

Contents

<i>Notes on Contributors</i>	vii
Introduction	1
Part I Digital Memory Discourses	
1 The Mediatisation of Memory <i>Andrew Hoskins</i>	27
2 Saving Lives: Digital Biography and Life Writing <i>Paul Longley Arthur</i>	44
3 Rewind, Remix, Rewrite: Digital and Virtual Memory in Cyberpunk Cinema <i>Sidney Eve Matrix</i>	60
Part II Digital Memory Forms	
4 Memobilia: The Mobile Phone and the Emergence of Wearable Memories <i>Anna Reading</i>	81
5 Remembering and Recovering Shanghai: Seven Jewish Families [Re]-connect in Cyberspace <i>Andrew Jakubowicz</i>	96
6 Archiving the Gaze: Relation-Images, Adaptation, and Digital Mnemotechnologies <i>Bruno Lessard</i>	115
Part III Digital Memory Practices	
7 MyMemories?: Personal Digital Archive Fever and Facebook <i>Joanne Garde-Hansen</i>	135
8 The Online Brazilian Museu da Pessoa <i>Margaret Anne Clarke</i>	151

vi *Contents*

9	Digital Storytelling and the Performance of Memory <i>Jenny Kidd</i>	167
10	Remixing Memory in Digital Media <i>Shaun Wilson</i>	184
	<i>Selected Bibliography</i>	198
	<i>Index</i>	201

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

2 Introduction

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' (Huysen, 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.

4 *Introduction*

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 mediatized memory records of the post-broadcast era are in some ways easy to delete or lose, the emergent

6 *Introduction*

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 continual 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 benefit 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 participatory 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 galvanise 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 underpin 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 degradation 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*TM 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 memories 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 testimonies) 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 newness, 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 remembering other media. 'New digital media are not external agents that come to disrupt an unsuspecting culture. They emerge from within cultural 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 memorialisation 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 representation', the composition of media objects from digital code, a mathematical 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 memory is embedded in a post-industrial landscape of 'individual customization' (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>).

References

- Angel, Maria and Gibbs, Anna (2006) 'Media, Affect and the Face: Biomediation and the Political Scene,' *Southern Review*, 38: 2, 24–39.
- Assman, Jan (1995) 'Collective Memory and Cultural Identity,' *New German Critique*, 65, 125–133.
- Bartlett Frederic, C. (1932) *Remembering: A Study in Experimental and Social Psychology* (Cambridge: Cambridge University Press).
- Baudrillard, Jean (1994) *The Illusion of the End* (Palo Alto: Stanford University Press).
- Becker, Ernest (1973) *The Denial of Death* (New York: Simon and Schuster).

20 *Introduction*

- Boden, Deirdre and Hoskins, Andrew (1995) 'Time, Space and Television'. Unpublished Paper Presented at the second *Theory, Culture & Society Conference, Culture and Identity: City, Nation, World*, Berlin, 11 August 1995.
- Bolter, Jay David and Grusin, Richard (2001) *Remediation: Understanding New Media* (Cambridge: MIT Press).
- Broderick, Mick and Gibson, Mark (2005) 'Mourning, Monomyth and Memorabilia' in Dana Heller (ed.) *The Selling of 9/11* (New York: Palgrave Macmillan), pp. 200–220.
- Brown, Roger and Kulik, James (1977) 'Flashbulb Memories', *Cognition*, 5, 73–99.
- Castells, Manuel (2001) *The Internet Galaxy* (Oxford: Oxford University Press).
- Cottle, Simon and Rai, Mugdha (2007) 'Global Mediations: On the Changing Ecology of Satellite Television News', *Global Media and Communication*, 3: 1, 51–78.
- Derrida, Jacques (1994) *Spectres of Marx*, Peggy Kamuf (trans.) (London: Routledge).
- Fukuyama, Francis (1992) *The End of History and the Last Man* (London: Hamish Hamilton).
- Gleick, James (1999) *Faster: The Acceleration of Just About Everything* (London: Little Brown and Company).
- Green, Nicola (2006) 'On the Move: Technology, Mobility, and the Mediation of Social Time and Space', in Robert Hassan and Julian Thomas (eds) *The New Media Theory Reader* (Maidenhead: Open University Press), pp. 249–265.
- Grosz, Elizabeth (1999) *Becomings: Explorations in Time, Memory, and Futures* (Ithaca: Cornell University Press).
- Halbwachs, Maurice [1951] (1980) *The Collective Memory* (New York: Harper and Row).
- Hansen, Mark, B.N. (2003) 'Affect as medium, or "the digital facial image"', *Journal of Visual Culture*, 2: 2, 205–228.
- Hayles, N. Katherine (2006) 'Traumas of Code', *Critical Enquiry*, 33: 36–157.
- Hirsch, Marianne (1997) *Family Frames: Photography, Narrative and Postmemory* (Harvard University Press).
- Huyssen, Andreas (2003) *Present Pasts: Urban Palimpsests and the Politics of Memory* (Palo Alto: Stanford University Press).
- Jackson, Timothy Allen (2001) 'Toward a New Media Aesthetic', in David Trend (ed.) *Reading Digital Culture* (Oxford: Blackwell), pp. 347–353.
- Jameson, Fredric (1991) *Postmodernism, or the Cultural Logic of Late Capitalism* (London: Verso).
- Jenkins, Henry (2006) *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press).
- Landsberg, Alison (2004) *Prosthetic Memory: The Transformation of American Remembrance in the Age of Mass Culture* (Columbia: Columbia University Press).
- Lévy, Pierre (1997) *Collective Intelligence: Mankind's Emerging World in Cyberspace* Robert Bononno (trans.) (Cambridge: Perseus Book).
- Manovich Lev (2001) *The Language of New Media* (Cambridge: MIT Press).
- Marshall, P. David (2004) *New Media Cultures* (London: Arnold).
- Mayer-Schonberger, Victor (2007) 'Useful Void: The Art of forgetting in the Age of Ubiquitous Computing', April. KSG Working paper No. RW-PO7-022, [http://ksgnotes1.harvard.edu/Research/wpaper.nsf/rwp/RWP07-022/\\$File/rwp_07_022_mayer-schoenberger.pdf](http://ksgnotes1.harvard.edu/Research/wpaper.nsf/rwp/RWP07-022/$File/rwp_07_022_mayer-schoenberger.pdf). Accessed 24 September 2008.

- McLuhan, Marshall (1964) *Understanding Media: Extensions of Man* (New York: McGraw-Hill).
- Merrin, William (2008) 'Media Studies 2.0', <http://mediastudies2point0.blogspot.com/>. Accessed 12 June 2008.
- Mosco, Vincent (2004) *The Digital Sublime: Myth, Power and Cyberspace* (Cambridge, MA: MIT Press).
- Nardi, Bonnie and O'Day, Vicki (1999) *Information Ecologies: Using Technology with Heart* (Cambridge, MA: MIT Press).
- Negroponste, Nicholas (1995) *Being Digital* (New York: Knopf).
- Neisser, Ulric (1982/2000) *Memory Observed: Remembering in Natural Contexts* (New York: W.H. Freeman and Company).
- Nora, Pierre (1989) 'Between Memory and History: *Les Lieux de Mémoire*', Marc Roudebush (trans.), *Representations*, 26, 7–25.
- Olick, Jeffrey K. (2008) "'Collective memory": A memoir and prospect', *Memory Studies*, 1: 1, 23–29.
- Parkin, Alan J. (1993) *Memory: Phenomena, Experiment and Theory* (Oxford: Blackwell).
- Pennebaker, James W., Dario Paez and Bernard Rimé (eds) (1997) *Collective Memory of Political Events: Social Psychological Perspectives* (Mahwah: Erlbaum).
- Rose, Steven (1992) *The Making of Memory: From Molecules to Mind* (London: Bantam Books).
- Schutz, Alfred (1962) *Collected Papers 1* (The Hague: Martinus Nijhoff).
- Shandler, Jeffrey (1999) *While America Watches: Televising the Holocaust* (New York: Oxford University Press).
- Sturken, Marita (2007) *Tourists of History: Memory, Kitsch, and Consumerism from Oklahoma City to Ground Zero* (Durham: Duke University Press).
- Tapscott, D. (1998) *Growing Up Digital: The Rise of the Net Generation* (New York: McGraw-Hill).
- Weissman, Gary (2005) *Fantasies of Witnessing: Postwar Efforts to Experience the Holocaust* (Ithaca: Cornell University Press).

Index

- Agar, John, 82
 Alfie, Dennen, 89–90
 Althusser, Louis, 144
 American Historical Review, 111
 amnesia, 5, 7
 Angelopoulos, Theo, 115–16
 archival memory, 26
 see also archives
Archive Fever (1996), 126, 131, 137
 archives, 116–17, 125–6, 130–1
 authenticity of, 178–9
 personal, 135–49
 see also digital archives
 archons, 137
Ars memoria traditions, 186
 Arthur, Paul, 25, 44
 artificial memory, 5
 Assman, Jan, 3, 91
 audience, 171, 179
 Auslander, Philip, 33
 authorship, 184
 autobiographical memory, 170–9
 autobiography, 45, 47, 57n4
 see also biography; life writing
 automation, 15
 avant-garde film, 130
- Babylonian Jewry Heritage
 Center, 102
 backward compatibility, 5
 Baddeley, Alan, 174
 Bal, Meike, 170
 Bartlett, Frederic, 2, 30, 37
 Baudrillard, Jean, 67
 BBC, 131–2, 168
 Bebo, 30, 50
 Beim, Aaron, 40–1
 Benjamin, Walter, 44–5, 148, 189
 Bentham, Jeremy, 67
 Besmeres, Mary, 57n5
 Beth Hatefutsot, 102
 biographers, 50–1
 challenges facing, 53–6
 biography, 25, 45
 autobiography, 45, 47, 57n4
 digital, 44–59
 future of, 51–3
 history and, 98
 impact of digital revolution on,
 56–7
 life writing and, 47
 technobiography, 49
 see also life writing
Biography (journal), 48
 biopics, 45
Blade Runner (film), 60–1, 62
 Blitz, 37
 blogs, 48, 54, 85, 147, 185, 187–9
 Bluetooth, 84, 89
 Blu-ray, 5
 Boissier, Jean Louis, 79, 117–27
 book publishing, 58n16
 books, digital, 52, 53
 Borges, Jorge Luis, 115
 botany, 125
 boyd, danah, 139–40, 145
 Brazil, 153–4
 digital divide in, 159
 Museu da Pessoa, 151–64
 broadcast media, 3–4, 29, 31
 see also media
 Bush, Vannevar, 115, 116
- camera phones, 78, 86–7
 see also mobile phones
Capture Wales Digital Storytelling
 Project, 131–2, 168–81
 background of, 168–9
 process, 172–4
 Story Circle, 173–4
 Castells, Manuel, 83
 CD-ROMs, 79, 126–7
 cell phones *see* mobile phones
 Center for Digital Storytelling, 169
Challenger disaster, 34, 35
 chronophotography, 122

- citizen journalism, 87–90, 185, 187
 Clarke, Margaret, 132–3, 151
 Coates, Sharon, 179
 code, 25, 26
 collective intelligence, 9, 25, 30
 collective memory, 39–1, 157–8, 180, 185
 comfort culture, 6
 commemoration, mass-mediated, 23
 Commonwealth literature, 58n6
 communicative memory, 3
 computer memory, 185, 195
 computer viruses, 12–13
 computers, 15–16, 130
 confessional culture, 28
Confessions (Rousseau), 119, 124–5
 Connerton, Paul, 37–8
 consciousness, 24, 37
 consignment, 138–9
 consumerism, 6
 convergence culture, 8, 9, 11, 14–16
 Conway, Martin, 168, 171, 174–5, 178
 correspondence, 54–5
 crisis of temporality, 167
 cultural citizenship, 153
 cultural memory, 3
 cultural mnemotechnique, 91
 culture
 comfort, 6
 confessional, 28
 convergence, 8, 9, 11, 14–16
 Cunio, Nissim, 108
 cyberpunk film genre, 25–6, 61–3, 72–4
 Final Cut, 66–9
 Minority Report, 69–72
 Vanilla Sky, 63–6
 cybersurveillance, 69–70
Cypher (film), 62

 Daliot-Bul, Michael, 87
 data, 26
 data loss, 55, 194
 de Certeau, Michel, 140
 De Landa, Manuel, 91
 de Waal, Martijn, 41
 death, deferral of, 4
 deferrals, 4–5

 deletion, 195
 Deleuze, Gilles, 117
 Del.icio.us, 50
 democracy, liberal, 158
 democratic ideal, 159
 democratisation
 of history, 45–6
 of journalism, 87–90, 185, 187–8
 Derrida, Jacques, 126, 131, 137, 138, 139, 145, 148–9
 developing countries, mobile phone use in, 83–4
 diaries, 48–9, 187
 digital archives, 117, 125–6, 130–1, 167–8
 authenticity of, 178–9
 personal, 135–49
 see also archives
 digital biography, 44–59
 digital books, 52, 53
 digital convergence, 81–2
 digital divide, 159
 digital files, 192
 digital media ecology, 3, 4, 9–10
 digital media technologies, 1, 4, 5, 44
 see also specific types
 digital memories, 1, 4–8, 167–8
 history and, 8–11
 inorganic and organic, 11–13
 old and new media and, 13–17
 prosthetics of, 11–13
 public-personal, 6
 digital memory discourses, 23–6
 digital memory forms, 77–80
 archives, 116–17
 CD-ROMs, 126–7
 memory repositories, 98–9
 mobile phones, 81–92
 digital memory practices, 129–34
 digital storytelling, 167–81
 Museum of the Person, 132–3, 151–64
 social networking, 135–49
 digital remixing, 184–95
 digital selves, 174–9
 digital storytelling, 49–50, 86, 167–81
 digital textuality, 51–2
 digital witnessing, 88–90

- director-narrator, 170, 176–7
 Dodge, M., 194
 Draaisma, Douwe, 77
 D-Space, 111
 DVDs, 5
- Eakin, John, 47, 58n11
 e-books, 52, 53
 editing, 190–3
 e-journals, 110–11
 email, 54, 189
 embodied memory, 26, 70–1, 73
 emplotment, 170
 endings, deferral of, 4–5
 episodic memory, 73
 e-publishing, 110–12
 e-research, 110–12
 Esslin, Martin, 173
 event-driven memory, 33–4
 everyday memory, 3
 exposure, 28
 extended present, 85
- Facebook, 30, 50, 131, 135–49
 copyright issues, 138–9
 homogeneity of, 147
 hyperlinking in, 144–5
 social profiling by, 140
 user-friendliness of, 141
 see also social networking
 false memories, 35
 family history websites, 56
 Featherstone, Mike, 188
 Ferrarotti, Franco, 39
 file sharing systems, 30
 film
 avant-garde, 130
 cyberpunk, 25–6, 61–72
 refugee, 103
 see also specific films
Final Cut, The (film), 61, 66–9, 73
 First Monday, 111
 Flanagan, Bob, 58n12
 flashbulb memory (FBM), 3, 31–6
 Flickr, 30
 forgetting, 134, 193–5
 Foucault, Michel, 67, 135
 Freud, Sigmund, 64, 68
 friendship, 145
- Friendster, 139, 145–6
 see also social networking
 Fyfle, Hamish, 180–1
- Galloway, A., 184–95
 Garde-Hansen, Joanne, 131, 135
 gazes
 archiving, 117–27
 caught on film, 115
 genealogical research, 56
 generational memories, 3
 Gibson, William, 65
 Gillespie, Tarteton, 72
 Gitlin, Todd, 39
 Gleick, James, 5, 7, 133
 global memory bank, 39
 global witnessing, 132, 171, 179
 Goggin, Gerard, 85
 Google, 30, 99–100, 188
 Green, Nicola, 6
 Grele, Ronald, 155
 Grosz, Elizabeth, 12
 group memories, 29, 86
 Gye, Lisa, 87
- Halbwachs, Maurice, 29
 Hall, Justin, 187, 188
 Hanson, Jarice, 85
 Harding, Susan, 70
 Hayles, N. Katherine, 24
 herbarium, 124, 125–6
 Hiroshima, 189–90
 historians, challenges facing, 53–6
 historical sociology, 97, 113
 history, 96
 authenticity and, 98–9
 biography and, 98
 deferral of, 5
 democratisation of, 45
 digital memory and, 8–11
 end of, 148
 memory wars over, 98–100
 oral, 152–3
 Sumerian, 187
 tourists of, 6
 Hodgkin, Katharine, 70
 Holocaust, 23, 170
 Holocaust Memorial Museum, 102–3
 Holocaust projects, 100–1

- Holocaust television mini-series, 3
 Hooton, Joy, 58n6
 Hoskins, Andrew, 24
 Hoskins, Janet, 58n7
 human memory, 11, 185, 195
 Huyssen, Andreas, 167
 hyperlinks, 144–5
 hyperrealness, 195
 hypersocialability, 9
 hypertext, 77–8, 111
- Ibrahim, Yasmin, 87
 identity
 memory, technology and, 61
 multiple, 47, 55, 175
 Igud Yotzei Sin (YIS), 102
 immediacy, 39
 individual customization, 14
 information
 first order of, 32
 loss of digital, 5, 55, 195
 second order of, 32
 third order of, 32
 information overload, 5
 information storage, 57
 institutional memory, 157
 interactive media, 144
 interactive narratives, 100–1
 interactivity, 130, 179
 in media arts, 118
 social networking sites and, 144
 Internet, 7, 30, 56
 commercialisation of, 132
 email, 54, 189
 life writing and, 48
 personal expression and, 46
 wikis, 25, 185, 191–3
 see also blogs; social networking sites; Web 2.0
 Internet project, oral history, 152–3
 interstitial level, 40–1
 Iraqi Museum, 187
- Jakubowicz, Andrew, 78–9, 96
 Jameson, Fredric, 33, 34, 62
 Japan
 mobile phones in, 87
 Shanghai Jews and, 101–2
 Jenkins, Henry, 9, 16, 131
 JenniCam, 48
- Jewish diaspora, 79
 Jewish People Policy Planning Institute, 102
 journalism, citizen, 87–90, 185, 187
- Kamler, Barbara, 172, 174
 Kennedy, Helen, 49
 Kennedy, John F., assassination of, 23–4, 33–4, 35
 Kidd, Jenny, 132, 167
 Kindberg, T., 87
 knowledge communities, 9
 Konvalinka, Danillo, 105
 Kuhn, Annette, 68
- La Nouvelle Héloïse* (Rousseau), 121–2, 123
 Labyrinth Project, 59n17
 Landsberg, Alison, 11, 25, 61
 language of therapy, 177
 Lash, Scott, 32
 Lessard, Bruno, 79, 115
 letters, 54
 Lewis, Alys, 179
 liberal democracy, 148
 see also democratisation
 libraries, 45
 life caching, 84–5
 life stories, 170–2
 life writing, 25, 44–59
 expanding field of, 46–9
 impact of digital revolution on, 56–7
 Internet and, 48
 Web 2.0 and, 49–51
 see also autobiography; biography
 lifecasting, 59n18
 Lifelog software, 84–5
 Lindholm, Christian, 84
 living memory, 180–1
 London bombings, 6, 24, 37, 78, 89–90
 London South Bank University, 88
 love letters, 54
 Lubavitcher Chabad houses, 102
- Machover, Tod, 105
 Manovich, Lev, 14, 15, 58n8, 142, 143, 144

- Marey, Étienne-Jules, 118, 122
 Markham, Annette, 145
 Marshall, P. David, 17, 140, 147
 mashup memory, 66–9
 mash-ups, 192
 mass media, 10, 27, 33–5
 mass-mediated commemoration, 23
 Matrix, Sidney Eve, 25–6, 60
Matrix, The (film), 62
 McAdams, Dan P., 170
 McPherson, Tara, 111
 Meadows, David, 169
 meaning making, 171
 mechanical technique, 35–6, 38–9
 media, 3
 Brazilian, 153–4
 broadcast, 3–4, 29, 31
 citizen journalism, 87–90, 185, 187
 interactive, 144
 mass, 10, 27, 33–5
 memory and, 16, 33–5, 39–40, 126–7
 new, 10, 13–17, 28
 news, 24, 31, 33
 personalization of, 17
 media arts, interactivity in, 118
 media conglomerates, 10
 media epistemology, 33
 media events, 36
 media logic, 5, 24, 29
 Media Studies, 4
 media templates, 36–7
 mediated memory, 91–2, 148
 mediatisation, 24
 defined, 29
 of memory, 27–41
 persistence of flashbulb memories and, 31–6
 phases of, 31–2
 schemata and, 36–41
 memex, 115, 116
 memobile, 82
 memobilia, 78, 81–92
 memory, human, 11
 memory aids, 55–6
 memory boom, 167
 memory repositories, 98–9
 memory/memories
 archival, 26
 artificial, 5
 autobiographical, 170–9
 beginning of, 8–11
 collective, 39–1, 157–8, 180, 185
 communicative, 3
 computer, 185, 195
 concept of, 1–4
 cultural, 3
 digital media and, 167–8
 editing, 190–3
 embodied, 26, 70–1, 73
 episodic, 73
 event-driven, 33–4
 everyday, 3
 fading of, 5
 false, 35
 flashbulb, 3, 31–6
 global, 39
 group, 29, 86
 history and, 96
 human, 185, 195
 hyperlinked function of, 125
 institutional, 157
 living, 180–1
 mashup, 66–9
 media and, 16, 33–5, 39–40, 126–7
 mediated, 91–2, 148
 mediatisation of, 27–41
 mediatized, 5–6
 mobile communication studies and, 85–8
 models of, 2–4
 narrative, 169–72
 nature of, 8–9
 new, 27–8, 29
 personal, 39, 170–2, 180
 prophetic, 69–72
 prosthetic, 11–13, 61–3, 73
 psychology of, 37–8
 reconceptualising, 90–2
 reconfiguring as technology, 126–7
 reliability of, 133–4
 remixing, 184–95
 repressed, 69
 screen, 68–9
 self and, 174–9
 self-defining, 171, 176
 semantic, 73

- memory/memories – *continued*
 social, 33, 39, 157–8
 social network, 6, 30, 41
 surplus of, 133
 synthetic, 62, 72
 technology, identity and, 61
 value of, 7
 virtual, 63–6
 visual, 124–5
 wearable, 81–92
see also digital memories
- Menorah of Fang Bang Lu project,
 97, 104–6, 112–13
 creation of, 107–10
 e-research and publication,
 110–12
- Merrin, William, 4
- Messenger, 189
- M-government, 82
- Miller, J. Hillis, 163
- Minority Report* (film), 61, 69–72
- mnemotechnologies, 61, 115,
 125–7
- mobile phones, 6–7, 78, 81–92
 camera phones, 78, 86–7
 life caching and, 84–5
 studies on memory and, 85–90
 use of, 83–5
 wearability of, 82
- mobility, 89
- moblog, 89–90
- modernities, 32–3
- modularity, 15
- Moments of Jean-Jacques Rousseau*
 (Boissier), 117–27
- montage, 142
- Mosco, Vincent, 10
- movement-images, 117–18
- multimedia, 110–11
see also media
- multiple identities, 47, 55, 175
see also identity
- Murray, Timothy, 116
- Museu da Pessoa (Museum of
 the Person), 132–3, 151–64
 memory, history, and narratives,
 156–61
 National Memory Network,
 162–4
- networks between tellers and
 listeners and, 161–4
 origins and development of,
 155–6
 purpose of, 151–2
- MySpace, 30, 50, 137, 146
see also social networking
- narrative memories, 169–72
- narrative remembering, 175
- narrative witnessing, 171
- narratives
 interactive, 100–1
 spatial, 143
 trauma, 170, 177
 universal, 180–1
- Neilson, Philip, 173
- network society, 83
- Neuromancer* (Gibson), 65
- new media, 10, 13–17, 28
- new media ecology, 41
- new memory, 27–8, 29
- news media, 24, 31, 33
 media templates and, 36–7
 mobile phones and, 87–8
 repetition of, 35–6
- Nora, Pierre, 23
- North Korea, 83
- numerical representation, 14
- object-oriented approach, 130
- Okabe, Daisuke, 86
- Olick, Jeffrey, 2
- online diaries, 48, 49
see also blogs
- online identities, 47, 48, 55
- online publishing, 51, 186
- open source, 111
- Opium Wars, 101
- oral history movement, 152–3
- Overdrawn at the Memory Bank*
 (film), 74n6
- Pain Journal, The* (Flanagan), 58n12
- Panofsky, Ernest, 118
- past, 7, 39, 185
 collecting the, 187–90
 deleted, 186
 forgetting, 193–5

- past – *continued*
 remixing, 190–3
 versions of the, 185–6
- peer-to-peer connections, 41
- Pentes, Tatiana, 107–8, 109
- performance, 173
- performative remembering, 173–4
- Perkins, Mary, 57n5
- permanence, concept of, 180
- personal agency, 148
- personal expression, 46, 54
 public forms of, 49–51
- personal memory, 39,
 170–2, 180
 mobile phones and, 88–90
- personalization, of media, 17
- Petrobrás, 158–9
- Pew Project, 145
- phones *see* mobile phones
- photography, 44–5, 53
 camera phones and, 86–7
- photo-sharing sites, 85
- Photoshop, 184, 191
- Piercy, Marge, 81
- podcasts, 111
- point-of-view (POV), 190
- Politics of Friendship, The*
 (Derrida), 145
- popular culture, 16
- portraits, 44–5
- postcolonial literary theory, 58n6
- Poster, Mark, 144
- postmodernism, 33
- present, 7, 39
- present tense, 85–6
- private, boundaries between public
 and, 91
- prophetic memory, 69–72
- prosthetic memories, 11–13, 61–3, 73
- prosumers, 148
- psychology of memory, 37–8
- public, boundaries between private
 and, 91
- public events, 23–4, 35
- public voyeurism, 186
- publishing
 book, 58n16
 online, 51, 186
 research and, 110–13
- Radstone, Susannah, 70
- Rafael, Vincent, 41
- readership, 121
- Reading, Anna, 81
- reconstruction, 38
- refugee films, 103
- relation-images, 117–18, 123
- reliability, of memories, 133–4
- remediation, 14
- remembering, 2, 184
 narrative, 175
 performative, 173–4
 in Shanghai, 96
- remixing, 184–95
- repressed memory, 69
- re-remembering, 190
- research, publishing and, 110–13
- Reveries of the Solitary Walker*
 (Rousseau), 119, 124, 126
- Rickshaw, 102
- Ricoeur, Paul, 170
- Ringley, Jennifer, 48
- risk society, 23
- Rosenberg, Daniel, 65, 70
- rotary press, 53
- Rousseau, Jean Jacques, 79,
 117–27
- Rubinstein, Daniel, 86
- Russian Jews, 101
- SAGA magazine, 148
- Schechner, Richard, 173
- schemata, 30–1, 36–41
- science fiction, 61
- scrapbooks, 130
- screen memory, 68–9
- self, 174–9
- self-censorship, 67
- self-defining memories, 171, 176
- self-identity, 2
- self-reference, 171
- semantic memory, 73
- September 11, 2001, 24, 35, 170
- Shanghai, Jewish diaspora in,
 96–113
- Shanghai Stones project, 102
- Shaw, Martin, 34
- simulacra, 62
- simulation theories, 195

- Sino-Judaic Institute, 102
 Smith, Dennis, 113
 Smith, Sidonie, 48
 SMS, 189
 social bookmarking, 49, 50
 social frameworks, for memory, 2
 social life, 4
 social memory, 2, 33, 39, 157–8
 social network memory, 30, 41
 social network sites (SNSs), 10, 30, 135–49
 see also Facebook; *specific sites*
 social networking, 6, 49, 50, 54–5, 85
 social profiling, 140
 sociology, historical, 97, 113
 Sontag, Susan, 38
 spatial montage, 142
 spatial narratives, 143
 spectatorship, 121
 Stacey, Adam, 89–90
 Story Circle, 173–4
 storytelling, 52
 digital, 49–50, 86, 167–81
 on web, 101
Strange Cities (Pentes), 107
Strange Days (film), 74n6
 Sturken, Marita, 6
 ‘Sujets d’estampes’, 120–1
 Sumerian history, 187
 Surowiecki, James, 41
 Sydney Jewish Museum, 105, 108
 synthetic memory, 62, 72
- Tapscott, D., 148
 Taylor, Diana, 26
 technobiography, 49
 technological unconscious, 24–5
 technology, memory, identity
 and, 61
Technorati.com, 187
 technoromantic mythos, 65
 television, 3, 31
 television news, 24, 33
 flashbulb memory and, 33–5
 media templates and, 36–7
 repetition of, 35–6
 schemata and, 38, 39
 templates, media, 36–7
- text messages, 6–7, 54
 Thrift, Nigel, 24
 time, 7–8, 38–9
 extended present, 85
 spatialisation of, 143
 time-images, 117–18
Total Recall (film), 62, 74n6
 transcoding, 15–16
 translation effects, 156
 trauma narratives, 170, 177
- Ulysses’ Gaze* (film), 115
 universal narratives, 180–1
 user-generated content, 99, 132
 Ut, Nick, 190
- Vader Sessions* (2007), 192
 van Dijk, Jose, 77, 79, 91
Vanilla Sky (film), 61, 63–6
 variability, 15
 VCRs, 5
*Vectors: Journal of Culture and
 Technology in a Dynamic
 Vernacular*, 111–12
- VHS tapes, 5
 videoblogging, 49–50
 see also blogs
 Vietnam War, 190
 Virilio, Paul, 39
 virtual memory, 63–6
 visual memories, 124–5
- Watson, Julia, 48
 wearable memories, 81–92
 Web 2.0, 30, 49–51, 56–7, 78, 99, 110, 112, 189
 web pages, 47
 web searches, 99–100
 weblogs *see* blogs
 webumentary, 78–9
 Weinberger, David, 32
 Wii Fit, 11
 Wikipedia, 99, 186
 wikis, 25, 185, 191–3
 Wilson, Shaun, 133, 184
 witnessing, 88–90
 global, 132, 171, 179
 narrative, 171

- Woman on the Edge of Time*
(Piercy), 81
- women, in historiography, 58n6
- Worcman, Karen, 157
- 'Work of Art in the Age of
Mechanical Reproduction,
The' (Benjamin), 44
- World Wide Web, 30
see also Internet
- Xanadu, 115
- XML, 110
- youth culture, 146, 148
mobile phones and, 85–6
- YouTube, 30, 49, 54, 186, 189–92
- Zuckerberg, Mark, 141
- Zuern, John, 48–9, 58n12

