarratives, in
particular through online databases, which one might argue have caused
a versioning of the past to be preserved and ultimately re-remembered.
While it is commonplace to position memory in context of the act of re-
experiencing the past, digital media gives rise to an ability to 'version'

and 'forget' through a condition brought about by generational edits of memory. From a phenomenological perspective, the issues that emerge here play out a significant role in both how accounts of the past are recalled from a contextual point of view and how they are then changed and re-experienced through the endless reproduction of digital narrativity. Given this, I will refer to memory not as an internal cognitive phenomenon but rather as an external hybrid state between collective memory and the exterior traces of remembrance found as relics or 'remixes' of the past.

Indeed, the fundamental changes in recent online citizen journalism, such as blogs and wikis, have relied on the remixing and reversioning of memory in such a way as to change the methods of articulating the past through the representation and redistribution of media-rich narratives. Although one might argue that the Internet is a digital storage pen for archiving the past it is, however, by the very process of reproducing information that the stories of the past – our memories – can change or subsequently vanish. These ideas and others are reflected throughout this chapter to not only probe the digital footprints of changing memory but to come to terms with the impact and effect brought about by these new online methods on our understanding and experiencing of the past through memory. My intention in this regard is not to discriminate against these technologies but instead to aim to form a reasoned understanding as to why these effects might occur.

Other considerations will take into account the differences between human memory and computer memory understood by differentiating computers (the machine) from digital media (webpages, software and digital files). As computers were, of course, designed to be flawless in their conclusions and more accurate than even the most intelligent human, these achievements give rise to a comparison between computer memory as *perfect* and human memory as *imperfect*. 'The latter [is] prone to versioning of events, a tendency to fictionalise' (Hilton, 1991, pp. 181, 189) and a risk of deletion from the effects of age or cognitive disruption. Where we used to forget over time, we now have the capacity to perfectly remember (Mayer-Shonberger, 2007, p. 17). Yet, how could such an accurate computational system be able to modify information or forget it entirely? Although human memory can be, at times, flawed, it does play an important role in reclaiming the past from digital archiving. This further connects to other issues related to the validity of collective memory and its subsequent impact on the past as a 'version' not necessarily a factual 'event'. In this context, I regard the past and its subsequent narrativity as three-fold: first, as an event supported

by artefact (first past); second, an account (remix) of the event shared through a combined artefact (second past); and third, a versioned remix of the artefact (third past).

The premise of 'DIY' editing is a problematic situation directly related to these understandings of past structures, especially through the ever-growing democratisation of online publishing and editing. If online database archives such as YouTube and Wikipedia house artefacts (accounts) of the past that are easily altered and versioned by a simple method of editing, then questions must be raised as to the accuracy of such histories if the artefacts themselves have a versioned remixing of something else. Does the factuality of digital media contain an ever-growing disjuncture amongst the democratisation of recording history by means of verifying and, if so, what is to become of a recorded past that has suffered deletions and which, over time, we may forget altogether? A good example is old web pages where the html text survives but the images do not (Nguyen, 2007). These form the basis of what I refer to as a 'deleted past'; systematically echoed in the absence of reference, usually highlighted with an icon or border, hinting that something else was once present in its place. If a third past, however, is to arrive from an absence of original data then the implications for such narratives are immense: weighted with the corruption of a copied past will ultimately misalign a second past into something else.

Nevertheless, to draw out all of these properties in a reasoned manner would require many more pages of discussion so this chapter will focus on establishing a beginning of such dialogue later to prompt further discussion for the reader. I will also consider versioning memories alongside the human desire to preserve histories – our own daily lives – in comparison with online chronicles, which, in the last few years, have blurred any distinction as to the importance of the historic versus personal as a type of public voyeurism. In effect, these methods, not dissimilar to the Roman *Ars memoria* traditions (mental techniques to remember through navigating spatial databases), are recording private moments traditionally reserved for home use and consequently storing, archiving and transmitting such items available for public scrutiny. Despite this somewhat recent acceptance of public surveillance, especially in an post-9/11 era, the need to document the present – from the mundane to the profound – has become prolific. However, our understanding of the past as a 'condition' caused by the collection and assemblage of remixed artefacts (data), as an ongoing sequence of revision to databases, is an area I will explore throughout this chapter.

Collecting the past

One of the earliest databases of recorded history is a collection of Sumerian tablets written in Cuneiform script, a complex pictographical language (similar to html code and emoticons) used from around the third millennium BC onwards. These accounts document the day-to-day records of Sumerian life, surviving today as a glimpse into the recorded past of the ancient world and further, a beginning of modern history. One such example located in the Iraqi Museum in Baghdad and classified simply as 'W-20274, 2' is a record of transactions involving a group of slaves' (Iraqi Museum, 2008), which is obviously part of a wider collection of tablets that form a collection of information categorised as a primitive, yet highly articulate database. The premise behind such records is not unlike early digital artefacts of online blogging, which can be traced back to 1994 when US student Justin Hall began using a rudimentary electronic log book to document his daily life. Hall's blog which ran for eleven years is now accepted as the first blog in online circulation (Harmanci, 2005), which obviously evolved from similar technologies dating back to the late 1980s when disgruntled journalists covering the 1988 US Presidential election began to use electronic noticeboards, later termed 'threads', to foster the beginnings of online 'citizen journalism'.

The blog-tracking website *Technorati.com* estimates that as of January 2008, there were 122.8 million online blogs in circulation covering all thematic spectra of social media. If one considers 2002 data from *Blog Census* which 'place the number of sites calling themselves blogs at over 1.3 million' (Nardi, et al., 2004, p. 222) then this dramatic increase in blog culture over such a short amount of time brings to our attention that collecting and publishing pieces of information from everyday life have arguably renewed interest in electronic archiving, which in time may prove to be historically important. However, when blogging is used as a social medium or a 'life log' (Dodge, 2006), its specific culture and meta-culture are as much about archiving moments as they are to do with creating communities of readers that in turn differentiate a blog from a confessional diary. I suggest that to claim a blog as a diary ignores the fundamental principle behind the medium – blogs are to be read, whereas diaries are private documents kept away from public gaze. Personal blogs – which form a large component of evidenced blogs in current circulation – are in essence an online collection of information describing and personalising moments to be revisited at some point in

the near future. It is at this point I further suggest that the narrativity of blogs ceases to be democratised journalism and in turn becomes an historical archive measured as historical currency in the future. But the other concern located in this idea is at what point should we *stop* collecting materials? One only has to consider *Google's* ability to document user history to then realise that what they are achieving is either the world's most elaborate historical document or a database of secrecy with the potential to be used for more sinister motives. For example, in March 2007, Google confirmed that since its inception it has stored every search query every user ever made and every search result he or she ever clicked on: Google remembers forever (Mayer-Schonberger, 2007, p. 1).

As the medium of blogging is still relatively fresh, we only have a small period from which to draw evidenced examples for reference as indeed the evolution of the medium is still in its infancy. Yet, within this short history of practice, Hall's blog has effectively started a trend of democratised online publishing that now justifies even the most mundane details of self-observation to be publicly available as memory artefact. The effect of this has provided avenues for personal blogging to achieve a transformation of text-based artefacts from personal accounts to memory archives, which over time have become encoded as memorialised history. If the blogger has assumed the role of archivist – preserving memories that over time become a type of second past – then the intent of such claims must take into consideration the practice of personal blogging as a whole instead of random, individual examples. It is in the wider sense that a social collective memory exists as a parallel solution to the role of both historian and journalist.

I am careful here not to term this archive as a 'virtual world', as this implies a separation of space between our own location and something else as if a type of mythical ether that denies co-inhabitancy. Whereas the collective archive is, by its very nature, an accessible storage chasm embedded in our own immediate surroundings. Mike Featherstone (2000) brings to our attention the importance of the archive, but in terms of a shifting construction shared and experienced through a mediating collective who states:

> The sense of incompleteness and shifting sites of archival work is further emphasized by Joyce (1999) who draws attention to the efforts of the changing relationship between the nation and the social. As the 'memory nation' gives way to 'historicized memory', a new massively expanded archive open to democratic scrutiny and counter claims comes into view. (Featherstone, 2000, p. 171)

The immediacy of this scrutiny differs a blog from other methods of communication, such as email, SMS or Messenger, as these transcripts are not primarily constructed as a database, but rather as contributors within an editable database. They are instead a private medium not readily accessed through public readership in the ways that published html text can be accessed. An email inbox is a private arena for user-to-user messages that while still able to archive images and text in a rudimentary fashion does not (in its current form) share the ability to be edited by other users except when individual files are cut and pasted or transmitted through 'reply', 'send' or 'forward' options. Likewise, one might argue that SMS and Messenger are localised chat rooms that obviously do not operate under the same kind of matrix that a blog presents, that is of course until advances in future internet search engines operating from a Web 2.0 capacity (and beyond) can provide access to all stored emails and text messages. These applications do, however, have the capacity of storing information that over time becomes historic just as other digital mediums such as MP3 players, DVD recorders, PDAs and mobile phones achieve the same effect: virtually any electronic device capable of storing and transferring data can be regarded as an archival instrument. While these media all contribute to collecting the past, they are more concerned about individualising memory artefacts whereas blogs are primarily an ever-changing and multi-edited public database, housing an archive of potential messages, still and moving image files, music files, text files, hyperlinks, random and specific scripting, html code, chat rooms, and web counters for tracking site hits (see Nardi, et al., 2004).

YouTube compounds these same types of individualised data in much the same way, but is instead focused on video transactions coded with a secondary level of metanarratives for endless publication of self-edited video files. As Walter Benjamin concludes that 'history breaks down into images not into stories (*see* Gilloch, 1996, p. 112), a transition from oral history to image history has become evident in the way we record, collect and re-remember the present. If we consider that much of the twentieth century was recorded and re-remembered through the still and moving image, perceptions (versions) of first past are a major contributor to a generic collective image-based memory. For example, if the atomic bombing of Hiroshima was remembered as a second-hand event then surely the archival footage of the rising mushroom cloud would prompt us to associate visual memories of the event from newsreel and military footage. We re-remember this event in black and white although most of us where obviously never present or even born at the time suggesting

that the power of image association has a contributing factor when an image-saturated society recalls its past and that of someone else. Equally powerful are the profound images taken by Nick Ut in 1972 of an injured Vietnamese child named Kim Phuc running naked towards his camera after a napalm strike, which for many signifies a collective memory of the Vietnam War. With these examples in mind, the historian suddenly has at their disposal the dramatic power of a singular point-of-view (POV) not dissimilar to how Proust (1982) guides us through his own point of view memories of Combray in *Remembrance of Things Past*.

The instantaneousness of POV digital technology such as still cameras, mobile phones and video cameras has driven trillion-dollar markets to exploit ways and means of recording our every moment with an intention of re-remembering. What drives the commercial viability of these types of products is our inherent desire to gather, share and preserve. The factor of instantaneous is a key issue that I highlight as becoming increasingly important in the understanding of our immediate environments and social networks – phrases such as 'cut and paste', 'delete' and 'back up' are computational directions that have found their way into the vernacular. Boundaries of this shift have obviously affected ways of thinking; after all, thinking in computer terms generates a mathematical historicity, as our lives have become task-orientated. The preservation of the moment can, I suggest, be measured as code: select, record, upload, save as and quit. It is when this code is re-edited that we might consider the reduction of first past, which then becomes generational: memories of the past now become a remix.

Remixing the past

As Manovich claims 'if Postmodernism defined 1980s, then remix definitely dominates 2000s, and it will probably continue to rule the next decade as well' (Manovich 2005, p. 1), then will our understanding of a history memory versus a second-handed facsimile play out any differences in how we relate to second past? Possibly, but in which type of matrix the structure of this question exists will depend on how we define the nature of remixing and its altered state of remixability. In contrast to words such as 'appropriation' implying part modification of an original, 'juxtaposition' implying the bringing of two layers together to reveal each other or 'fakeness' implying a copied non-truth, I use the term 'remix' to describe the condition of an edit that is not restricted to part-modification or transparent layering. Hence, I will discuss second past as a *condition* of remixing.

There has been much discussion recently about the state of remixing on digital media – primarily located within contemporary dialogues of media arts and digital philosophy (see Manovich, 2005) – which generally fits in to two categories: process or product; although these do not do any justice to an already significant issue that, like blogging, is still in its infancy. But since the introduction of software such as *Photoshop* it becomes clear that our association with digital alteration has affected our relationship with both first and second pasts, and the very methods through which we remember (and consequently don't remember) information. Now more than ever, the tools needed to alter and replace digital information are so readily available as software and downloads (for example) that online editing has changed its purpose from modifying content to selectively controlling content.

An example can be found on wiki-generated websites that exist as unrestricted editing platforms allowing virtually anyone with a computer and internet access to update and revise the contents of its published pages. The interesting part of these types of websites is found under each page 'history', which reveals generic listings of versions of edits made and tracked through its individual lifespan. What might be published in early edits may differ or simply disappear from later edits or have been consequently buried under the mounted weight of versioned remixes not necessarily related to its form.

> Wikis allow for collaborative communities that can share knowledge and ideas with minimal technical know-how, so that any user can be a writer, editor, and content creator and groups can harness collective intelligence to coauthor documents. In this case, 'voice' is not an individual, but a collective expression, which involves structured debate and discussion about the form a group's wiki takes. (Rheingold, 2008, p. 110)

Wikis are, in many cases, an online database controlled by the action of editing, enabling anyone to create a second past from the remixing of information – not just limited to text and images – by simply deleting or replacing data that might never be considered valid again. Wikipedia exists as a myriad of information that has, at some point changed or is consequently buried in successive edits. Memory of the original information may fade over time or simply be forgotten, just as the acceptance of informational validity may change over time. Editing in this regard becomes a way to change the context of the past as found in examples from other online databases such as YouTube,

which further illustrate this condition with the publication of re-edited films and videos combining two or more separate sources, commonly referred to as 'video mash-ups'.

One such example titled the *Vader Sessions* (2007) features an opening scene from *Star Wars: Episode 4: A New Hope* (1977) over dubbed with edited voiceovers from actor James Earl Jones except that the dialogue is remixed from other films. On the surface it is obviously a playful attempt at contributing yet another popular culture-themed mash-up on YouTube but the condition that it establishes forms on the one hand, a rupture of narrative by replacing part of a dialogue with another and, on the other hand, the weighted memory of an original image is repositioned through its facsimile (Wilson, 2006, p. 35). It would be quite simplistic to regard this as merely adding one part to another in order to form a whole, as this premise concerns itself with process and product. Instead, I am interested in exploring *beyond* these actions to the condition implied for memory and its relationship to the past.

We see this condition when digital files are copied; 'digital.jpg' becomes 'digitalcopy.jpg'. As the clone file is opened, what we are experiencing is a version of the original file, not a duplicate. The content may be exactly the same as its other, even the metadata are almost identical, but the glaring difference is found in meta-narrative; it has ceased to be the original file and is now positioned as an 'other'. At a deeper level, one might think of the condition arising from remixing as reflecting a fundamentally human desire to rebuild and change. Like our desire to collect from the present, there also comes an equalled desire to improve it through alteration.

In its basic form, editing simply means 'to shape'; however, the implication of this also suggests that part of a whole will be removed and discarded in order to complete the entirety. From a historical view, this practice has been an ongoing cultural basis.

> Ancient Rome remixed Ancient Greece; Renaissance remixed antiquity; nineteenth century European architecture remixed many historical periods including the Renaissance; and today graphic and fashion designers remix together numerous historical and local cultural forms, from Japanese Manga to traditional Indian clothing. (Manovich, 2005)

The implications of editing memory, from bias, error or incidentalism connote the layering of different versions of recollections embedded within digital files. We find this in the history page of wikis in as much

as the altered states of archived images doctored in iPhoto, to the sonic alterations of audio files in iTunes or the actions of compositing software remixing layers of images together. We find editing options in the posting and re-posting of blog pages, redistribution of RSS feeds, email applications, list serves, mobile phones and other hand-held telecommunications devices, digital still and video cameras, internet fridges and personal satellite navigation systems; the growing list is endless. Yet, with all of these editing options saturated throughout digital media, I suggest that our over-indulgence of an 'edit desire' risks the possibility of 'dumbing down' a sense of memory because there is very little need to engage memory when histories of all manners can be accessed with a few clicks. With the need to remember diminished, a remixing culture might create a situation where much of our daily media content has ultimately been reshaped so many times that the history of a first and second past may completely vanish altogether leaving the over-versioned artefact weighted with incalculable layers of forgotten history.

'Borges, in his famous short story, *Funes, the Memorious*, tells of an Uruguayan man who is haunted by his inability to forget anything, thus making living a normal life impossible' (Bannon, 2004, p. 4). Imagining this outcome might seem strange when the notion of forgetting is thought of as a human weakness or a computer defect. Indeed, an accurate memory might be considered to be what Cicero claimed in *De Oratore* (Sutton, et al., 1959) as a 'stronger memory'. In the case of digital media I suggest two reference points when considering precisely this issue: first, the relationship between human memory and computer memory and, second, the condition brought about by third past.

Forgetting the past

A fundamental difference between human memory and computer memory is that the latter cannot (yet) feel emotion whereas the former is profoundly influenced by emotion. Forgetting is part of the human condition as there are certain instances where traumatic or painful experiences are desired to be forgotten and thus remembering stops being a desired task and instead becomes a feared state. Computers on the other hand can and *do* forget but on a different level; caused by user deletions, crashes, viruses, re-installing and software-enabled cleaning. It would then be permissible to suggest that humans have an inbuilt capacity to voluntarily (and involuntarily) forget, while computers are told *what* to forget by calculations, actions and scripting. The condition of forgetting through digital media is, however, quite different.

Let us return to the story of the vanishing data found in a disused html page. The images are gone and marked with a question mark icon. The hyperlinks lead to web pages that no longer exist. The graphic content is stripped to text and outlined columns and the page itself has not been updated for several years. Yet, the skeleton html code remains as if a digital ruin on an abandoned locale. Echoes of the forgotten web page are a reminder that the digital can show signs of ageing. With a click of the delete button or the drag of the mouse to the Trash, a file and its remembered history can vanish from existence. In the case of a disused web page, what is left around the space of the former still displays signs of the previous host. In the same manner, a bricked-over doorway can reveal a former entrance by the traces that surround its border – the doorway still exists but has been replaced by something else on top of its original form. The same can be said of a third past – these states are the traces of an original memory buried under the various edits and remixes that the file has undergone, but unless one knows where to look this may be impossible to find. Hence, if a second past is the condition of remixing then a third past is the condition of forgetting.

These ideas have surfaced in recent discussion that conceives forgetting in digital media as a necessary condition rather than a dysfunction. According to Dodge, a set of ethics needs to be put in place to allow for the nature of forgetting to be a part of the very condition that memory and history share together in digital archiving as he claims that '[...] forgetting is not a weakness or a fallibility, but is an emancipatory process that will free life-logging from burdensome and pernicious disciplinary effects; as Nietzsche suggests, forgetting will save humans from history' (Dodge, 2006, p. 5).

Dodge proposes a structure with two types of memory – thin memory (the factual account) and thick memory (the emotional identity) – to then promulgate a notion of computer memory possessing emotion. His division between 'thick' and 'thin' memory obviously characterises the differences between how computers and humans remember, so to consider the idea of computer memory becoming more 'human' establishes a premise for digital media to be versioned and eventually forgotten.

> [O]ne should envisage necessary processes of forgetting, following Schacter (2001) six forms, that should be in-built into the system ensuring a sufficient degree of imperfection, loss and error. The goal is to make the system humane and yet still useful [...] it is not the adding of false memories, but rather 'tweaking' of a past event. (Dodge, 2006, p. 6)

Subscribing to this method would suggest a redefining of what a computer as a machine can achieve, no longer perfect and subject to the same fallibilities, conditions and nuances that human memory can experience. But it also radicalises human-computer interaction. 'If it is characteristic of human memory to be defective – to fictionalize, to fantasize, to be forgetful – is it always such a help that the computer is not like this at all' (Bannon, 2004, p. 9)? Moreover, '[t]aking this stance, it is possible to query the accepted wisdom of the relation between the human and the machine in the context of memory' (Bannon, 2004, p. 21).

Even so, a third past is of concern when its condition affects our understandings of the past itself to misinform, through unintentional means, in the same manner as the order simulation theories of Baudrillard who suggested through his discussions on simulacra and simulations (see Baudrillard, 1998, p. 166) a three-level system measuring degrees of realness and hyperrealness in cities. The third-order simulation 'produces a "hyperreal" – that is, a world without a real origin' (Lane, 2000, p. 89). Likewise, third past would operate in the same manner, with exception to its originality being concealed by remixing rather than vanishing altogether. I liken this type of past with colonial histories: after the occupier invades a nation, the history of such a place might be fictionalised, edited, forgotten or replaced with something else (e.g., the early white settlement of Australia).

In any case, forgetting the past is as much to do with the experience of memory as it is to come to an understanding of histories. If we consider the presence of embedded memory (and its narrativity) in digital media then the loss of history can occur when, for example, blogs are deleted from servers or page-history edits are deleted from wiki pages. Deletion thus becomes a factor in the loss of memories and histories. As the burning of the great library of Alexandria destroyed much of our knowledge of the ancient world so too, I propose, deleting data can be dangerous to historicised memory. Moreover, as our discussion has focused on the potentiality of digital media undergoing a 'condition' of memory, implications for the past as a set of histories have brought into question issues of originality and validity in the ways in which we document and publish our everyday lives. As I claim that the central issue to this question concerns the nature of online editing and remixing, the practice of versioning the past as a 'condition' will ultimately reflect an ongoing series of revisions to the past (as we know it), which will change the past from an account of an 'event' to a 'version' of an event. These potential versions may re-articulate the past – consequently changing our perceptions of human history and the unwritten memories of our pending future.

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