

**THE TECHNOSOCIAL MEDIASCAPE:
PRODUCING IDENTITIES**

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Jenny Weight

B.A. (Hons); M.A.

School of Applied Communication

Design and the Social Context

RMIT University

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ABSTRACT

This exegesis questions and explores the types of identities that are emerging as a result of human engagement with contemporary communications and media technology. These identities are communicated, shaped and defined by the way we appropriate and engage with a smorgasbord of communications and media consumption technologies which merge in our imaginations to form a technosocial mediascape. As artist and teacher, consumer and prosumer, I participate in the technosocial mediascape, along with colleagues, students, artists, friends and family members.

As we produce, communicate and ultimately co-create that technosocial environment, how are we changed by this experience? We contribute to a diverse and globally circulating, but paradoxically transient parade of data and media that apparatuses and humans together bring into existence. How does this mediascape impact on human ontology and sociology? What are the different 'positions'—relationships with the mediascape—that emerge?

My method derives from analysis of my own experience as an engaged and flexible 'position-taker' within the technosocial mediascape. I analyse my own creative practice with reference to a range of modernist, postmodernist and media theories. The technosocial enshrines the idea that technology and human behaviour are not separable, and draws on many theoretical sources, including phenomenology, the philosophy of language, design theory and digital media theory. All media, and mediums, are technosocial, because they impact on the *praxis* of identity. However, a range of contemporary media and mediums are more explicitly technosocial, and that is where my focus lies.

I will suggest that the role of language in technosocial contexts is peculiar, important and under-theorised. Our 'linguistic apparatuses' offer an alternate concept of technology to the 'heavy modernism' of Martin Heidegger.

I will explore ways in which technosocial engagement privileges fluid identities which drift in and out of different but co-existing realities. Various types of 'immersion'—some neo-baroque and some neo-romantic—contribute to technosocially-engaged identity construction. Thus, our engagement with the

technosocial mediascape challenges received ideas about personal identity, and indeed, the nature of the real.

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The following papers and artworks are partly or wholly reproduced in this exegesis, and were created as part of my PhD candidacy:

Weight, J. (Winter 2006) 'I, apparatus, you: a technosocial introduction to creative practice', *Convergence* 12(4): 413–446.

Weight, J. (September 2005). 'Microsoap for waiting rooms.' Presented at *Vital Signs Conference*, RMIT and ACMI, Melbourne.

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<http://incsub.org/blogtalk/>.

Weight, J. (2004). 'Cyborg dreams: from ergonomics to electracy.' *Over the Horizon*. Special issue on 'Second generation e-learning: serious games' guest edited by Drew Davidson. 12(1): <http://www.emeraldinsight.com/oth.htm>.

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<http://jodi.ecs.soton.ac.uk/>.

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Geniwate (2003) *Concatenation*.

<http://www.idaspoetics.com.au/generative/generative.html>. (*Concatenation* was the winner of the Mayne Award for Creative Writing in Interactive Media at the International Adelaide Festival of Arts.)

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Geniwate (2005-2006). *RL~*. (*RL~* was distributed to mobile phones as part of the dLux Media Arts (<http://www.dlux.org.au/>) 'd>ArtO5' distributed art showcase, which was commissioned by Mobile Journeys (<http://dlux.org.au/mobilejourneys/>).)

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PREFACE

In a recent lecture, I asked my Master of Communication students whether they turned their mobile phones off when they went to bed. Many said they did. However, a few of them did not. Indeed, one young woman said that if she turned her mobile off, she would not be able to sleep. Her response is symptomatic, perhaps, of an emergent anxiety about not being networked.

Our apparatuses¹ and the networks they enmesh us within have become intimately integrated into our lives. It is a connection that runs far deeper than convenience. We attach ideas of who we are and what we value to the apparatuses we use. The flexibility of a computer means that 'we soon consider it less an external tool and more a second skin or mental prosthesis', according to Michael Heim (1993, p. 64). This results in 'existential-ontological questions' (p. 61) concerning how reality changes as a result of our interaction with apparatuses like computers. Indeed, our idea of reality and our sense of personal identity seem to be the two sides of the same set of concerns, which range from the ontological ('Being'²) to the sociological ('identity'), and this nexus suggests the need for an analytical perspective that I am calling 'technosocial'.

Much of our identity is tied, not only to *what* we communicate, but to *how* we communicate. We have a smorgasbord of options for media consumption. For example, we can determine what level of interactivity we want (movies versus computer games), but we can also choose the apparatus through which we will engage with that media (PlayStation versus PC). We are learning to make conscious choices between a suite of media and mediums as a result of assessments often concerning whether a device will promote our evolving aspirations. Whether consciously or unconsciously, the wealthy, educated, and to some extent, younger members of the global middle class spend a significant proportion of their time, energy and money deciding not only what to communicate and what to consume, but also how.

I count myself among the technosocially-engaged global middle class, both personally and professionally. I am constantly reconsidering my communication options. Until recently, when I went overseas I would be on the look-out for internet cafes; now I take my mobile phone switched to global roaming. As a result, my messages back home are more constant, less important, and brief. Communication works two ways: I

was in Thailand when the 2005 tsunami hit, and within two hours, my mother was texting me to see if I was OK. The way we communicate, the content we communicate, and indeed, the sort of people we are, changes as we renegotiate our technosocial options.

Meanwhile, as a content producer, I have different decisions to make. Some of them have political and ideological consequences. The modernist and romantic idea of the artist/writer that was a cornerstone of my education is challenged by today's Do-It-Yourself networked culture. Not only is the artist's voice drowned among a cacophony of cultural production in which editorial control has collapsed (unless you accept Google as editor), but the idea that the individual voice should be given preference over an emergent, globally networked, 'hive mind' seems harder to sustain.

Nevertheless, the ideals of romantic art and its associated subject positions live on, although perhaps in surprising places. As discussed more fully in chapter three, the immersed computer game player is arguably on a conceptual continuum with the figure of the romantic poet who

not only beholds intensely the present as it is, and discovers those laws according to which present things ought to be ordered, but he beholds the future in the present, and his thoughts are the germs of the flower and the fruit of latest time... A poet participates in the eternal, the infinite, and the one; as far as relates to his conceptions, time and place and number are not.

Shelley 1980 p. 78

Millions of people daily engage in highly immersive gameplay, excursions into possible worlds in which 'time and place and number are not'. However, the romantics tended to eschew technology as imagined during the industrial revolution. That the apparatus is the means to a highly *romantic* experience is just one of the ironies that I grapple with in my own creative practice and this critical reflection upon it. One of the ambitions of this exegesis is to suggest ways in which we can reconceptualise creativity and experience as a function of our engagement with the apparatus, rather than in spite of it.

A PhD exegesis is required to address, explain, or critically explore aspects of the project work produced in conjunction with it. In this instance, my project work includes, but also extends beyond, some artworks that I made and exhibited. The holistic project that I present is my technosocial *practice*, which takes several forms

including communicating with friends and family, my teaching job as a media academic, and my consumption of other media such as commercial computer games.

Originally I conceived of the project aspect of my PhD as my avant-garde art practice in isolation from the other ways I engage with media. I have come to view the avant-garde position as somewhat problematic in the technosocial context that I will explore. By focusing on my technosocial practice more broadly, I am able to stand outside that part of my practice which is explicitly and strictly ‘artistic’ and consider it within a broader mediascape. I can therefore situate the idea of the avant-garde beyond received ideological positions. Accordingly, a trajectory exists in the evolution of the PhD project from artwork to practice which is reflected in the structure of the exegesis.

The other ‘positions’ that I consider part of my project/reflective practice—that of engaged consumer and prosumer—seem less elitist, but they are also generally less recognised by cultural arbiters. This exegesis thus explicitly foregrounds the wide scope of engaged relationships we can choose to express in the technosocial mediascape, and wonders about their impact on identity and reality. Enroute, issues of cultural politics arise and are analysed.

The territory of my research intersects with many disciplinary fields, including design, IT, computer programming, literary studies, cinema studies, philosophy, history and media studies. However, the technosocial articulates with some of these disciplines more comfortably than others. For example, the prevalently utilitarian discussion found in IT circles does not overtly concern itself with human identity and experience beyond mundane issues such as ‘usability’. I propose that IT research should be more deeply concerned with ontology, and I will give indicators of such an approach in chapter four, focusing on mobile phones.

Chapter one will introduce the territory of the technosocial, a realm in which people, the apparatus and language collide to produce reflection upon identity and reality, and associated acts of identity-creation. Different ‘positions’ are possible, but some of them—in particular, those we have inherited from earlier media cultures—are under pressure to reinvent themselves to more directly facilitate identity experimentation.

In chapter two, I will be concerned with the perspective of the technosocial avant-garde artist/author/programmer, and the experience of collaboration with the

apparatus from my own perspective. I will conclude with further observations about whether the avant-garde and associated cultural politics remain a viable technosocial position.

'[O]ur most typical moments are those when we are engaged, absorbed in an undifferentiated world of involvement', argues Richard Coyne (1999, p. 146). The idea of unity strongly flavours technosocial aesthetics, and indeed, some mainstream debates surrounding appropriate media cultures for young people. I will explore the nature of immersion in chapter three, using the computer game as the paradigmatic text-as-apparatus.

In chapter four I will turn to networked media communications, particularly the mobile phone, the media that is being designed for it, and how it reflects upon, and even creates, human experience. The conclusion will situate the contemporary technosocial problematic with reference to aspects of the philosophy of technology.

While tensions between 'creativity' and academic rigour undoubtedly continue to haunt PhDs by project, I will follow Richard Vella's (2005) advice that

the translation from a creative work to one within a research context involves: (1) extracting from the work criteria for evaluation; (2) relating the criteria to some worldview via some exegetical perspective; (3) applying the criteria to other contexts external to the candidate's work. These steps are nonlinear and can operate simultaneously.

p. 2

My exegesis embraces this approach by attempting to holistically integrate the various types of practices that I engage in within the broader technosocial mediascape. In the end, I will argue, what makes this engagement so fascinating is that way that our identity evolves as a function of our relationships with the media we make and consume.

CHAPTER ONE: INTRODUCING THE TECHNOSOCIAL

The term 'technosocial' has been infrequently deployed in media studies, but is not wholly without precedent. Mizuko Ito and Daisuke Okabe's (2005) focus on the mobile phone means they use the term 'technosocial' to explore locative issues from a sociological perspective. Their definition bears quoting:

Electronic media have effects that break down certain prior social boundaries ... But they also have effects of constructing and reifying other social boundaries. We draw broadly from approaches in social and cultural studies of technology that see the technical and social as inseparable outcomes of ongoing and historically contextualized practice...

pp. 259-260

In her work on voice chips, Nathalie Jeremijenko (2004 p. 262-3) describes a 'sociotechnical project' which is 'an approach to human (singular)-computer (singular) interaction that reconsiders interaction as a form of participation and escapes the simple dichotomy between social and technological'.

As I am employing it, building on these past uses, the technosocial represents both a problematic and an opportunity. Whether digital or analogue or papyrusian, technosocial media and communications are not 'natural' or given. We choose between and engage with various media and communications apparatuses, and as a result, they synthesise our experience of the world. That experience then impacts on our subsequent technosocial engagements. One small example is the way that the world became a lot smaller when I started to use global roaming. It also changed the content and style of my communications.

Technosocial analysis does not presume digitisation, however ubiquitous digitisation enables media and communications scenarios that privilege a praxis of self-expression and arguably, self-creation, through media. Issues surrounding identity will be a focus of my analysis, but this emphasis is not shared by Ito and Okabe or Jeremijenko.

Concepts from diverse disciplines are certainly allied to the technosocial. They include Paul Resnick's concept of SocioTechnical Capital, which refers 'to productive combinations of social relations and information and communication technology' (2001, p. 4). Resnick emphasises 'how [the technical and the social] jointly influence the ability of people to act together' (my parentheses). Resnick expands on ideas reminiscent of Pierre Bourdieu's idea of cultural capital:

The notion of capital suggests a resource that can be accumulated and whose availability allows people to create value for themselves or others.

p. 1

Resnick desires to harness social capital resources for ethical, collective and informed decision-making. Thus '[i]nformation and communication technologies (ICTs) should also increase people's ability to act together...' (p. 2)¹. He is motivated by a democratic project, though it is one problematically marked by elements of technoromanticism (Coyne 1999, pp. 232; 271).

In contrast, my project is not so squarely tied to these kinds of ethical outcomes. Technosocial engagements include ironies and negative consequences. Our communications and media devices are important because they are popular, rather than because of some moral authority automatically consequent upon their use (by individuals, organisations or governments). Analysing the scope of possible technosocial engagement may, however, reveal ethical implications. For example, the ability of corporations and governments to manipulate the types of technosocial engagements that are possible is an aspect of technosocial analysis (explored further in chapter four).

Daniel Downes (2005) introduces the term 'interactive realism', which is a methodology and focus similar to the conceptual framework of the technosocial that I am proposing:

We construct our social world with a variety of tools, languages and material artifacts, and these tools refer back to our embodied experience of the world in a process of *interactive realism*. Interactive realism investigates the significance of new technologies not from the perspective of determining what is lost, dispersed, or destroyed by using them but by exploring the opportunities they offer for new experience.

p. 12

Downes continues:

Technology is significant for the ways it delineates the boundaries and horizons of our *life-world*. Technology is simultaneously material and symbolic, as tools and language combine to create artifacts.

Elsewhere Downes rejects the idea that language creates reality (p. 34)². It is of note that Downes gives a 'delineating' role to technology, but not to language. I will question this distinction in chapter two. Technologies, at least digital technologies,

function because of their linguistic core. In contrast to Downes, I share with Ludwig Wittgenstein and Martin Heidegger a constructivist view that our relationship with the world is always mediated by language. This constructivism allows me to rehabilitate the apparatus from the tradition of an essentialising romantic condemnation of technology, and this, together with the focus on identity, is another cornerstone of the technosocial approach.

A technosocial approach questions any methodology that opposes technology and culture. Technology is a *human* artefact, designed to meet evolving human ambitions, and none more obviously so than our communications and media technologies. My approach assumes that humans and technology can not be separated.

Maurita Harney (1985, p. 527) suggests there are ‘two methodological lines of approach to a philosophy of technology’: one is analytical, and the other is ‘a meaning-centred approach whose point of departure is our own experience of the technological milieu and whose chief concern is ... the transformation of cultural meanings and values effected by technological change’.

Squarely tied to a concern with meanings and values—of a personal, as much as an interpersonal nature, my phenomenologically-informed technosocial methodology takes as its premise ‘that information technology is best understood through its involvement in various practices’ (Coyne 1999, p. 145), where practices entail relationships between humans, and between human and apparatus. The technosocial apparatuses that I will focus upon privilege *performative* communications and media consumption. The technosocial meanings that I wish to explore derive from use. The technosocial wonders not whether you have a mobile phone, but what, out of the variety of things you can do with it, you choose to do with it, and how your phone fits with the other technologies you use. The technosocial is more interested in *how* you choose to watch a movie rather than the details of which movie you watch. The technosocial is interested in your *active* use of media and communications, and life as mediated *praxis*³. How does use, process and performance combine with technical affordance (a term I will shortly define) to create meaningful experience? A technosocial approach engages the nexus between culture, history, politics, sociology and economics, ‘aesthetics’ (form) and technology (Ito and Okabe 2005, pp. 257, 259-260), in order to reflect upon and understand personal experience. It seeks to avoid technodeterminism and essentialism. As Malina *et al* (1999) proclaim:

We are living in a world in which the arts, sciences, and technology are becoming inextricably integrated strands in a new emerging cultural fabric. Our knowledge of ourselves expands with each discovery in molecular and neurobiology, psychology, and the other sciences of living organisms. Technologies not only provide us with new tools for communication and expression, but also provide a new social context for our daily existence.

Technologies extend their influence into the way we think, and what we think about. Culture and technology co-evolve. As media technologies proliferate, creative people—everybody except those whom Manuel Castells (1996, p. 400) has described as the ‘fourth world of exclusion’—have a greater range of decisions to make about creative activity, communication, and ultimately identity.

In other words, the term ‘technosocial’ presupposes a deep relationship between humans and their apparatuses. This framing of the technosocial is derived from my reading of work in the phenomenological tradition. According to Don Ihde (1993, p. 34), technology changes human experience, and therefore technology must be understood ‘... as belonging in different ways to our experience and use of technologies, as a human-technology relation, rather than abstractly conceiving them as mere objects’.

The engagement with phenomenology means that I extend ideas about identity—often tied to cultural studies analysis—into more philosophic, abstract, ontological territory. Heidegger (1962, p. 312) defines phenomenology as ‘the science of the being of entities—ontology’. Elsewhere he suggests that ‘[t]he task of ontology is to explain being itself and to make the being of entities stand out in full relief’ (p. 310). Heidegger’s complex philosophico-poetic thought explores territory of allusive complexity, however he engages with issues of technology, art and ontology in ways that are productive for this project. In particular, Heidegger wonders about the experience of engaging with art as opposed to the experience of engaging with technology. This focus (although not necessarily Heidegger’s conclusions) will be taken up in chapter three.

Heim (1993, p. 66) calls Heidegger ‘the father of information anxiety’. With Marshall McLuhan, Heidegger believed ‘the most awesome power of technology to reside in its newly achieved intimacy with language’ (pp. 66-7). However, Heidegger considered this awesome power as a more-or-less negative one: he thought that using a computer to compose text alienates us from writing, for the word ‘can and must “have” “the hand”’

(Heidegger (1992) quoted in Kittler 1999, p. 198). Through the apparatus, words are degraded to a 'mere means for the traffic of communication'. Heidegger's reflections on language and technology represent relatively minor writings compared to the attention he gives to the 'big footprint' technology of modern infrastructure development. However they issue a challenge to my position that I will explore more fully in chapters three and four.

In making use of a phenomenological approach I will adopt Gilbert Ryle's (1932, p. 215) advice that such a method is analytical and critical, but indifferent to empirical methodology. It 'enquires into the nature of more or less radical types of mental functioning': in other words, phenomenology is about experience, but does not provide new information about an objective world, separate from experience (p. 217).

My extension of analysis about media to include the relationships between human and apparatus is partly a response to the phenomenological ideas of Maurice Merleau-Ponty, who argues that the relationship between subject and object is a '*relationship of being* in which, paradoxically, the subject is his body, his world, and his situation, by a sort of exchange' (1964, p. 298). Elsewhere Merleau-Ponty suggests that this exchange is the very basis for the 'phenomenological world', which is 'the sense which is revealed where the paths of my various experiences intersect, and also where my own and other people's intersect and engage each other like gears' (2002, p. xxii).

However, while I agree with these general observations, Merleau-Ponty's belief in the possibility of 'direct and primitive contact with the world' (p. vii) limits his usefulness to my approach. Likewise, Downes (2005 p. 52) draws on the phenomenology of perception, which is 'concerned ... with demonstrating how perception is a body skill-set embedded in representation, discourse, and technique'. The emphasis of my project work and this exegesis is not on the phenomenology of perception and embodiment; instead, my starting point is the necessary mediation of reality by language. As a consequence, embodiment is a less pressing issue and a fuller exploration of it is beyond the scope of what is possible to cover in the present work.

This exegesis draws from other writers in the broad phenomenological tradition. The reflections of phenomenological sociologist Alfred Schutz (1962) on multiple realities suggests ways in which our devices structure our engagement with the world. Additionally, Don Ihde's (1993, p. 7) 'nonfoundational and nontranscendental'

postphenomenology is useful in examining relationships between technology and culture because it sympathises with contemporary discourses surrounding embodiment and contingency. For me, Idhe's approach has suggested ways to explore technologies and practices which not only are transient, but seem to some extent to be *about* transience, a theme that will become more important as this work progresses.

As we have already seen, some phenomenologists tend to regret our burgeoning media technology culture. These include communications theorist Vilèm Flusser's (2005) analysis of the impact of technology on human creativity. Such views are countered by the more contemporary writings of Andrew Feenberg (1999; 2000a and 2000b). Feenberg offers an antidote to Heidegger (and implicitly, to Flusser) by contrasting Heidegger's historically-specific assumptions about technology with the digital technologies of the late twentieth century. Finally, the frequently cited 'phenomenology' of the cyborg⁴ has popularly reconceived of the relationships between humans and technology.

To an extent, a phenomenology of the apparatus is pre-determined in negative ways if the theorist believes technology to be essentially non-human. Feenberg (1999, pp. 203; xiv) traces a history of romantic-Heideggerian technological essentialism, suggesting that such an approach inappropriately infers that technology is impregnable and monolithic. If, however, we agree with Bruno Latour (2005, p. 39; also see Slack and Wise 2005, p. 117) that technologies are better conceptualised as *mediators* which are active and produce transformation, technology becomes part of a human project expressed most directly during *trilogical* (a term I will define in more detail in chapter two) collaboration, and different questions arise. We can focus on ontological consequences, rather than worrying about (for example) determinism. I agree with Idhe (1993, p. 34) that technologies must be understood as existing in relation with humans rather than as discreet objects⁵. Indeed, Feenberg (1999, p. vii) suggests that we are politically empowered by conceiving of technology and human behaviour as interconnected; if they are not connected, our ability to influence technology is in doubt.

Situating the apparatus in a central, mediating position in human dialogue is unusual partly because the apparatus (ordinary PCs *circa* 2006) is not conscious. Why would we want to privilege the apparatus to such an extent that dialogue—communication between two humans—needs to be expanded to *trilogue*? The answer lies in the

relational nature of communications and media apparatuses. While the apparatus is not conscious, it is, nevertheless, in Alfred Schutz' (1972) terms, 'other-oriented'—it originates signs for someone else to interpret (p. 150). It also *reacts to* (not the same thing as *interprets*) signs originated by human interlocutors. It operates within an 'intersubjective motivational context' in which social interaction takes place (p. 159). As I will argue in chapter two, fundamental here are the various ways in which humans and apparatuses use language.

The apparatus employs a type of language suited to a non-conscious entity. Were we to describe the apparatus as engaging in dialogue, we would anthropomorphise its behaviour and capacity. Better, then, to introduce a new term, the *trilogue*, so we can acknowledge the communicative status of the apparatus without claiming too much for its conscious abilities (an error usually accompanied by under-emphasizing the role of the programmer).

Questions concerning whether non-human entities are conscious bring us to the centrality of the subject in phenomenological analysis. According to Ryle, "'What is it to be an I?'" is perhaps the most general way of formulating the question of phenomenology' (1932, p. 219). 'I'-ness is a quality that even the most optimistic IT futurologists must concede that the contemporary apparatus lacks, despite the affectations of Apple's desktop messages to the contrary. Situating the apparatus beyond the relationships that form the 'I' risks the Heideggerian fallacy of condemning technology as anti-human. Instead, I will be arguing for a technosocial approach with discusses hybrid relationships. As a result, the question about consciousness becomes 'how does technology collaborate in the creation of what it is to be an (human) I?'

A human-centric concept of agency is implicitly questioned by the *trilogue* (cf Slack and Wise (2005), p. 116). Drawing on Latour's actor-network theory, Slack and Wise propound:

First, agency does not require human intention, which means that technologies can also be involved in relations of agency. Second, agency is not a possession of agents; it is a process and a relationship.

p. 117

Latour's social actors include technologies (p. 118) which can prescribe behaviours. For example, the mobile phone 'does the travelling for us' (p. 120), but it also 'prescribes back a daunting range of behaviours'. Slack and Wise continue:

The prescriptive pressure is to always be in contact... Thus, the cell phone prescribes the value of always being in contact, of always being 'on call,' and works at obliterating privacy and the idea that privacy might be desirable. A whole new standard of expectations about being available is emerging as the cell phone (and e-mail) gradually blankets the planet.

p. 120

Indeed, my transference to global roaming from internet-café based email has other ambiguous consequences. The cost of immediacy is the terseness of text messaging.

While actor-network theory helpfully repositions technology in terms of relationships, it is open to accusations of technodeterminism, and perhaps overplays the type of agency that our (non AI) devices are capable of. The apparatus' limited agency can be explored within a trilogical nexus whose bookends are human. A technosocial approach privileges collaboration and cooperative exchange to avoid overstating the agency of the device.

The three partners in the technosocial undertaking are human programmer/artist, the executing apparatus, and the human interpreter. The human roles may be performed by the same person, but they are different activities. Indeed, one of my own most revelatory moments concerning the trilogical relationship involved programming a text which, when performed by the apparatus, had results that I didn't expect. Thus I seemed to be performing two distinct activities almost simultaneously—that of programmer, and that of user/interpreter.

Networked apparatuses may command access to a near-infinite database of information and media objects, and programs can be written to manipulate that information in nontrivial ways. Thus, the apparatus is more than a mere tool or machine, blindly wielded by a human consciousness. It is a performative device of unique capacity, sensitivity and complexity, which encourages a wide range of human creativity, interpretation and indeed, collaboration. However, it has few virtues of interest outside its performative relationships with humans. Studies of trilogical experiences share with Latour (2005, p. 1) an interest in *process* rather than finished product.

The philosophical issues that arise are complex. For example, Downes (2005, p. 74) wonders where to draw the line between us and the outside world when our interactions with it are technologically mediated. The solution entails a

reconceptualisation: our technosocially-engaged selves are not separate from the apparatus, and the apparatus' position as mediator collapses the distinction between us and the world. The line that Downes seems to want cannot be drawn, and is, indeed, perhaps unnecessary. Marcos Novak describes humans as being 'within information' (1992, p. 225). Novak takes this insight into the realm of architecture (p. 226); in chapter two I take it into the realm of language. With Latour (2005, pp. 5-8), I join in a project of uncovering connections, in the hope that those connections will uncover organizing principles, or ways of being, that insightfully reflect upon social and ontological aspects of technosocial humanness.

A range of conceptual tools and examples will assist an exploration of the technosocial problematic, its implications for human identity, and the nature of the real that results from technosocial engagement.

Technosocial 'positions'

On the one hand, the technosocial problematic is personal and intimate; on the other, it is social and even public. As we inhabit, explore and communicate our identities via the apparatuses that pervade our communicative, media-saturated lives, the technosocial simultaneously challenges our ideas about social relationships. We feed the results of our technosocial engagements back into the system that creates the terms of those engagements. As a result, technosocial systems—combinations of human behaviour and technical affordances—dynamically evolve.

Bourdieu's (1993) sociological approach to the structural relations within which creators produce their work provides a way of understanding the different relationships that people within capitalist countries have with culture and cultural products. His typology provides a departure point for the analytic framework of this exegesis. An artistic work, according to Bourdieu, is not merely a unity unto itself (the presumption of, for example, literary school of new criticism), but has a necessary relationship with the world beyond it. Therefore:

To understand the practices of writers and artists, and not least their products, entails understanding that they are the result of the meeting of two histories: the history of the positions they occupy and the history of their dispositions.

p. 61

Analysis of individual dispositions (apart from my own) are beyond the scope of the current work. However, as an introduction to different types of technosocial engagement, I will now sketch the technosocially productive ‘positions’ that inform my own practice but are also reflected in contemporary society. For Bourdieu, three different principles of social legitimacy may underwrite your identity as writer, artist or media-maker:

1. recognition by artistic peers (the avant-garde);
2. recognition by bourgeois taste (high culture);
3. popular success (media-makers) (pp. 50-51).

For the avant-garde, recognition outside one’s peer group is almost anathema. The other two principles of legitimacy rest on the idea of an audience that is distinct from the producer⁶. Bourgeois ‘high art’ audiences generally seek cultural products whose value has been historically reified. Such products rarely as yet exist within the digital technosocial, and thus I will not consider that principle of legitimacy. However, the popular productions of ‘corporate media’ and the positions they entail are worthy of technosocial consideration. I shall also identify another emergent technosocial position that Bourdieu’s analysis cannot easily account for, because of technosocial evolution (combinations of technology and human behaviour). That position is the prosumer. The following sections outline the sorts of engagements, and media and communication products, associated with these three positions. Establishing these positions will allow me to explore my own assumptions of those positions in succeeding chapters of the current work.

I. The prosumer

The term ‘prosumer’, originally a marketing term to describe the professional consumer, now enjoys a broad use as a descriptor for creative individuals constantly collaborating with apparatuses to make and disseminate media and communication, usually for nonprofessional reasons. Mark Deuze (2003, p. 213) defines prosumers as ‘active instead of passive media consumers ... interactivity [is] ... the characteristic of the internet which facilitates association, enabling people not only to receive information ... but also to disseminate it...’. The prosumer’s ‘success’ is mainly judged by peers. Blogging (weblogging) is a commonly cited example.

As a teacher, I am also a prosumer. This technosocial position is often community-based. My students and I form communities of interest; we publish (text, image, audio and video) on topics of common interest on the Web (most commonly to our blogs). We refer to each other's work by hypertextually linking them together, an activity that is promoted by the built-in affordances of blogging software. We might publish work elsewhere on the Web, using different software, then link those publications back into our blogging presence.

The struggles my students have with the idea of networked prosuming often concerns identity⁷. My students are not a part of the *MySpace* generation (see below), and they often find the process of creating a public self somewhat confronting. How does prosuming change self? As a result of engaging with these issues, at the end of a course, many students seem very aware of how their technosocial engagement has impacted upon their lives.

Indeed, prosumers are making identity into the explicit theme of their publications. A famous recent example is Geriatric1927 (2006) who posted a video about himself to *YouTube*, a networked video sharing website. In that video, Geriatric1927 announces he wishes to 'bitch and grumble about life in general from the perspective of an old person whose been there and done that and hopefully you will respond in some way by your comments and then I might be able to do other videos to follow up your comments, I do hope so'.

According to Goldsmith (2006), Geriatric1927 received a half million viewers in the first week. His success is an example of a strong prosuming impetus to make your identity public and therefore perhaps convert life itself into a work of art (Bauman 2000, p. 82). Perhaps, as Zygmunt Bauman continues, for prosumers, camcording your life actually makes it real (p. 84). Indeed, if 'the search for identity is the ongoing struggle to arrest or slow down the flow, to solidify the fluid, to give form to the formless' (p. 82), our may blogs faultily grasp towards this essentially elusive goal. However, I will develop a different perspective. I will argue that our technosocial engagements are about manipulating *fluid* identities and *multiple* realities, and any hope that prosumers have about making a permanent archive of the self tends to quickly recede.

Prosumer culture threatens to elide traditional cultural boundaries between hobbyists and professionals. One example is the semi-professional service, the *Tsunami Video Hosting Initiative* (Media Bloggers Association, 2005) which 'was launched in response to concerns over bandwidth issues facing bloggers doing a tremendous public service by providing video of the tsunami to the world'. Another example is *Now Public* (2005) whose by-line is 'don't like the news? Then change it. The news is now public'. As whole prosumer 'genres' such as machinima receive critical acclaim and mass attention in work such as *Red vs. Blue*, even media corporations such as News Corp (Murdoch 2005) and the BBC (Sherwin 2006)⁸ are hitching their star to the prosumer bandwagon.

Prosumer culture also threatens cultural distinctions between hobbyists and the avant-garde. The prosumer does not necessarily engage in pushing artistic boundaries in the manner that Bourdieu (1993, pp. 62-63) or Lyotard (1984, p. 75) suggests, however some prosumer media nevertheless finds a niche community⁹, in a way reminiscent of avant-garde communities. Technosocial networks support niche prosumer media. Social software¹⁰ such as *Flickr* reveals the large range of publication position-takings that the network now allows, from advertising of professional photography to more intimate communities of interest represented by family photo galleries.

Many prosumers have become members of a technosocial club predicated on access to technology rather than upon pushing artistic boundaries or achieving mainstream success. Much of the resulting media is peculiarly and even proudly naïve, as one need only examine the superficial ramblings of most *Friendster* or *MySpace* entries and what Vilèm Flusser (2005, pp. 57-8) would call the redundancy of most of the photos in *Flickr* to discover. Most prosumers would fail the criteria for avant-garde membership, characterized by Bourdieu as 'no place for *naïfs*' (1993, pp. 60). However, the prosumer position depends on a similar peer recognition value system.

Indeed, to outsiders, prosumer content can be quite disconcerting. It tends to be only meaningful to other prosumers in the same community. Arguably, you need to be putting your own content 'out there' to appreciate the efforts of your peers. Hans-Georg Gadamer (1977, p. 25) argues that intersubjective understandings are arrived at through language. Perhaps prosumer activity extends face-to-face linguistic intersubjective engagement into peer-to-peer intersubjective convergence. These technosocially-facilitated media communities stretch the boundaries of Bourdieu's

positions. While Bourdieu's theory can accommodate change in particular cultural forms, it is unclear how it might account for change in the very *concept* of creative production.

Prosumer 'social software' like *Flickr* and *Friendster* developed out of a commitment to participatory or metadesign, an approach to design which is 'both a theoretical issue and an operational methodology' (Giarccardi 2005, p. 343). Originally conceptualised by Gene Youngblood (1986) as 'a strategy for instigating a revolution in the communication world and overcoming the broadcasting style of mass culture', metadesign promotes critical and reflexive thinking about the boundaries and scope of design 'aimed at coping with the complexity of natural human interaction made tangible by technology'. Thus, '[m]etadesign seeks to transform this complexity into an opportunity for new forms of creativity and sociability'¹¹.

Derrick De Kerckhove (1995) describes metadesign as a useful principle for Web-based applications because it is

the kind of design that puts the tools rather than the object of design in your hands. The better interactive systems are not those which define the process, but those which define the conditions for the process of the interaction. The more tools are in the hands of the user to shape, specify and control the interaction, the more interactive it will be.

Metadesigners become the 'seeders' of a collaborative creative process which is 'able to generate endless variations recognisable as belonging to the same idea but open to change by the client' (Giarccardi 2005, p. 345). Metadesign and the related school of participatory design¹² are ways in which designers are responding to a technosocial environment in which prosuming has become an ubiquitous emergent behaviour. Prosumers are notoriously coy if they don't feel empowered. They simply go elsewhere.

The *Flickr* environment was developed on metadesign principles. Launched in February of 2004 as a Flash application for chat about photos, user feedback encouraged its evolution into a photo sharing application. The *Flickr* team sought to build community through functionality. One example is their implementation of tagging. According to Eric Costello:

Tags were not in the initial version of *Flickr*. Stewart Butterfield wanted to add them. He liked the way they worked on del.icio.us, the social bookmarking application. We added very simple tagging functionality, so you could tag your

photos, and then look at all your photos with a particular tag, or any one person's photos with a particular tag.

Soon thereafter, users started telling us that what was really interesting about tagging was not just how you've tagged your photos, but how the whole *Flickr* community has been tagging photos. So we started seeing a lot of requests from users to be able to see a global view of the tagscape.

quoted in Garrett 2005

One of the interactive principles that Löwgren and Stolterman (2004) identify is 'playability'. The *Flickr* team intuitively picked up on the importance of playability in their own work practices and that of their prosumer users:

Our team, led by Stewart, is very playful. We are always having a good time, whatever we're doing. We let that carry through into the way we describe things on the site, the way we talk to our users. It's all very playful, and that's intentional. We want it to be a playful place.

Metadesigned social software like *Flickr* are in 'perpetual beta': always evolving. Being finished is, indeed, a thing of the past. This is also the attitude of more forward-thinking professional media makers, such as David Vadiveloo, director of the online documentary *UsMob* (2005), hosted by the ABC (Australia). Users can add media and text to *UsMob*. Presaging a technosocial prosumer documentary, the ABC is paying for five years of moderation, giving *UsMob* an evolving lifespan as users add their own media to the *UsMob* networked database.

From the metadesigner/programmer's perspective, Tim O'Reilly (2003) argues that the future lies with 'people who build products based around the deep involvement of a community'. Projects which succeed in this 'software paradigm shift' of pervasive networked computers facilitating meaningful connections between the self-interested actions of individuals, attract a critical mass of individual involvement to a site:

There are a whole new range of applications ahead of us. The line between cell phones and handhelds and laptops and wireless ... is going to make computing that is something that surrounds us and that we interact with in our daily lives in completely different ways... When all these devices are connected in the network, it allows a new class of socially conscious software... to be developed and to be exploited.

A useful concept to help us understand the nexus between technology and human creativity is that of 'affordance'. Developed by Donald Norman (2002, p. 9), it originally referred to '... the perceived and actual properties of the thing, primarily

those fundamental properties that determine just how the thing could possibly be used'. A chair affords sitting; glass affords seeing through (and breaking).

In design, affordance is the range of behaviour that an object allows, and constraints limit the range of behaviours. A sister concept, mapping, is the notion of the relationship between the designed object and the effect of the object in the world. Natural mapping occurs when the object takes advantage of physical analogies and cultural standards to lead to immediate understanding about its purpose and function (p. 23). Affordance, constraints and mapping provide the conceptual model of a thing (p. 13). Feedback—sending the user information about what has been accomplished—further this understanding. Good design entails visible things with

good mappings, natural relationships, between the controls and the things controlled. Single controls often have single functions. There is good feedback. The system is understandable. In general, the relationships among the user's intentions, the required actions, and the results are sensible, nonarbitrary, and meaningful.

p. 22

Affordance is subjective and psychological. It ties technology to hermeneutics. When I use my mobile phone overseas to contact my mother, it gives rise to an interpretation of the world being interconnected regardless of distance. In this way, what our devices can and can't do come to signify different things about the world we live in. Thus, the idea of affordance can be broadened from its design roots to encompass technosocial praxis. N. Katherine Hayles' media-specific analysis (MSA) develops an idea similar to affordance to analysis of avant-garde technosocial artworks. MSA is 'a kind of criticism that pays attention to the material apparatus producing the literary work as physical artifact' (2002, p. 29).

Affordance also ties technosocial practice to the discipline of design. Prosumers and professional media-makers alike have become obliged to think like problem-solving designers, critically engaged with technology. Only then can they contain what Norman (2002, p. 27) describes as the paradox of technology, which is that 'added functionality generally comes along at the price of added complexity'.

A simple example of the idea of affordance as a hermeneutic tool would be to compare blogging behaviour with behaviour associated with other social software such as *Friendster* and *MySpace* (according to Jenkins (2006) the latter has more than one

million Australian users). *Friendster* encourages personal, informal, unstructured and even intimate writing. It is rarely used in professional contexts, but rather is used to form new friendships or maintain old ones. Built into the *Friendster* software is a mechanism to encourage you to make more friends. The result may well be quantity over quality of friendships with little real content, however that may be to miss the point of what *Friendster* and *MySpace* promote: the exploration and publication of self-identity. The different affordances of different social software encourage different types of human behaviour, human values, and different types of prosumer media-making.

Despite this apparent media democracy, prosuming is still a cultural tactic for relatively wealthy, relatively educated people. Prosumer media is often about place, friends and the quotidian. Prosumers employ technology to surmount or even make a virtue of transience—travelling, going out. Indeed, prosumer culture seems peculiarly concerned with ‘not being at home’—physically, but perhaps also emotionally. Perhaps we have all become tourists, even in our own back yards. How do we maintain a sense of self when we are not at home? How do we transform not being home into an enriching experience? Perhaps by publishing it. In chapter four I will explore further whether prosumer culture and experience of transience are mutually reinforcing.

A technosocial analysis engages economics, aesthetics, cultural knowledge, technical access and skill, all articulated in the languages which oil the connections between apparatus and human. In this sense, identity becomes more anchored to your ability to communicate by manipulating media and media flows. Prosumer behaviour privileges practice, process and community over received ideas of content, aesthetics, and completion. This is not to say that technosocial nexus does not promote or lead to formal sophistication. However for a lot of prosumers, aesthetics seem to have become of secondary import to the phenomenon of engagement with community and identity generation *per se*.

The intensity of technosocial engagement with digital media is often expressed through the concept of *immersion*. Immersion—its limits, successes, failures and consequences—is a theme that periodically arises in technosocial contexts. As an outsider, viewing prosumer media tends to fail the immersion test: you are usually aware of the way it is technologically framed, and embedded within another layer of reality. Indeed, immersion and transparency are probably not a necessary prelude to

telepresence and ‘virtual community’ as Downes (2005, p. 84) suggests. Production and dissemination is a collaborative activity, and no prosumer is really interested in obscuring the technology that enables it. However, when you are making such work, immersion runs deep. This is immersion in *trilogical collaboration*.

Identity data is spread across and recombined by the Internet. Search for me and you will find my blog, my artistic work, my *Friendster* account, my *LinkedIn* (2003-2006) profile. Networked prosumer identities have been described as ‘identity mashups’ by Jake Shapiro (2006). Shapiro asks what happens when you mash all this identity data together? The result may include risks, possibilities and unconventional behaviours. Maybe the apparatus synthesizes an identity you didn’t entirely intend.

Those who seek formal sophistication (at times, including myself) find themselves alternating between the quite distinct value systems held by prosumer and avant-garde cultures. The next section explores the latter position.

2. The technosocial avant-garde

In 2006, a star was born. Lily Allen, ‘the postergirl for the MySpace generation’ (Bailey 2006, p. 7), built a huge following for her music as a result of posting her songs on *MySpace*. She is not the first to garner commercial success via the peer-to-peer (P2P), commonly non-commercial nature of prosumer networks. The technosocial is breaking down distinctions between the creative amateur, the avant-garde artist, and commercial success (corporate media). Prosumers leverage networked dissemination to find their community. Whether that community consist of 50 or 5 million, success is a measure your ability to find the people you needed to find. Increasingly, artists and corporate media are co-opting prosumer behaviour to their own ends. As such, the prosumer position ‘bleeds’ into the two other positions I will discuss—that of avant-garde artist and corporate media producer.

As we examine the three proposed technosocial positions—the prosumer, the avant-garde artist, and corporate media-makers—we move away from the explicit, direct (and indeed, naive) exploration of personal identity. Corporate mass media’s engagement with personal identity has traditionally been quite tenuous. The avant-garde artist’s expression of personal identity is often indirect and ironic. They often strive to create work in which their personal situation is obscured. At the same time, personal renown as an artist seems core to their public personas. Contemporary

artists such as Abe Lincoln and Jimpunk (see below) obscure personal identity behind data and pseudonyms. However, success is still measured in terms of fame within their community. Within the technosocial problematic, tensions arise between the ironic personas of avant-garde artists and contemporary prosumer ideas of mediated identity.

The artworks of the contemporary technosocial avant-garde can be strange beasts. They eschew the reassuring solidity we are accustomed to. Made of digital information, they leave a small footprint. They may evolve in response to aspects of their technosocial context—for example user behaviour, or automated digital information supplied by a network/system. Both form and content might be highly dependent. It can be hard to know where an artwork ‘ends’ (let alone ‘concludes’). If unity¹³ is still an important aesthetic principle for technosocial media and art, how do we interpret a work like *Screenfull* (Lincoln and jimpunk, 2005), described by Fateman (2005) thus:

If you like noise bands, dial-up (their browser-slowness tricks tend to frustrate navigation), or the endurance tropes of experimental work, you'll have the stomach for this noisy, erratic site. Vandalized screen-grabs, animated Photoshop layers, Duchamp references, and grafts of high art and advertising imagery engage both net art practices and the appropriationist strategies of punk, Dada, Situationism, and remix culture. *Screenfull's* ability to zero-in on the parodic vulnerabilities of their subjects supports the aim to disrupt the corporatized conventions of online display, or, in their words, the desire ‘crash your browser with content.’

The idea of the Web surfer as a flâneur, eternally roaming the ‘streets’ of our symbolic, virtual world, seeking accidental found objects and experiences in decontextualised ways (Coyne 1999, p. 191)¹⁴ is commonplace. *Screenfull* ironically usurps flâneur experience by compiling the accidents of flânerie in one location. The guiding principle seems to be ‘pixellation’-in-flow¹⁵, that is, interpretation becomes ‘pixellated’ as digital objects are programmatically pulled out of their context and remixed, a process which exemplifies the digital, networked, hypertextual ontology of databased media (Manovich 2001, Chapter 5), but also, it seems, mocks it. Putting discreet digital objects into meaningful groups or sequences is the monumental task of meaning constructors—a human task that the apparatus alone can’t achieve. Trying to interpret the *Screenfull* mashup implies the limits of the apparatus.

Screenfull undermines our modernist sensibility of unity to replace it with a (noisy) meditation upon the arbitrariness of the unities we (human + apparatus) create. If the

resulting conjunction of information seems transient and contingent, meaning—successful interpretation—seems at best a lucky break. According to Flusser (2005, p. 71), photography instigated a period of cultural deterioration in which ‘all cultural phenomena started to replace the linear structure of sliding with the staccato structure of programmed combinations’. This heralded the eventual ‘cybernetic structure such as that programmed into apparatuses’. *Screenfull* works against unity, but trades upon the expectations of unity that modernism has enshrined in our interpretive acts. Its ‘unity’ is thus ironic, as the expectations of formal coherence are simultaneously betrayed and confirmed.

Screenfull is not necessarily emblematic of all digital and networked artworks, but it reveals a range of tensions that technosocial artists face. Networked culture is one in which individual voices tend to be lost in a scrum of media and communications. Expressions of personal identity generally penetrate no further than your community of interest: digital works are notoriously unstable, and capitalism has little motivation to get involved.

Bourdieu argues that the field of cultural production harbours a struggle for legitimacy, in which ‘...the most autonomous producers naturally tend to exclude “bourgeois” writers and artists, whom they see as “enemy agents”’ (Bourdieu 1993, p. 41). This struggle is embedded in popular parlance in the distinction between ‘media’ and ‘art’. The position of pure artist is a position of freedom (p. 63); it operates beyond politics, ethics and economics. Such risky positions depend on possession of the economic and social capital (p. 67) that provide the conditions for freedom (p. 68). These observations still hold true for the technosocial avant-garde, but within contemporary technosocial contexts, such artists wrestle with a new range of ironies about their status.

Being an avant-garde artist is an unstable position. The position is haunted by demands for innovation and invention. For artists engaging with new technologies, the challenge of continual invention is even more intense. For this and perhaps other reasons, the avant-garde position often dissolves into the other creative positions—the hobbyist, the bourgeois producer or more recently the prosumer.

3. Technosocial corporate media

The contemporary technosocial privileges user involvement over passive consumption. Even decisions over the type of device, and the type of software used, presuppose a certain level of research and engagement (*MySpace* is not automatically delivered to 98% of people's living rooms). If the technosocial presupposes active choices about communications and media, where does this leave a professional media industry, traditionally predicated on the ubiquitous supply of a producer-consumer model in which consumer decision-making and power is extremely limited? Corporate media has been obliged to find ways to engage the active exploration of identity that prosumer media has promoted. As we shall see in chapter three, one of their solutions is the computer game.

Corporate media-makers tend to rely on realism, a formal aesthetic based on unity, simplicity and communicability that replicates the dominant culture (Lyotard 1984, p. 75). The realist aesthetic dominates popular visual culture and has been widely appropriated by broadcast television. It is also at work in mainstream movies and computer games. Seamless realism is an aesthetic that privileges an ideology of transparent, static and coherent identity. Downes (2005, p. 141) suggests that government and big business have a vested interest in pinning people's mediated identity to their offline identity 'as precisely as possible'. However I shall be arguing that fluid identities come to the fore during the praxis of the technosocial.

Different types of corporate media appeal to the prosumer mentality to different degrees. For example, performative media like computer games (even those that do not operate in multiplayer mode) mean that players have choices and therefore can engage issues of identity (see chapter three). Network television on the other hand, is rarely responsive to personal taste and struggles to engage with identity issues. Community television and community radio, which can align itself with a niche audience, is more successful in engaging with issues of personal identity, but they do so precisely by refuting the mid-twentieth century Reithian¹⁶ belief that mass broadcasting should promote common national values. Mass broadcasting may be well-placed to develop (or perhaps, indeed, enforce) group identity, but not to promote personal uniqueness.

Much prosumer activity operates beyond the reach of the national political discourse surrounding broadcast media. Media policy-making is framed in terms of the good of the nation; this is partly because, in Australia at least, media policy is the preserve of the national government. As a result, either implicitly or explicitly, the rhetoric surrounding mass broadcast media promotes the values of the nation-state. Furthermore, broadcast media in Australia, particularly television, is mainly directed at an Australia-wide audience. It is therefore not surprising that it should adopt the Federal government's national agendas.

On the other hand, prosumer and avant-garde activity tends to operate *glocally*—the direct interface of the local with the international. Anecdotal evidence and personal experience suggests that the Australian technosocial avant-garde has responded to shrinking opportunities from local funding agencies by engaging with European, Asian and American partners. Nationalism is rarely an important ideology in prosumer or avant-garde contexts.

One example of Australian policy discourse which tied mass broadcasting and corporate media-making to nationalism was the debate about the 2004 Free Trade Agreement with the USA. This treaty appears to undermine the production of Australian media content (Lundy 2004). However, the core problem has been somewhat misconceived because of the ability of corporate media-makers to dominate the debate: the Free Trade Agreement will not prevent Australians from communicating or producing their own media. However, it may impact on the content that receives big-budget, mainstream, *mass* media distribution. Australian product circulating in prosumer or avant-garde networks seems unlikely to be affected (indeed, consumption of prosumer product seems to be increasing), but it is also less likely to meet the content agendas preferred by nationalistic policy-makers and large media corporations. In implementing such policies as the Free Trade Agreement, national policy-makers may inadvertently squeeze out an ideology that confirms their own central position in the politics of Australian media.

Corporate media of relevance to my focus has been analysed within academic discourse in a variety of interesting ways. Of particular note is the theory of remediation, developed by Jay Bolter and Richard Grusin (1999). Remediation is the result of two cultural mechanisms: immediacy and hypermediacy. Hypermediacy, whose 'aim is to draw attention to the medium itself, deliberately hi-lighting the fact that

what we view is not a transparent window on the world but merely a mediated representation' (Scott and White 2003, p. 319) is in a collaborative tension with immediacy, in which viewers forget technological specificity and cultural reference to engage with the media itself.

Bolter and Grusin (1999) argue that immediacy and hypermediacy are always both present; together they create media that pays homage to, but also interrogates the limitations of, prior media. Thus:

Digital visual media can best be understood through the ways in which they honor, rival, and revise linear-perspective painting, photography, film, television, and print. No medium today, and certainly no single media event, seems to do its cultural work in isolation from other media, any more than it works in isolation from other social and economic forces. What is new about new media comes from the particular ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media.

p. 15

The complex relationships that result are a mediascape in which, according to Hayles (2002)

the relationships between different media are as diverse and complex as those between different organisms co-existing within the same ecotome, including mimicry, deception, cooperation, competition, parasitism and hyper-parasitism.

p. 5

Scott and White analyse the technosocially interesting *Walking with dinosaurs* series (1999), which oscillates between immediacy and hypermediacy (2003, pp. 319-320)¹⁷. *Walking with dinosaurs* also exists as a cross media, convergent product. Consumers have a lot of choices about what aspect of the *Walking with dinosaurs* product range they engage with, and also *how* they engage—video, web, etc.

Increasing the range of consumption mediums has become common since the *Walking with dinosaurs* series. One local example is ABC Radio National repurposing its broadcasts as MP3 podcasts¹⁸. As a result, programmes such as *Late Night Live* garner an international, time-independent audience. Audiences are choosing from a plethora of modes of consumption. Identity partly becomes a function of *how* you consume, not just *what* you consume.

Remediation is the guiding aesthetic principle of convergent and cross media. In many ways, it works counter to traditional realism. Realism seeks a level of ontological transparency and coherence which this neo-baroque range of choices betrays. We are always making conscious technosocial decisions. We are told to look forward to a future of media tailored for multiple devices on a pay-per-view basis from the BBC or News Corporation, and homes dominated by an 'entertainment hub' which serves media to all these devices (envisaged, for example, by Microsoft's Media Center PC; see Ross (2006) and Ross and Martin (2005)).

The aesthetic of cross media, convergent remediation challenges traditional concepts of copyright, a legal concept that served the legal and commercial requirements of non-digital and realistic media well. With digital media, copying is particularly easy. Technosocially well-informed creators practice 'copyleft', whether illegally or legally, often motivated by political and ethical concerns as well as formal experimentation¹⁹. Copyright, and the power relations it enshrines, is a contested site in the convergent, remediated mediascape. It is one of the main ways in which corporate media clings to its domination of an increasingly fragmented mediascape.

This fragmentation is facilitated by networked distribution, which has changed the types of media content that are viable because of its ability to sustain 'niche media'. A producer might be more motivated to make niche work if he/she feels confident that a large proportion of that relatively small audience can be reached via the network.

According to Doug Kaye (2005)

the best blogs and podcasts aren't those that appeal to the largest and most generic audiences, but rather those that deliver the greatest value to an audience, regardless of the size of that audience. One might have a blog or podcast about organ transplants, for example. Wouldn't make the Top Anything list, but for the intended readers/listeners, it would be #1. Old media can't do that. New media can and should. Change lives in as profound a way as possible.

The networked facilitation of niche media illustrates how technology, social relationships and economics interrelate and evolve. Until recently, such media was not sustainable, because producers were unlikely to reach their community of interest.

One of the challenges corporate media faces is how to commercialise such behaviour in the face of passionate prosumers willing to give up their time and energy for their niche, for little or no financial return. Prosumer audiences, likewise, appear forgiving of poor production values if the content is right.

The challenge for corporate media is cognitive before it is economic. Lehman-Wilzig and Cohen-Avigdor (2004, p. 723) argue that '[t]ransforming deep-rooted patterns of thought and consumption undercut the very foundation of the older media...'. An illustrative example are adolescents, whose mobile phones may consume a high percentage of their disposable income. It would appear that the social payoff justifies their expenditure. As Idhe (1993, p. 34) observes, 'the dimension of technology transfers are never simply economic or productive, but multidimensioned and involve cultural and existential interchange'. Indeed, as telcos become content suppliers, the very identity of corporate media suppliers is changing.

Networked, peer-to-peer distribution is a core technology facilitating changes in technosocial practices that break down traditional distinctions between audience and producer. Resnick (2001, pp. 11-13) suggests the strengths of networked information sharing, some of which are explicit, and others emergent. It

- facilitates information routing;
- helps people to exchange other resources besides information;
- makes it easier for people to provide emotional support to each other;
- enables coordination of interdependent actions.

He locates seven 'productive resources' (2001, pp. 13-17) that collude to create SocioTechnical Capital:

1. communication paths;
2. shared knowledge;
3. shared values;
4. a shared sense of collective identity;
5. obligations, debts that have been incurred during prior interactions;
6. roles and norms of behaviour for people playing those roles;
7. trust.

One of the striking things about this list is its similarity to the early broadcast television rhetoric. That rhetoric has largely been discredited: when the communications paths are one-way, assumptions by the creator about shared knowledge and values must be made. In the broadcast context, any shared sense of collective identity tends to be at best a statement about successful monocultural assimilation, or at worst, an alienating experience of 'identity enforcement'. Resnick

implies that P2P networks seek to address similar issues of identity, community and trust, but they do so from 'grass roots' power-bases.

As Ingrid Richardson (2005) suggests, when audiences become users, there are changes in the relationships 'between individuals and society, private and public domains, temporal and spatial perception, location and presence, embodiment and interface'. These are issues that corporate media-makers are struggling to come to terms with. As we shall see in chapter three, their most successful contemporary response is the computer game, but even that type of media does not escape a fair amount of cultural controversy. What affect do the relationships that result from technosocial praxis have on our sense of who we are?

Identity and the apparatus

In previous sections of this chapter, we have considered three technosocial 'positions'—a term and approach adapted from Bourdieu (1993). Contemporary technosocial ways of engagement with media and communications give rise to a prosumer position which throws into relief aspects of avant-garde, and corporate media-maker positions. The types of positions that have characterised modernism and capitalism are evolving in the face of technosocial challenges to traditional ideas of art and media-making and consumption.

Downes (2005, p. 12) argues that functional sociology tends 'to undervalue questions about why we might choose to use technologies (computers, for instance) in new or unintentional ways or why we keep using them as a form of communication and expression'. My task is to translate such functional observations into reflections about the way our experience of media communications technologies impact on identity and our sense of human possibility and thus, to future uses, patterns and opportunities. Thus, technosocial contexts contribute 'to a general reconsideration of traditional, unitary notions of identity' (Turkle 1996, p. 260).

My approach extends sociological and political insights into philosophical and cultural realms. Our engagement with technology challenges our sense of self:

A sense of self requires a poetic assemblage of experience. One experiences oneself not as an entity but as having a place from which one perceives and acts and where one is perceived and related to ... the self is ecological, artifactual, and enacted. One also perceives oneself in relation to the groups to which one belongs—one has a social self.

Downes 2005, p. 70

The self becomes fragmented, multiple, and engaged with different types of realities, perhaps even simultaneously. Identity is thus tied to our concept of what reality is like. The question of what reality is like has been a stumbling-block for new media theorists. This stumbling-block is signified in the multiple, confused uses of one term: 'virtual'.

Jaron Lanier invented the phrase 'VR' to signify 'a computer simulation of sufficient fidelity that a user can operate in the simulation' (Downes 2005, p. 45). Lanier wasn't proposing any kind of fakeness about virtual reality, rather VR was 'an expansion of reality, the provision of alternate realities' (Lanier *et al* 1992, p. 8). This relatively harmless term has been somewhat carelessly expanded into ontological realms.

The original meaning of 'virtual' is 'not actual, but just as if' (Heim 1993, p. 160). It is a big leap from this meaning to Downes' idea of virtuality 'based on the relative transparency of a technological system that allows a user to experience a communicative event and to ignore the technology mediating the experience' (2005, p. 72). Another oft-cited term, 'immersion' is often used in this sense²⁰, and I will use this term in a similar way.

Heim (1993) argues that:

A virtual world can be virtual only as long as we can contrast it with the real (anchored) world. Virtual worlds can then maintain an aura of imaginary reality, a multiplicity that is playful rather than maddening.

p. 133

This contrast is extremely tenuous, and opens criticism up to complex ontological argument definitely beyond the scope of this exegesis. I will argue instead that both mediated and nonmediated worlds are 'real', however the ways in which they are 'real' might differ. Introducing the term 'virtual' as a way of distinguishing between these worlds introduces an unhelpful regime of values. In a limited but productive sense, we can talk instead about worlds that are framed by other worlds (even if, as I will argue in chapter three, when you are absolutely immersed, that framing disintegrates).

The means to achieving an ideal, unified experience is data, says Coyne (1999, p. 257)—but data is malleable; it transits in and out of 'existence'. Our technosocial unities are ironic; they are beholden to language, which itself is a transient thing. It is

to the ironies of producing transient texts, derived from the play of nonhuman language, that I now turn.

CHAPTER TWO: I, APPARATUS, YOU

Poetry is liquid language.

Novak 1992, p. 229

The aim of this chapter is to theorise the creative process involved in the technosocial praxis introduced in chapter one, exemplified by my own avant-garde work *Concatenation*. The role of language in technosocially rich forms of media structures specific types of relationships between author/programmer, text, apparatus and ultimately user. These are relationships I call *trilogical*, and they will remain important throughout the current work.

The linguistic phenomena that I will explore ultimately suggest that technosocial engagements are a distinct type of human activity derived from quite different relationships to those that humans have with the heavy technology decried by Heidegger. My approach draws on constructivism, which suggests that our technosocial engagements collaborate in creating the reality that we live in. The relatively negative attitude to apparatuses communicated by Heidegger and Flusser is not a necessary outcome of trilogical collaborations. The impact of our trilogical engagements are as complex as any other linguistic phenomena, and not, therefore prone to specific or pre-determined ethical or political appropriation.

Concatenation, a recent creative work produced as part of this PhD project, belongs to a sub-genre called generative poetics; it has relationships with generative visual art practices and other algorithmic textual practices. While these works are textual—both in the programming and in the surface display—the following observations are broadly applicable to computer-based works that do not wholly, or mainly, result in display of written language. The trilogy surmounts some traditional genre distinctions by focusing on the similarities about the relationships between human and apparatus across computer-based artforms. Such ‘texts’ (understood generically) exist co-extensively with the apparatus when they are executed; they are described as ‘a single ideocratic device’ in Talan Memmott’s *Lexia to perplexia* (2001a). I call such texts ‘text-as-apparatus’. When used, they perform the technosocial environments in which interpretation happens.

The project work discussed in this chapter adheres to the idea of the technosocial avant-garde described in chapter one. I will conclude this chapter with observations on

the problematic contemporary position of the technosocial avant-garde, before discussing in later chapters positions that seem less prone to tensions derived in part from inserting modernist cultural values into a technosocial environment that privileges inclusivity, interaction and dialogue.

Unblacking the box



Image 2.1: *Semtexts* at the Australian Centre for the Moving Image, 2004

Influenced by Martin Heidegger, Vilém Flusser (2005) was one of the earliest communications phenomenologists to consider the digital apparatus. He argues that apparatuses supposed to aid human creativity, like stills cameras and movie cameras, stunt human creativity. According to Flusser, the apparatus requires and creates a specific type of culture that distances humans from

‘nonmediated RL’. Since Flusser wrote in the early 1980s, apparatuses, and particularly computers—combinations of software and hardware, often connected to the network—have become ubiquitous.

Flusser made some key assumptions about the nature of the human-apparatus relationship worth questioning. For instance, he conceptualizes the apparatus as a ‘black box’, a given that the user can not access. Flusser defines a program as a sub-human and mindless ‘combination game based on chance’ (p. 69). Creative power is almost wholly in the hands of the programmer, a shadowy figure whose humanity seems overwhelmed by the technical-manufacturing ‘metaprograms’ that s/he contributes to and instantiates in her programming work. In other words, the system obscures humanness.

However, contemporary programmers are not shadowy ciphers conforming to the grand plan of an apparatus-ruled world. As Florian Cramer (2001) stresses, ‘computer

code, and computer programs, are not machine creations and machines talking to themselves, but writings by humans'. The phenomenal success of *Flickr* is one example of programmers socially engaged in technosocial creativity. The programmer/artist¹ has peered inside the 'black box' and learned to manipulate it, for user-centric ends. The apparatus is transformed into a technology with a range of affordances, which the programmer takes advantage of to create a text-as-apparatus: a text which is coextensive with a machine, and which instantiates performance as its *modus operandi*. As Gelernter (1994, p. 115) argues, it is the software, not the hardware, which is of ultimate interest, because the character and functioning of the apparatus 'are determined not by the way it is put together, but rather by the identity it has temporarily assumed—by the program it is executing'. That is, the apparatus is nothing, if it is not performing as a text-as-apparatus.

Cramer (2001) alludes to the difficulty of analysing the text-as-apparatus because

program code contaminates in itself two concepts which are traditionally juxtaposed and unresolved in modern linguistics: the structure, as conceived of in formalism and structuralism, and the performative, as developed by speech act theory.

The notion of the trilogy provides a way of thinking about the relationship between structure and performance inherent in the text-as-apparatus². John Cayley suggests analysing the text-as-apparatus in ways specific to its linguistic 'ontology'

because the code is not necessarily transparent or visible in human-readable language; because code has its own structures, vocabularies and syntaxes; because it functions, typically, without being observed, perhaps even as a representative of secret workings, interiority, hidden process; because there are divisions and distinctions between what the code is and does, and what the language of the interface text is and does, and so on.

2002

The code is generally hidden to human interpreters; it is not in itself an object for hermeneusis (a human activity), and yet it enables the interpreted text. This obscure but nontrivial textual 'ecology' must be unpacked with reference to the human activity that bookends it—at its conception is the programmer, while its execution is presided over by the user/interpreter.

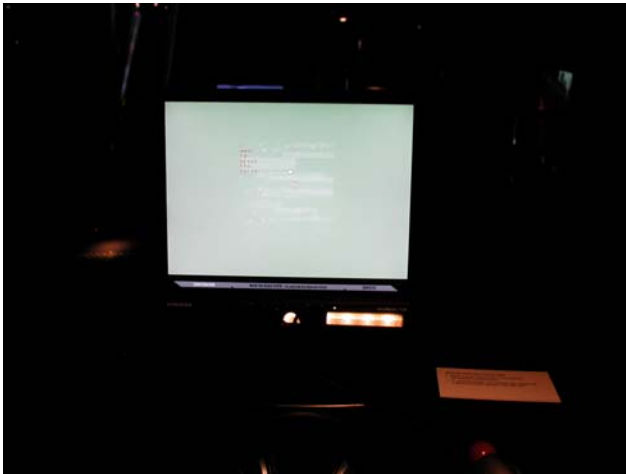


Image 2.2: *Concatenation* at the Australian Centre for the Moving Image, 2004

My work *Concatenation* is a text-as-apparatus. It was necessarily created within, and is necessarily experienced via a computer. This Shockwave³ program generates two versions of its single text—one to be executed by the apparatus and the other to be interpreted by a user. These versions are sensually discreet, but exist in a relationship of necessary correspondence. However, while the program at first glance seems

‘omniscient and omnipotent’ (Flusser 2005, p. 68), depending on the programmer’s design, execution and interpretation are under user control. In other words, analysis of the text-as-apparatus outside of its human context is hermeneutically barren.

Dialogues and trilogues



Image 2.3: *Concatenation*

Programming is addressed to two different entities—directly, to the apparatus and indirectly, to the human user. The programmer addresses her human audience by writing something that the computer can execute. If all goes well, what manifests is a text that a human (who doesn’t read programming) will interpret.

Thus the scope of dialogue is revised by the text-as-apparatus. As described by Merleau-Ponty (1962, p. 453), dialogue constitutes

‘between the other person and myself a common ground’ in which ‘my words and

those of my interlocutor ... are inserted into a shared operation of which neither of us is the creator'. It results from the creation of a 'dual being, where the other is for me no longer a mere bit of behaviour in my transcendental field, nor I in his; we are collaborators for each other in consummate reciprocity' in which '[o]ur perspectives merge into each other, and we co-exist through a common world'.

The trilogy seeks to encompass the synthetic and mediating role of the apparatus in acts of communication that also possess (at least) two human parties—programmer and interpreter. The trilogy offers scope for exploration of different types of communicative acts, which nevertheless also result in a 'merging of perspectives' and a 'co-existing in a common world'.

From the interpreter's perspective, it appears that the totality of linguistic aspects of a text-as-apparatus is impossible to know. Only humans can undertake the interpreting part of the trilogical relationship; while they can trigger textual changes, they are excluded from the direct text-execution (an algorithmic process undertaken by the apparatus). The trilogy promotes an emergent text resulting from the co-operation of programmer, apparatus and interpreter. For example, the interpreter is in a position to grapple with the questions about 'intent, identity, history, authenticity, so on...' (Coverley 2003) only if the recombinant nature of Memmott's 'Self Portrait(s) [as Other(s)]' (April, 2003), in which the descriptors of major figures from the history of art are wittily recombined, is understood. Sophisticated interpreters know there is more (text) going on than meets the eye. The trilogical relationship discloses an ecology of texts within texts, of illusion and truth, of revelation and secret that, as we shall see in chapter three, quickly become suffused with ontological interpretations concerning the nature of the real. There is no 'essential text' distinct from the process of trilogical collaboration and performative interpretation.

What programming is like

Programming is a species of logical writing whose operational efficacy derives from the correspondence of surface display (that is, what the screen shows the interpreter) with coded instruction, where correspondence is *not* equivalent to representation. In contrast, natural language works on principles of coherence, empathy and a level of syntactical forgiveness.

Texts that simultaneously deliver these two types of language require from programmer/artists an ability to engage different philosophies of language (that is, not merely vocabularies) at the same time. Writing for the apparatus alone is ultimately meaningless and non-communicative, since apparatuses are not interpreters. It is only in trilogical circumstances that the text-as-apparatus communicates.

However, programming code does possess an aesthetic allure. It has been described as 'highly recursive and highly architectural, building upon layers of layers' (Cramer 2001). The computer practices an extreme 'hypertextuality' on the code it executes, by reading functions that may call other functions and other objects, with little regard to their textual proximity. The aim of the programmer is 'elegance'—code should be as brief and powerful and bugless as possible. Programmers spend hours testing their code by executing the code and putting themselves in the position of human interpreter. In this quest for power and elegance, programmer/artists may start thinking they have a productive dialogue with the apparatus itself. However, the apparatus offers no original thought, but only the surprises of execution, and seeking dialogue with the apparatus offers limited onanistic satisfactions.

In others words, 'significance' for the apparatus is *epistemologically* distinct from 'meaning' in a (human-centric) poem⁴. Significance has an operational result. When code is significant, it can be executed without error. Code can only ever 'signify' one thing. It is not open to interpretation, and does not scatter meaning in different directions. The program won't signify something different in twenty years time when the War on Terror is over.

On the other hand, 'meaning' is contextual and nuanced. It emerges from the way specific individuals interpret the text into a multiplicity of elements, then determine how to unify it again.

The difference between my use of 'significance' and 'meaning' is further apparent if we consider the different ways in which humans and apparatuses respond to nonsense. When the computer encounters a 'bug' in the code, no dialogic negotiation takes place. The program—the performance—stops, and the most the human interpreter can hope for is an indication of syntactical irregularity that has stymied execution, performance, and event. That indication will rarely, of course, shed light on meaning, since the apparatus doesn't understand the distinction between meaning and

significance. As far as the apparatus is concerned, the monitor is displaying exactly what was programmed, whether it be an error message or a poem. However, when a human encounters an apparently nonsensical text, he/she will often attempt to extrapolate meaning through clues and cues. We may refer to other texts or previous experience. We might make whimsical and idiosyncratic interpretations inconceivable to our friends. In other words, computers can't read poetry; only humans can. Natural language is not a transparent bearer of meaning in the way that programming code absolutely must be (Glazier 2000). Even a random script—that opportunity for the computer to perform 'unpredictably'—is completely transparent. The apparatus is never asked to choose for itself.

The apparatus has no concept of multiplicity: it sees only the unity of data. There is no 'beyond' the data. The human interpreter engages in a 'back and forth' between the unity of the text and multiple factors in the world that might be brought to bear on interpretation. The interpreter cannot help reaching beyond the text; the apparatus has no capacity to do other than stay within its boundaries (even if, because the computer is networked, those boundaries are extensive). In this sense the computer's agency is logical and exhaustive. Even networked texts are finite, and rules determine behaviour. Human interpretation is potentially infinite, and entails degrees of choice. Computers can't practice the 'prejudice' that, according to Gadamer (1977, p. 9), constitutes being.

Concatenation

Through trilogical engagement, questions about identity and humanness arise because you are always implicitly comparing your own behaviour to that of the apparatus. These questions ultimately derive from the complex ways that language is used and manifests itself in the text-as-apparatus. I will illustrate the ways they arose for me in my own work, *Concatenation*.

Indeed, in subtle ways, these questions are encapsulated by the title, 'Concatenation'. 'Concatenation' is a programming term for joining things together. The poetic text is produced on screen via a complex range of rules from the database of possible textual combinations⁵. That database is, itself, almost wholly programming code, written in conformance with the Director software, the PC operating system, and the browser.

As I progressed in the production of *Concatenation*, the process of programming it came to seem like an exercise in applied philosophy of language. One language—lingo code—could, under certain circumstances, create another language—English. Although they were both written in the same alphabet, and the programming code contained (between quotation marks) some of the English phrases that the monitor displayed, syntactically, linguistically and even, in various instances, symbolically, the languages were distinct. These distinctions were necessary because of their very different audiences (Cayley 2002), and the different types of responses those audiences are capable of—while apparatuses *execute*, humans *interpret*.

Not comprehending that these linguistic differences were ontologically interesting in themselves, I complained as I tried to learn and apply principles of object-oriented programming that it would be more direct to write my poem on paper, thus avoiding that extra layer of translation due to the existence of code that had to be executed before it could be interpreted. Interpretation required programming with a level of transparency and unambiguity that was alien to natural language—and, indeed, to poetry. I had to force the apparatus to create a text that humans might want to engage with. If I was writing a print poem, I could have a ‘normal’ dialogue with my audience. I needed to discover a reason why the apparatus *should* intervene.

Interpretation based on human dialogue is open to negotiation, but there is a non-negotiable core to the apparatus: it can only respond to a limited range of commands written in specific syntax. Ellen Ullman (1997) describes

something in the system itself, in the formal logic of programs and data, that recreates the world in its own image... We think we are creating a system for our own purposes. We believe we are making it in our own image. We call the microprocessor the ‘brain’; we say the machine has ‘memory.’ But the computer is not really like us. It is a projection of a very slim part of ourselves: that portion devoted to logic, order, rule, and clarity. It is as if we took the game of chess and declared it the highest order of human existence.

p. 89

I learned to accommodate the apparatus’ *weltanschauung* and make it a part of the aesthetics of the poem by using the concept of concatenation as an uber-metaphor. I programmed the apparatus to engage in a to-and-fro process in which human interpretation is flavoured by the behaviour of the apparatus. In the to-and-fro exchange that the trilogue establishes, the text-as-apparatus reveals interdependence and collaboration. The trilogue can oblige the apparatus to yield a poetic, human-

centric interpretive environment that confounds much of the negative attitude of twentieth century philosophy of technology (including Flusser) concerning the apparatus imposing 'systems'-based anti-humanism on social and cultural behaviour.

In *Concatenation*, the text unfolds according to complex algorithmic rules. A poetic trilogue results, in which programmer, apparatus and interpreter have distinct and equally important roles. Interpreters must conform to the operational constraints of a rule-bound, materially specific, text-as-apparatus. In that act of conformance and negotiation, interpreters confront the 'epistemology' of the apparatus and the 'ecology' of the text-as-apparatus. As hands manipulate mouse and brains interpret the sometimes 'clunky' interfaces that mediate our trilogical relationships, these relationships themselves become part of the text's meaning. This is the metaphorical concatenation.

Developing this 'philosophy of the trilogue' seemed to be the prior condition for composing a text like *Concatenation*. While interpretation is the user's domain, as programmer I was still responsible for establishing the trilogical environment in which interpretation was possible. My previous model had been based on the flawed assumption that a *dialogic* relationship between author and user was the only worthy ideal. Instead, I found I needed to reconceptualise the apparatus as my collaborator. This was forcefully presented to me when I created my own programming, but was unable to predict precisely what would happen. Programmer and computer together created a text specific to the material affordances of the apparatus and the conditions under which it would be interpreted. Meanwhile, as a *performed, generative* text, the apparatus was going to collaborate with the user too. A trilogical nexus resulted between programmer, apparatus and user⁶.

The constructivist apparatus

The linguistic complexity of technosocial praxis ramifies on identity and the way we construct the real. The contemporary apparatus functions by complete dependence on linguistic invention. Unlike dialogue, trilogical communications are mediated by apparatuses which can't respond to a nod and a wink. My mobile can't tell me whether the text message I have just received is from someone who is relaxed or nervous. All communications between me and the human interlocutor who sent me the media or the message must be exhaustively specified in programming code and data. As a result,

what I understand is impacted upon, and my view of the world is flavoured by, the apparatus' linguistic 'filter'. Humans have different types of language capabilities, and different types of understanding than apparatuses, and yet we collaborate⁷. We trilogically negotiate the real.

Theories about the connection between language and reality are not new, neither in the history of ideas, nor in new media philosophy. Ludwig Wittgenstein, for example, is said to have reinvented philosophy to clear up 'the confusions caused by the bewitchments cast by language' (Monk 2005, p. 2). Wittgenstein is interesting because the history of his thought shows him changing his attitude to language. That change is mirrored by the different ways that humans and apparatuses 'understand'.

The trajectory of Wittgenstein's thought is encapsulated in his two famous works, the enigmatic *Tractatus logico-philosophicus* (2006b; originally published 1921) and the posthumously published *Philosophical investigations* (2006a; originally published 1953). In the *Tractatus*, Wittgenstein's views on language culminate in his famous aphorism, 'Whereof one cannot speak, thereof one must be silent' (2006b, p. 30 proposition #7). One possible interpretation is that use of language should be limited to communicative acts that are unambiguous and clear⁸. Taken literally as a recipe for language use, we can see it at work in any successful computer program: ambiguous or meaningless coding results in error messages, if not a 'crash'. The only statements that are meaningful are those that are exhaustively defined either within the program, or within the syntax of the programming language itself (Perl, php, Java, etc).

The initial propositions of the *Tractatus* can be interpreted as anticipating the 'ontology' of a computer program:

- I The world is everything that is the case.
- I.1 The world is the totality of facts, not of things.
- I.11 The world is determined by the facts, and by these being all the facts.
- I.12 For the totality of facts determines both what is the case, and also all that is not the case.
- I.13 The facts in logical space are the world.
- I.2 The world divides into facts.

Wittgenstein 2006b p. 2

An 'object' in object-oriented programming is a type of fact within the ontology of the program. In a qualified way⁹, the foundations of computer programming conform to the ontological predisposition of the *Tractatus*. In an object-oriented program, the world is, indeed, the totality of facts. In other words, artificially over-specified programming code wears its logical form on its sleeve, to adapt a phrase from Monk (2005 p. 48).

For the early Wittgenstein, language could be reduced to propositions, which are 'pictures ... of what they represent' (2006b, p. 10 proposition #4.011). Attempts to go beyond this to the linguistic expression of deep truths (that is, non-objective human-centric meanings coloured by emotion, aesthetics and ethics) always 'crash'. You need to *show* deep truths, not say/write them (Monk 2005, p. 21). This principle informs the performative ontology of computers and computer programming. Meanwhile, HCI (Human-Computer Interface) obscures the code, and the development of ever-more sophisticated and intuitive HCI derives from the general idea that 'deep truth' cannot be communicated by code itself. The computer, which only ever 'understands' the code, can never understand 'deep truth'. As a technosocial poet, I came to the conclusion that it can however, reveal or imply the 'deep truth' by collaborating with the human, in the human-centric version of the text that the monitor displays.

Different languages, different symbols, and ultimately, different understandings exist for different entities: the deeper a human looks into the layers of code that run our apparatuses, the more arcane they become. No one reads machine code, and no one wants to. We agree: there is no meaning in a series of 0's and 1's. Rather, the apparatus interprets digital data back up the hierarchy of code until it breaks into something that we can read (for some this meaning break-point will happen sooner than for others). Acts of interpretation, by human interpreters, are generally dependent on obscuring the apparatus' coded knickers.

We visit someone's homepage on *MySpace*, play computer games, and send text message poems to our girlfriends. Routinely, we barely acknowledge the bizarre, coded instructions going on somewhere behind the HCI. The visually and aurally-rich environments that humans engage with are what the apparatus has to 'show not say'. And thus we can return to Wittgenstein, who thought that renouncing language to 'show not say' had enormous implications:

Among those things that 'show themselves' are ethics, aesthetics, religion, the meaning of life, logic and philosophy. In all these areas, Wittgenstein *appears* to believe, there are indeed truths, but none of these truths can be expressed in language: they all have to be shown, not said.

Monk 2005, p. 21

Give to language (code) all that is logical. Everything else gets whipped up in a frothy mess of emotion and aesthetics that humans do so well. The early Wittgenstein would have loved the digital, through which language (code) and showing (HCI) can be neatly decanted into separate activities with different purposes and different audiences.

Ultimately, however, the position expressed in the *Tractatus* can not be sustained (except in programming code). The later Wittgenstein himself renounced the idea of the 'crystalline purity of logic' (Monk 2005, p. 61) to replace it with a use-centric analysis of living language:

I used to believe that philosophy had to give a definitive dissection of propositions so as to set out clearly all their connections and remove all possibilities of misunderstanding. I spoke as if there was a calculus in which such dissection would be possible... At the root of all this there was a false and idealized picture of the use of language. Of course, in particular cases one can clarify by definitions the connections between the different types of use of expressions. Such a definition may be useful in the case of the connection between 'visual impression' and 'sphere'. But for this purpose it is not a definition of the concept of a physical sphere that we need; instead we must describe a language game related to our own, or rather a whole series of related language games, and it will be in these that such definitions may occur. Such a contrast destroys grammatical prejudices and makes it possible for us to see the use of a word as it really is, instead of *inventing* the use for the word.

Wittgenstein 2006a, pp. 37-38

Thus logic gives way to hermeneusis, atomism is replaced with context, and this approach to language remains one that still flavours post-structural hermeneusis today.

The idea that computers use a certain type of nonhuman language has been remarked before, for example, in Heim's (1993, chapter two *passim*) analysis of Boolean logic. However, the philosophical analysis of digital experience has been dogged by what I will call 'reality fundamentalism'. In this formulation, mediated experience is somehow not as real as its predicated other, nonmediated experience¹⁰. I will argue against reality fundamentalism: I would say that the direct thing we are involved with is the apparatus; and the language that suffuses its workings is as real as any other language

which establishes the way we interpret the world. Multiple worlds have multiple languages.

The programmer engages then not only with two different concepts of language, but with the different ideas of the real that they imply. The apparatus relies on *significance* (equivalent to the early Wittgenstein's scientific and logical idea of language), while the human seeks *meaning* (equivalent to the later Wittgenstein's idea of context and language games). Human text and human dialogue are embedded within the trilogue, but the trilogue operates under the terms and conditions of logical languages. The constructivist approach allows us to describe ontology as flavoured by the various linguistic philosophies of programming code *and* human text. The 'ontology' implied by programming is of a (digital) universe that can be exhaustively enumerated; in which objects in propositions can be precisely defined; in which logic has ultimate value; and in which binary choices preclude the existence of questions that can not be answered. There is nothing to explore or question, because nothing can exist beyond its borders. The ontology implied by human language concerns a world which evolves according to use. These ideas about ontology are simultaneously embedded within any text-as-apparatus. It is a creative tension, in which questions of being—being human and being machinic—are constantly interrogated during composition, performance and interpretation.

'[T]he border between language and experience is not a neat and clear one', according to Don Idhe (1973, p. 138). He further notes that '[e]ven the distinction between linguistic and non-linguistic phenomena, between words and their referents must be made linguistically'. Programming code further complicates separations of language from experience, because it establishes a type of language whose initial object is not the communication of human experience, but rather the performance of a logically and linguistically specified universe.

With the intermingling of linguistic ontologies in the text-as-apparatus, it is perhaps not surprising that a level of irony infuses interpretation: indexicality is completely unsustainable. Indeed it can be difficult to believe in representation at all, when the text is shrouded by linguistic filtering and HCI. Handwriting on paper—a signifier of intimacy and personality (Heidegger (1992) quoted in Kittler 1999, p. 198)—and the type of dialogue it promotes, is replaced by distance, non-indexical representation and iterative performance.

The meaning of concatenation

Some of the earliest non-apparatus generative experiments were carried out by the OuLiPo (Ouvroir Littérature Potentielle) group, notably by Raymond Queneau (1961)¹¹. Display was determined via the application of algorithms to a database of potential elements. Such experiments were empowered by the computer (Fournel 1961, p. 182).

A classic work of apparatus-based OuLiPan recombinatory poetics is Florian Cramer's *Permutations* (1996-2000). However, generative poetics have become reasonably easy to find on the Web. Vivaria's (2000) random word generator called *The Complete Works of Shakespeare*

generates random words endlessly and checks each word against a dictionary of words that Shakespeare himself used. When a word is recognised, it is highlighted, and added to the document in the lower portion of the screen. Over time, Shakespeare's words will collect and form a new work.

Benjamin Gomez' *ci-gît* (c.2000-2005) is a shockwave application applying Brion Gysin's¹² cut-up principle, which allows the user to author text for herself, amongst a certain range of possible words. *Poem dada* (2005) by Robin Stein remixes contemporary newsfeeds.

Further experiments engage the OuLiPan principle in conjunction with the greater range of user creativity afforded by the network. Noah Wardrip-Fruin et al's *The impermanence agent* (1999) is downloadable software that 'customizes its story for each user. The story takes a week to tell, in the corner of your screen, as you browse other sites on the web' (Wardrip-Fruin 1999). Content changes according to the user's web browsing until the original story is replaced.

Other creators have explored hypertext, which has been regarded as the dominant rhetorical device for creative writing using the text-as-apparatus. Much interesting work (at least, in terms of the affordances of the text-as-apparatus) escapes the link-node tradition of static web pages¹³. One example is *%20 Network* by Jodi (c.2003), which explores the affordances of the browser in somewhat disconcerting programmatic ways. Such work is removed from literary traditions, and has been appropriated more by art criticism. *Concatenation* belongs to this apparatus-enabled generative tradition.

In creating *Concatenation*, my aim was to compose a text in which the materiality of the

text supported its subject matter. ‘Concatenation’ is at work on many levels, including in the subject matter of the poem. The poetic text explores the rhetoric used to justify or explain some of the intractable conflicts in the world. These conflicts are globally concatenated; they may commence in places like the Middle East, but they ‘wash up’ as a refugee crisis in Australian detention centres and a race riot on Sydney’s Cronulla Beach.

The poetic text communicates transience *and* sameness—details might change, but the message of intransigence and hopelessness is constant. Whatever side of a particular conflict you are on, people suffer trauma, homelessness, injury, confusion. I discovered that the rhetorical concatenation of conflict and power employed and repurposed by politicians, and learned and adapted by ordinary citizens with odd changes of noun or adjective, could be revealed as infinitely available for automatic re-purposing via the programmed apparatus. I wrote a script that would infinitely recombine this rhetoric according to various rules and random functions.

You have to perform *Concatenation* to get this message; no textual chunk ever overtly makes that point. The programming performs transience and sameness via a database of elements that can be recombined, but without the possibility of progress, conclusion or resolution. The *performance* of these texts is the pivotal difference between a conventional text and a trilogical one. Via performance, the text-as-apparatus asserts its unique ‘ecology’.

‘Concatenation’ reveals itself as a way of patterning text, and speech, and the world itself. In artistic blurbs I have described *Concatenation* as a decaying elegy. The textual display within the *Concatenation* apparatus decays as soon as you move the mouse, and is washed away if you click—always replaced by more of this part-absurd, part-comprehensible rhetoric.

Designing textual combinations for generative recombination is very challenging, particularly if you don’t share the surreal impetus of Tristan Tzara (1920)¹⁴ or William Burroughs (1963). ‘Meaning’ is derived in *Concatenation* from the database of textual combinations, and the rules that permit recombination: because the apparatus only responds to significance, not meaning, it is easy for it to generate nothing but nonsense (in terms of human meaning). The programmer/artist must engage trilogically in order to manipulate the environment and successfully create a human-centric

surface display that gives rise to an *illusion* of apparatus-interpreter dialogue. Creating this illusion may also give rise to the uncanny fallacy, as I will discuss below.

Two other works, *Semtexts* (2004) and *When you reach Kyoto* (2004)¹⁵ use the *Concatenation* engine. *Semtexts* takes the recombinatory principle to an even greater level of granularity. Into the engine database I programmed some semantically suggestive syllables. These meaningful ‘semes’ (to adapt Richard Dawkins¹⁶)—meaning-laden, or at least suggestive syllables—get recombined in unexpected ways. The result is a Joycean word-engine that takes the stress out of the manufacturing of neologism. Unexpected combinations of syllables prompt users to new concepts. Apparatus and user seem to be collaborating in meaning-creation. Jim Rosenberg (c.2000) poetically conceptualises this type of collaboration:

Computer screen as crystal garden, part of the mind / not part of the mind.

Metamorphosis, migration, evolution, reassembly: substitution may occur at the play of super-words one for another, bonds broken and reattached elsewhere in the mixing of the atoms at higher energy, a fractally point-sharp force of surprise....

Rosenberg (1994) postulates new hypertextual principles like simultaneities (‘literal layering on top of one another of language elements’) and polylinearity (‘stringing of word skeins in a graphical space where normal print conventions establish no clear ordering among the skeins’—a device I sometimes employ in *Concatenation*). Such experiments lead Rosenberg to conclude, in the tradition of Vannevar Bush (1945) and Theodore Nelson (1965), that hypertext is not merely ‘a medium of organising thoughts, but ... a medium of thought’ (Rosenberg 1994).

The uncanny fallacy

The history of critical responses to the text-as-apparatus has been ridden with misconceptions about the trilogical relationship. For example, over-estimating the importance of specific rhetorical strategies, such as hypertext, means that critics have failed to explore the ontological issues that lie at the heart of the trilogical relationship and its hermeneusis. An undercurrent of woolly, somewhat superstitious thinking about the apparatus’ consciousness sometimes results. Thus the text-as-apparatus becomes uncanny¹⁷—always on the verge of being alive, because we are always on the verge of granting consciousness and purpose to it, without recognising that its agency is attributable to collaborations involving human programmers,

engineers and designers. The apparatus becomes undecidable, as Nicholas Royle (2003, p. 15) says.

One example of uncanny interpretation is this reading of Ray Kurzweil's cybernetic poet which is apparently able to

'read' poems by selected authors and from that create its own, original poem. To create this poem, the algorithm first creates a 'language model' based on mathematics closely resembling neural networks, known as markov models, and with this language model, the computer can write a poem.

Kurd c.2001

Kurd anthropomorphises the apparatus by conflating the apparatus and its human programmer. However, Kurd cannot wholly be blamed for his uncanny interpretation, because Kurzweil consciously sought the 'Eliza effect' (Aarseth 1997, p. 130). Kurzweil (1996-1999) describes the cybernetic poet as a 'narrower concept of a Turing test' in which a computer imitates a particular domain of human intelligence. As he puts it, '[o]ne such domain-specific Turing test [is] based on a computer's ability to write poetry'. Kurzweil challenges us to determine which poem is by a human author, and which is by the cybernetic poet, and suggests that works like *I think I'll crash* pass the Turing test:

I think I'll crash.
Just for myself with God
peace on a curious sound
for myself in my heart?
And life is weeping
From a bleeding heart
of boughs bending
such paths of them,
of boughs bending
such paths of breeze
knows we've been there

Kurzweil's cybernetic poet, 2000

Meanwhile, according to Hayles (2005), in Memmott's *Lexia to perplexia* (2001a) '[c]ode erupts through the surface of the screenic text, infecting English with machine instructions and machine instructions with English, as if the distinction between natural language and computer commands has broken down'. This language-mingling is also an example of an uncanny interpretation of the apparatus, and was a common response in the now receding period of text-as-apparatus novelty.

While programmer/authors are free to try to create an uncanny affect, a hermeneutis of the uncanny fails to come to grips with the complex linguistic-ontological questions that the trilogy poses. Other possible hermeneutics revolve around the rhetoric of convergence, which, while prone to technoromanticism, implies a technosocial worldview. Another promising ‘meta-hermeneutics’ concerns patterning. From experience of patterns arises meaning:

Textual and written languages are subsets of the pattern flows that inform an embodied knowledge of the world. The variety of language use enables and is enabled through hybrid constructions. Each new context adds another layer of thought and experience to the accretive nature of meaning production—generating a hybrid of hybrid of a hybrid, etc. Thus, an assemblage of instances informs identity production as an ongoing process.

Seaman 2005a, p. 13

At this point in history, we are moving to a stage of ‘using patterns to reflect on patterns’, according to Bill Seaman. The computer itself is implicated, because it

functions as a pattern-producing semiotic machine or extended linguistic mechanism that enables both the ongoing production of sensual patterns as well as the interactive manipulation of these patterns. In this light I would suggest that the computer can potentially extend our definition of language and in turn, linguistics. I call this more expansive take on linguistics Pattern Flows. This understanding of linguistics enfolds computer-based perturbations as well as other forms of environmental perturbations into an accretive participation in meaning production.

Seaman 2005a, p. 15

The ‘ontology’ of the trilogy is replete with patterns—linguistic, coded and structural. Indeed, the computer’s pattern-production allows the juxtaposition of different types of media—different types of patterns—which Loss Pequeño Glazier describes as ‘a metonymy that comes from overlaying, collage, juxtaposition of visual elements, and forms of mapping’ (Glazier 2000). Perhaps as a result, digital media and digital art is increasingly dominated by the aesthetics of collage and montage (Mirzeoff 1999, p. 15).

Multi-modal patterning is exemplified in Memmott’s *Lexia to perplexia* (2001a) which ‘must be considered not only as text but as a fully multimedia work in which screen design and software functionality are part of its signifying practices’ (Hayles 2002, p. 57). As a result of a more in-depth conception of the trilogical relationship, second-generation electronic literature ‘experiment...[ed] with ways to incorporate narrative

with sound, motion, animation, and other software functionalities' (p. 27), all implications of the multi-model pattern flows described by Seaman. These are viable hermeneutic responses to the trilogical relationship. Seaman's understanding of the pivotal nature of digital pattern flows in the service of evocation has similarities with my use of concatenation as uber-metaphor for the text-as-apparatus.

Conceptualising the technosocial avant-garde



Image 2.4: *Concatenation* and other work at the Australian Centre for the Moving Image, 2004

Having established a theory of the trilogue that is at the core of technosocial textuality, I will now consider other critical reflections about the technosocial avant-garde, preparatory to my own thoughts about the cultural politics of this position.

Although critical frameworks for computer-based creative work are available, and several

high-profile critics have focused on the materiality of the text, what I seek is a philosophy of the *relationships* between creator, user and apparatus, which inform this materiality. My focus on relationships is suggestively presaged by N. Katherine Hayles (2002) and Espen Aarseth (1997). Hayles seeks texts that 'reflexively interact with the inscription technologies that produce them' (2002, p. 24). She argues that the material artifact (the apparatus) transforms the context and circumstances for interacting with words. This changes the *meanings* of the words as well. Hayles seeks the 'reflexive loops' between a text's 'imaginative world and the material apparatus embodying that creation as a physical presence' (p. 25).

However, materiality for Hayles remains skewed towards specific types of textual experience: critics must beware of 'genre lapse' (Glazier 2000)—a reliance on the conventions of print and literature, which Joseph Tabbi has characterized as a 'domestication' of technology 'in terms familiar to a language-based discipline' (Enns 2002, p. 1). Thus, Hayles' analysis of the 'set of relationships...constituted by artistic

practice—between a newly problematized linguistic materiality and represented content’ (Cayley 2000) perhaps falls short of its goal.



Image 2.5: *Semtexts*

During the last few years we have witnessed debate concerning the relevance of literary analysis to the text-as-apparatus. While there is no question that creative writers who collaborate with the apparatus remain faithful to many of the rhetorical devices of print literature, is that sufficient reason to describe the work they produce

as literature? Another way of posing this question is whether the ‘ontology’ of a text—that is, the way in which the text exists—has such an influence on its reception, that it predetermines the categorisation of that text?

The idea of the hypertextual apparatus unshackled text from strict linearity when it was proposed by Vannevar Bush (1945) and Theodore Nelson (1965)¹⁸. As a result, database replaces narrative, and archive replaces history—albiet an ironic archive, representing a dual aim of ‘[d]ynamics without loss. Impermanence enfolded within permanence’ (Wardrip-Fruin 1999, §6)¹⁹. Different media manifestations—text, audio, moving image—have become the surface effects of the sea of data silently accumulating beyond our senses. Instead of existing as a *sui generis* media artefact, we now understand media / art objects as the more or less contingent endpoint of a process ultimately comprised of data manipulation. The bigger the archive, the more contingent is our experience of it. Implicit in my approach is the need to move away from comparison with other artforms. Although I argue that understanding the behaviour of language is essential to understanding text-as-apparatuses, this is not to suggest that such texts therefore naturally belong within the category of literature.

An approach to the materiality of the text-as-apparatus which is less beholden to literary analysis is proposed in Espen Aarseth's (1997) computational perspective for ‘cybertexts’, described by Hayles (2002, p. 28) as ‘functional and semiotic’. Cybertext places ‘literary works on the same playing field as computer games and other

combinational worlds' (p. 39), and creates a symbolic arena in which texts became analyzable outside of literary convention. The methodology focuses on the 'mechanical organization of the text, by positing the intricacies of the medium as an integral part of the literary exchange' (Aarseth 1997, p. 1).

Thus Aarseth's motivation is to express 'the perspective of the text as a material machine, a device capable of manipulating itself as well as the reader' (p. 24). The user becomes 'a more integrated figure than even reader-response theorists would claim' (p. 1) however, Aarseth adds elsewhere that individual 'traversals' (Montfort 1999)²⁰ of a work should not be confused with the work itself (Aarseth 1997, p. 46). In other words, the text-as-apparatus is ultimately conceived as analysable without regard for the trilogical relationship. Aarseth wants to distinguish between experience and object (p. 45); however, I see no analytical value in doing this. Instead the work must be analysed as a *performed* and *experienced* object. I seek to conceptualise engagement, not try to conjure ideal textual abstractions that can neither be tested nor experienced.

Aarseth also proposes the pivotal relationship between *scriptons* (strings as they appear to readers) and *textons* (strings as they exist in the text) (Hayles 2002, p. 40; Aarseth 1997, p. 62)²¹. This approach privileges programming over surface phenomena because the real action is 'in the mathematical reality beneath the surface, where the relations and objects of the system are being processed' (Aarseth 1997, p. 39). This focus sidelines interpretation and privileges 'truth'²², unity, logic and rules—hallmarks of the programmed text—over multiplicity, emotion, irony and nuance—hallmarks of the interpreted text.

In contrast, John Cayley (2002) has foregrounded the relations involved in the text-as-apparatus. He suggests that '[t]he flickering signifier cannot simply be seen as something which goes on behind the screen; it emerges when code is allowed, as I say, its proper place and function: when the composed code runs' (Cayley 2002).

Programming code transforms signifiers 'from writing as record of static or floating simultaneities into writing as the presentation of atoms of signification which are themselves time-based'. Code and text together represent the material conditions for the performance of a work, which is like an instrument. Wardrip-Fruin (2003) writes of 'textual instruments' which are 'tool[s] for textual performance which may be used to play a variety of compositions'²³. Wardrip-Fruin describes the process in performing

his n-gram instrument *Babble!*, in which alteration takes place as a result of user decision. He expects the finished instrument will be

like a complex toy, that one can develop a sense for, that one can get better at playing with. We expect it will be like an instrument, that one can learn how to improvise on or play toward goals, for which one can learn the sources, tunings, and means of playing that will lead to different effects.

The theoretical frames developed by these creators do suggest a trilogical conceptualisation: instruments have their own affordances, which are implicated in interpretation. Cayley (2002) suggests that programming the signifier 'brings transactive mediation to the scene of writing at the very moment of meaning creation'. I take this to mean that performance and interaction pervades interpretation.

Talan Memmott has developed a networked phenomenology, expressed in a number of works, that similarly expresses many features of trilogue and text-as-apparatus. Trilogical relationships are expressed as 'the (authorial) process of development, the processing (or computation) that occurs through interacting with the work as application, and the analytical (or sensorial) process for the reader/user' (Coverley 2003).

Perhaps as a result of the nature of his mainly poetic publications, Memmott expresses a phenomenology that seems romantic, value-laden and even perhaps transcendental. Memmott's networked 'I' is

not 5'8" with brown hair when I am there. Identification is not dependent upon appearance or presence but upon the collective significations of my fragmentary Agents – I govern remotely. These agents, particles of {i} are dispatched deep into the netherworld to serve as diplomats for myself.

'§.Opera', 2001c

Memmott's 'networked phenomenology' (Coverley 2003) implies a transcendental territory in which 'The HEAD, the State that determines the projective state of I is [N]either above [N]or below, always @, always going some(w)here. Even in forgetting, the projective state of I is re:membered @body' (Memmott, 2001b). This hybrid, code-infected syntax signifies a mode of being both apparatus and human. Memmott's phrase '@body' seems to infer bodily contingency and echoes ideals of networked disembodiment expressed by John Perry Barlowe (1996) and *Mondo2000*, and critiqued by Hakim Bey (2001) and Vivian Sobchack (2001), who argues that a whole culture has developed around mainly young, white males living a techno-fantasy of escape from

bodily limitations. While it may be impossible to avoid inscribing networks and apparatuses with value-judgements (and Memmott is by no means the lone poet of networked utopia), we should be wary of extending ideas of trilogue and text-as-apparatus into utopianism. Networks and apparatuses, like all human artefacts are open to interpretation and the politics of use. My terminology seeks to establish less immediately value-laden tools for analysis.

These theorists are all interested in the materiality of the text, however they privilege the centrality of the relationships that are established by the trilogical text to varying extents. With my more overtly phenomenological approach, I seek to foreground the relational—indeed, the text-as-apparatus can barely be said to exist without active, performative relationships taking place.

The next section examines more closely some of the previously alluded to ‘political’ questions about the technosocial avant-garde.

The future of the avant-garde

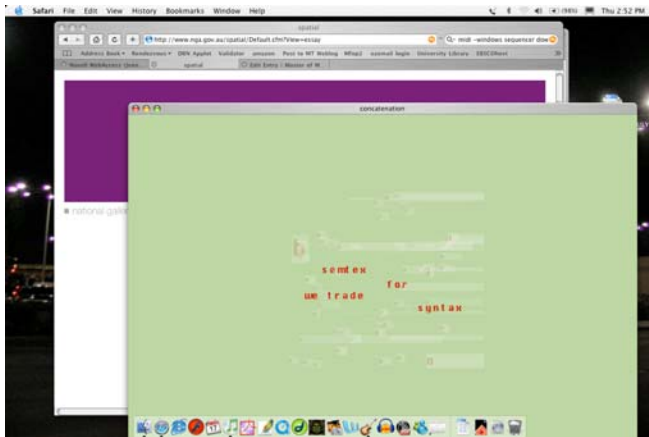


Image 2.6: *Concatenation* at Spatial, National Gallery of Australia, December 2004

In not substantively addressing the impact of technology on culture, Pierre Bourdieu (1993) seems to imply that no mere technology would dismantle the existence of the avant-garde. Meanwhile, Flusser (2005) argues that the apparatus represents such a radical challenge to human self-expression and freedom that Bourdieu’s idea of creative freedom enshrined in the avant-

garde is almost impossible, particularly if that avant-garde is deeply involved with technology.

My own argument is that a technosocial avant-garde is indeed difficult to sustain. Because of the transitory nature of its product, it may collapse as soon as it forms. Furthermore, the modernist cultural politics associated with the concept of the avant-

garde may be giving way to a politics which is more inclusive, adaptive and issues based. The challenge for the technosocial avant-garde is not that the apparatus consumes human creativity. Rather the collaborative nature of the trilogue and the transient textuality it favours questions the traditional status of artists, and the modernist idea of art.

In chapter one I suggested that a technosocial avant-garde position is at best ironic; like the artworks its members create, it is experienced as a transient position. Given the analysis we have now developed, what more can be observed about it?

Firstly, the authorial role changes as a result of the trilogue, given that the apparatus enjoys a type of agency, in Latour's (2005, p. 39) sense of mediation. Glazier (2000) commends us to 'consider such a sentimentalised "I", often concerned with its own mortality, as having passed away. Innovative practice is practice that often overcomes the "I" to explore material dimensions of the text'. The trilogue overcomes the sentimental 'I' by forcing artists into radical collaborations with non-human agency. Memmott's *Self Portrait(s) [as Other(s)]* (April, 2003) programmatically deconstructs the romantic idea of artistic genius, and implicitly problematises his own artistic status at the same time (Coverley 2003).

Secondly, the avant-garde depends on intertextuality—what has gone before is an important reference point, either explicitly or implicitly, for avant-garde artists who are highly educated in their artform. Jean-Pierre Balpe (2004, p. 387) argues that western culture's default position is to 'privilege memory over creation, death over life'. Classical (print-based) literature 'petrified itself in insane rituals of fixity'. While literature dreams of achieving its own perfect, final form (p. 388), digital textuality shares capacity for variation with oral tradition. This is the emergent textuality of the trilogue—variation and performance over permanence and reification. Balpe calls for a creative writing that emulates 'the fecundating power of language' because through it 'the receiving subject continually renews him or herself'. Refocusing on the text-as-apparatus, which reconceives the conventions of production, will assist, because 'in its multiplicities and its variations, what it first shows are its potentials and its changes'.

Immediacy and infinitude characterise the performance of the text-as-apparatus. As a result:

The text, no longer literary, has now to annihilate all reverence, because what is in view is the movement of the literary itself and not such or such of its singular exhibitions. So the computer produces something like an infinite 'diffraction' of its texts.

p. 390

Annihilating reverence opens up new ways of thinking about creativity²⁴. We privilege chance, accident²⁵ and engagement over the (limited) creativity of our own minds. Works reliant on the network, such as Bluescreen's *Streamscape* (2005)²⁶ exemplify this trilogical impetus:

This image is neither static, nor pre-recorded. It is gradually built live using images streamed from webcams dispersed all over the world. These images are updated each minute and are incorporated into the landscape with the help of a very progressive dissolve.

'Degenerative' by Eugenio Tisselli (2005) engages the same anti-modernist themes. The author describes it as 'a web page that slowly becomes corrupted' because 'each time the page is visited, one of its characters is either destroyed or replaced.' Visitors to the site can now only view the archive of its degeneration, since the work is now a blank page²⁷. The archive of the original page reads:

your visit will leave a permanent mark. this page will not be the same after you visit it.

the only hope for this page to survive is that nobody visits it. but then, if nobody does, it won't even exist. ¿does this happen with all the products of visual culture? ¿why is everything getting renewed constantly? ¿does everything contain the seed of its own destruction?

¿is visual culture a ritual of cannibalism and rebirth?

the only way to aim for permanence is through constant change

Tisselli 2005

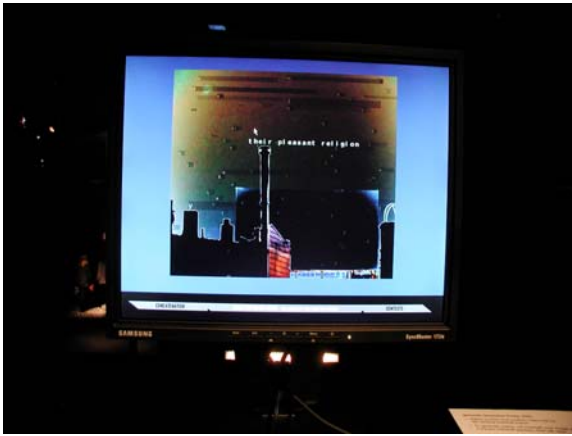


Image 2.7: *When you reach Kyoto* at the Australian Centre for the Moving Image, 2004

Transience here is the new 'permanence': but if transient, trilogical works represent the direction of the technosocial avant-garde, then the avant-garde is indeed an ironic position, because such works exude a praxis of dissolution and self-effacement. The response to the text-as-apparatus is the nullification of the author, literature, permanent legacies, the archive, linearity and closure. In

their stead, Glazier (2000) proclaims

the idea of the ... poet-programmer or prose-programmer is of a person who works among the tangles of the vines that yield the work. It is of one who sets up a series of events that culminates in the work as an action or execution of procedures. It includes a concept of intelligence that is more concerned with setting into motion a number of variables than trying to freeze, can, or embalm the outcome. The concern is, more specifically, with the parameters, character, and nuances of that motion, not with any one of its possible productions.

Perhaps the ultimate expression of this 'anti-literature' is 0100101110101101.org's *Biennale.py* (2001a). *Biennale.py* is a virus, the performance of which is invisible, and the archive of which is non-existent (apart from the archive of its reception). This is because the work's text entirely addresses the apparatus. Beauty, for its creators, lies in the 'love poem' inscribed into the source code and the virus-like ways it spreads through the network (0100101110101101.org 2001b), transgressing the boundaries of well-behaved art. This avant-garde is characterized by a praxis that is not only transient, but sometimes invisible. Reactions to this work bordered upon the hysterical²⁸, probably caused by the lack of an understanding of the linguistics and relationships inherent in trilogical texts. Using traditional analysis, how do we understand a text that has no sensual manifestation, even briefly? As extremist conceptual art? Nevertheless, art and literary institutions attempt to maintain this almost impossible avant-garde (the 49th Venice Biennale commissioned *Biennale.py*).

The subtext of transience and dissolution that seems to pervade trilogical work further dissolves in the maelstrom of cyberspace, that 'sublime complexity which

eludes representation' (McQuire 2003, p. 168), with its ubiquitous redirects and 404 messages. In such 'invented worlds', 'data streams' can be redirected

into different representations: selves become multiple, physics become variable, cognition becomes extensible. The boundaries between subject and object are conventional and utilitarian; at any given time the data representing a user may be combined with the data representing an object to produce ... what?'

Novak 1992, p. 234

Perhaps the avant-garde always exists as a set of multiple, shifting identities. However, if trilogical agency is as much a function of the apparatus as it is of the programmer/artist, avant-garde identity can be seen as one in which the idea of authorship itself is problematic. The process of creating a work like *Concatenation* has revealed to me that trilogic artists must struggle with and reflect upon the self-effacements that the apparatus imposes. Meanwhile, it is to issues of multiple identities, expressed and mediated in possible worlds, that this exegesis now turns.

CHAPTER THREE: POSSIBLE WORLDS

We are engaged on a mission: we are called to give shape to the earth.

Novalis 1980a, p. 69

In chapter two, I suggested that language and its 'reality effect' are deeply entwined with the technosocial landscapes we inhabit. Our media and communications devices use specific types of languages to create specific types of realities, in collaboration with human interpreters. Different languages, different devices, different pieces of programming abound: as a result, realities have become coexistent and even embedded within each other. The idea of a singular reality has become contested; indeed, Nelson Goodman (1987, pp. 2; 18) goes so far as to argue that truth itself is malleable. This malleability allows our engagement with 'multiple actual worlds' (p. 2) that are 'of independent interest and importance, without any requirement or presumption of reducibility to a single base' (p. 4).

While our proliferating worlds seem more interdependent than independent, it is certainly true that differently mediated worlds, like computer gameverses, are sometimes experienced as being predominantly separate from other worlds (Juul 2005, p. 164). Salen and Zimmerman (2004, pp. 94-99) describe this in terms of the 'magic circle' by which a gameverse is bounded, a boundary that appears to operate similarly to the boundaries between sacred and profane space in mythic thought. Computer games, in this sense, interrogate 'reality' by suggesting alternative, possible worlds.

To an extent, media such as cinema, novels, plays and plays-within-plays have long demonstrated that different worlds can coexist. However, the performative, richly sensual worlds of contemporary computer games offer an immediacy of 'identity-play' derived from 'world experimentation' that other artforms struggle to compete with. I have previously suggested that our idea of reality and our sense of personal identity seem to be two sides of the same set of concerns. The corollary of this may be as Janet Murray (1997, p. 246) suggests, that 'part of the task of redefining what it means to be human lies in animating the machine, in using its system-modeling abilities to bring forth life—cuddly, affectionate, amusing, and recognizable—from empty matter'. Production of computer games has become a highly successful global media industry. In potentially transformative identity-play in possible worlds, corporate media presents their perspective on the themes and praxis of the technosocial.

More specifically, I will argue in this chapter that computer game immersion—the idea, that multiple realities can be subsumed by an intense experience of just one reality—is based on a neo-romantic ideology. Romantic ideology conflates aesthetics and ontology, and the immersion theory continues this tradition. I will commence by plotting a trajectory of romantic and then neo-romantic ideas that can be applied to immersion in computer games. I will show how this is a different type of aesthetic than that of the neo-baroque, which some critical analysts of contemporary media has favoured (Cubitt (2004); Ndalians (2004)). With reference to realist aesthetics, I will explore the specific type of realism the computer game encourages. I will show that this particular type of realism is tied to its neo-romantic immersive affect, and suggest ways in which the resulting experience has parallels to the ontologically powerful role of myth in archaic cultures, as understood by some of the early-to-mid-twentieth century anthropologists of mythology, who interrogated a tradition established in James Frazer's *The Golden Bough* (originally published in 1890) and include R H Codrington (1969), Mircea Eliade (1957, 1958 and 1959) and Joseph Campbell (1968)¹. This chapter will close with some observations about the ramifications of contemporary computer game identity-play, when the culture in which that alternate reality is embedded tends to reject mythical themes as significant.

Like all text-as-apparatuses, the computer game functions by virtue of the trilogy between programmer, apparatus and interpreter (game player) triggered during performance. Through it, we enter environments that set up worlds; as a result, we often fall into 'analogous thinking'—we contrast and compare the gameverse with that other world that we often privilege as 'really real', which I shall refer to as 'nonmediated RL'². Many players appear to seek an immersive experience in which technology and art merge—often in ways that arguably parallel the experience of myth in archaic cultures³. However, such experiences are not without 'dangers' and 'paradoxes', and one of these is dissolution of 'nonmediated RL' itself.

While research on the sociological implications of computer games has been conducted—for example by Jenkins (1998) on the significance of the computer game to contemporary adolescent boys; Taylor *et al* (2003) on the way that multiplayer games bleed into 'nonmediated RL', and Jakobsson *et al* (2003) on personal relationships and multiplayer games—the focus in this chapter is on single player rather than multiplayer

games. The sociological interest in interpersonal relations in multiplayer games would add a level of complexity which is easily avoided by focusing on single player games.

Many computer games present a spatial world which players explore, with adventures and challenges along the way (role-playing games, or RPGs). RPGs are available in single player mode (including games for consoles such as PlayStation). RPGs most clearly articulate the themes I will explore.

What ontological insights do the trilogical engagements that these games occasion reveal? Martin Heidegger has written productively about the intersections between technology, aesthetics and ontology. His thought is also tied to the neo-romantic tradition. For these reasons, his ideas offer a generative entrée into the range of issues I wish to canvass.

Heidegger and computer games

In ancient Greece, according to Heidegger (1977, p. 34), 'it was not technology alone that bore the name *techné*':

[Artworks] brought the presence of the gods, brought the dialogue of divine and human destinings, to radiance. And art was simply called *techné*. It was a single, manifold revealing. It was pious, *promos*, i.e., yielding to the holding-sway and the safekeeping of truth.

Unfortunately, says Heidegger, the compounded meaning of *techné* has been displaced, and the primal power of the arts to 'expressly foster the growth of the saving power' (p. 35) has been usurped by an alienated technology, for example, the typewriter (see chapter one). If Heidegger didn't approve of the typewriter, it seems reasonable to assume he wouldn't approve of the computer. However, the appearances of text-as-apparatuses that trilogically co-create and co-perform art challenge Heidegger's reservations.

Heidegger remains an 'important founder ... of the philosophy of technology', but he also supported a discredited political philosophy (fascism) 'seen today as one of the most destructive applications of modern technology' (Idhe 1993, p. 103). Heidegger's narrative of primal fall and redemption through art is part of a dubious romantic⁴ mythology⁵ which obscures a range of value-judgements with political consequences. He appropriates a highly selective reading of ancient Greece to political ends (Idhe 1993, p. 104-5), and various technologies are considered good and bad according to

that value system, resulting in 'a certain suspicion concerning *modern* technology versus traditional technologies, and the older, smaller and simpler technologies versus the newer, larger and more complex technologies' (p. 105).

Heidegger (1971, p. 50) argues we derive truth about Being from art. Truths about Being are usually obscured to humans (p. 51); but when we experience art '[t]his open center is ... not surrounded by what is, rather, the lighting center itself encircles all that is, like the Nothing which we scarcely know' (p. 51). The truth about Being determines what art may exist (p. 85)—in other words, Being and art are inter-related.

Heidegger explores the purpose of art by contrasting it with the purpose of equipment. Equipment, such as peasant shoes, has its own poetry because it 'belongs to the *earth*, and it is protected in the *world* of the peasant woman. From out of this protected belonging the equipment itself rises to its resting-within-itself' (p. 33). In the actual use of equipment we encounter its character. However, the poetry of peasant shoes only arises from contemplating Van Gogh's painting of them. It is not present in the peasant woman's actual use of them, because when equipment is used, it becomes invisible (a point that appears important in the idea of immersion). Equipment and art are thus contrasted by Heidegger. It is difficult to see how the same object could be both at once.

Heidegger's idea can be traced to romantic ideology. John Keats (1980, p. 64), for example, argues '[p]oetry lifts the veil from the hidden beauty of the world, and makes familiar objects be as if they were not familiar'. The genesis of immersion theory can be attributed to Immanuel Kant, who argued that 'the delight which determines the judgment of taste is independent of all interest' (Kant 1952, 'First moment of the analytic of the beautiful', §2, p. 42), as if at the moment of appreciation, nothing exists beyond the work. Kant's *a priori* principles form the basis of an idealist aesthetic theory. The beautiful is conceived as 'the Object of a UNIVERSAL delight' ('Second moment of the analytic of the beautiful', §6, p. 50). Kant's subsequent appropriation by romanticism⁶ led to the concepts of artistic genius (Coleridge 1980a, p. 75), the ineffability of the creative process (F. Schlegel 1980a, p. 71; Crawford 2001, p. 61), and thus to proclamations such as 'if Poetry comes not as naturally as the Leaves to a tree it had better not come at all' (Keats 1980 p. 63), in which creativity is pronounced innate and transcendental. While Heidegger distances himself from Kant's ahistoricism,

his attitude to the redemptive power of art maintains the romantic continuum.

Industrial and post-industrial technology has always held a vexed position in the broad church of romantic thought. Nevertheless, Heidegger's ideas about art—as opposed to his ideas about technology—are implemented in the RPG, as the 'poetry' of whole 'worlds' is performed by trilogical artworks. Thus the RPG may in fact meet Heidegger's ideal that '[i]n the vicinity of the work we were suddenly somewhere else than we usually tend to be' (Heidegger 1971, p. 35). If viewer immersion is a precondition for poetic revelation of truth about Being (p. 37), the computer game is its prime contemporary site, and the text-as-apparatus can make claims to being the *techné* that Heidegger nostalgically longs for.

Heidegger might have been grudgingly impressed with the idea of gameverse immersion, in which gameplayers are so absorbed that they cease to think analogously ('the game world is *like* RL'), although as we shall see, the extent to which this really occurs is doubtful.

In this chapter I will call the nexus between romanticism and the idea of immersive experience in computer games 'neo-romantic'. This can be contrasted with the argument that it is rather a neo-baroque aesthetics that is present in computer games and other postmodern media, presented by Sean Cubitt (2004) and Angela Ndalians (2004) among others⁷. Some of the signs of the neo-baroque, according to Ndalians (2004, p.17-19) are the sensual, and particularly visual, seductiveness of the artworks; the foregrounding of framing; and the paradoxes of realism. Questions concerning where illusion ends and reality commences often arise. Neo-baroque artworks create labyrinthine systems (p. 25) and spatial conundrums (p. 20). The neo-baroque invokes mythologies and classicism but subjects it to a baroque flair (pp. 24-5). Baroque and neo-baroque periods are ones of social upheaval (p. 21) characterized by active audience engagement (p. 25):

Whereas the seventeenth century was the culmination of a radically new understanding of space in light of newly discovered lands and altered perceptions of the nature of outer space and Earth's place in relation to it, our own era explores the mysterious realms of the computer. Cyberspace, like the newly discovered material spaces of the seventeenth century, has expanded not only our conception and definition of space, but also our understanding of community and identity.

p. 27

The baroque was widely derided as vulgar, exorbitant and bizarre by neoclassicism, romanticism and realism (pp. 7-8), but continues to influence art movements (p. 9), and amongst others, hypertextual environments (p. 116).

Through paradox and fantastic thematics, the neo-baroque foregrounds the createdness of artworks; viewers experience a state of extra-diegetic amazement at the sheer existence of the work, and to some extent diegetic immersion suffers as a result. The neo-baroque glorifies paradox and vertigo⁸, while in contrast the neo-romantic engages an aesthetic of unity, seamlessness and coherence to facilitate the experience of immersion in a singular, monolithic reality, in the hope of gaining some transcendental insight. Romanticism also privileges unity over multiplicity (Downes 2005, p. 27); and this privileging is a feature of the phenomenological corpus (Coyne 1999, pp. 147; 170-1), whose authors may therefore be described as infected with romantic thinking.

My argument here is that combinations of neo-baroque and neo-romantic principles feature in various degrees of tension in contemporary media, in much the same way that Bolter and Grusin (1999) argue that combinations of immediacy and hypermediacy feature in remediation (see chapter one). Although post-modern fashion favours the neo-baroque, millions of game players appear to remain interested in experiencing 'the spontaneous overflow of powerful feelings' (Wordsworth 1980, p. 11) supposedly achieved through immersion. Neo-romantic principles may not be fashionable among critics, but they continue to circulate. Both Heidegger and immersed game players share an ideal with romantic poets such as Novalis (1980b, p. 134), who sought artworks in which 'everything seems so natural and yet so wondrous. One feels as though it could not be any other way, and it is as if one had been dozing in the world and were only now awakening to a true sense of the world'. Immersion, however, is tenuous, and sophisticated neo-baroque conundrums surrounding space and 'the real' await gamers, regardless of their desire for it.

Heidegger grants language the power to create reality, but a romantic politics intervenes in the logic of Heidegger's position, which means he can't grant a similar creative and mediating role to technology. Questions surrounding the nature of the real—truth, presence and illusion—haunt our engagement with multiple, embedded worlds. What is the fate of the real and realism in technosocial culture? If there is no 'nonmediated RL', what does the 'real' become?

(e)Realism

According to one authority, realist media and art in the modernist period 'concentrates heavily on the here-and-now, and develops ... techniques for the detailed, accurate representation of life in all its social and domestic aspects' (*Fontana dictionary of modern thought* 1988, p. 725). Consequently:

Realism cannot logically be formless, nor beyond form; it is itself an aesthetic and contains certain logical structures. However, one of its triumphs is to limit complex techniques and mannerisms so that ... art becomes 'humanized'. Thus it emphasizes character, controls fantasy and idealism, and insists on experience, fact, and the sceptical view ...

As Cubitt puts it, realism seeks to 'reveal... truth accessibly' (2004, p. 130). Mark Wolf (2003, p. 59-60) suggests that the preference for realism in computer games is not just based on increasing technical sophistication, but also on a human need for empathy, which realism promotes. Thus realism may be tied to an Aristotelian ideal of emotional catharsis, shared by game designers and some game theorists alike (Frasca 2004 p. 87). A game's diegetic gameverse is psychologically easier to enter if it makes clear analogies with 'nonmediated RL'.

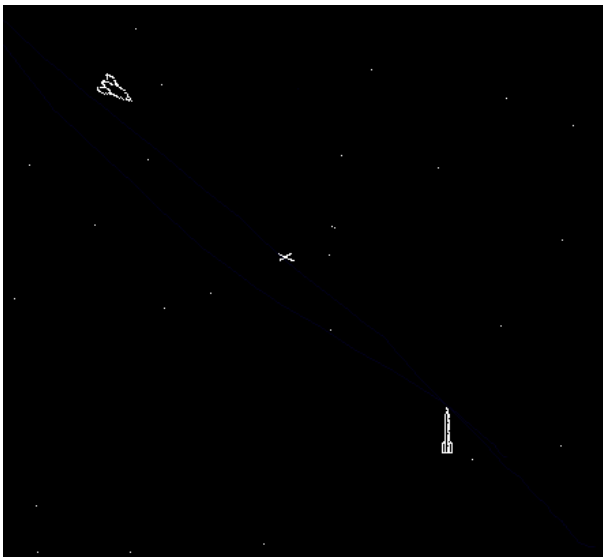


Image 3.1: The early vector imagery of *Spacewar* (1962) seems symbolic rather than realistic.

lack of indexicality.

The race towards greater representational realism in computer game imagery (using rasters⁹) was encouraged by a film industry reliant on indexical imagery (Darley 2000, p. 16). Contemporary computer games employ some of the most complex production techniques available, and the result is that games like *The Sims 2* (2004) can conform to the aesthetic framework of traditional visual realism and our penchant for analogous thought, despite their

However, the tenuousness of visual realism in computer games, which results from the non-indexicality of digital images, means computer games can only superficially be said to share the qualities of cinematic realism. For this reason, the type of realism a computer game offers should be defined in medium-specific ways. Dorothy Saloniou-Pasternak (2005) suggests one medium-specific definition of computer game realism:

Realism describes how real the game feels to its players, how vivid the depicted world seems to be. One aspect of technology to power realism (and interaction as well) in games is 'real-time 3-D,' which allows images to be created instantaneously as players progress through a game, unlike the 'pre-rendered' images of earlier technology, whose limited range of possibilities rarely allow players to forget even for a moment that it's only an illusion.

pp. 7-8



Image 3.2: The images in *The Urbz: Sims in the City* (2004) represent urban lifestyles and remain reasonably close to middle American expectation. Such games offer analogous experiences.

diegesis. Rather, the freedom of movement in *The Sims* is greater, more explorative, and therefore more lifelike.

The quality of gameverse realism thus depends on the extent of its performativity.

Marie-Laure Ryan (2001) defines two axes of text-as-apparatus experience, which are:

- internal (the operator as player character in a virtual world) versus external (the operator as an external 'watcher' of the virtual world) (p. 7); and

By this definition, both *The Sims* and *Final Fantasy X* (2002) (*FFX*) are realistic, because realism has become a measure of the immersivity and believability of game play. Gameverse realism concerns the extent to which the experience of being 'in' the gameverse is similar to the experience of being 'in' 'nonmediated RL'. *The Sims* may still do this better than *FFX*, but not because of *FFX*'s fantastic

- exploratory (the operator can freely explore the database but not change it or alter the plots) versus ontological (the operator's decisions 'send the history of the virtual world on different forking paths') (p. 8).

Gameverses plunge users into the internal position; in terms of the exploratory-ontological axis, computer games offer many 'degrees of freedom' (Penny 2004, p. 78). *The Sims* is more ontological; *FFX* is more exploratory. This 'experiential realism' is also at play in Michael Joyce's (1988, p. 42) idea of a constructive hypertext, which is 'hypertext as an invention or analytic tool'. Constructive hypertexts are development platforms, whereas exploratory hypertexts are 'finished'. According to Janet Murray (1997, p. 149), '[t]his constructivist pleasure is the highest form of narrative agency the medium allows, that ability to build things that display autonomous behavior'. Massively multiplayer games such as *EverQuest* (1999-2002) and *Graal* are to some extent constructive. Many single player computer games are more exploratory. I will call this range of realism 'experiential realism' (abridged to erealism). Murray (1997) describes its impact:

In games ... we have a chance to enact our most basic relationship to the world—our desire to prevail over adversity, to survive our inevitable defeats, to shape our environment, to master complexity, and to make our lives fit together like the pieces of a jigsaw puzzle. Each move in a game is like a plot event in one of these simple but compelling stories. Like the religious ceremonies of passages by which we mark birth, coming of age, marriage, and death, games are virtual actions allowing us to symbolically enact the patterns that give meaning to our lives.

p. 143

Murray can be aligned through this quotation with the neo-romantic, 'absolute immersion' school. In contrast to Murray, some theorists describe erealism in neo-baroque terms. Darren Tofts (2003), for example, develops a witty take on the neo-baroque perspective. He refers to a 'realistic unreality' which establishes carnivalesque environments:

This certitude, that we are immersed in realistic unrealities, is the metaphysics that allows us to tune into fantasy, live there for a time, and then re-inhabit the real without believing that the fantasy continues beyond the book or the film. It is fantasy's exit strategy.

The neo-baroque privileges extra-diegetic 'reality manipulation' over diegetic immersion. Indeed, both types of experience may operate simultaneously—when playing a game, you usually maintain some awareness of the frame that embeds the

gameverse, even while to some degree, you are also immersed¹⁰. Immersion is under threat if neo-baroque ironies surrounding reality and illusion dominate interpretation. Erealism is a precondition for absolute immersion in computer games but, importantly, it is not required for neo-baroque experiences.

Traditional realism relies on a nexus between the sign and its nonmediated referent:

Indeed, all the power of creating signs, all its evocative force, lies in the fact that the sign, as a substitute, preserves its sensuous nature. Signs do not lead us into the realm of concepts and images by breaking all contact with the physical, experiential reality; on the contrary, they serve as a liaison, as a bridge. The raw material of sign-creation is lively and sensuous in nature. The more physical this material becomes, the wider the field of meaning it can cover.

Biro 1982, p. 27

Contact with 'nonmediated RL' remains the core fantasy of traditional realism, but it is betrayed by digital media. The paradoxical sign in a computer game is a manifestation of code; indexicality does not function under these digitally mediated circumstances, and is not relevant to interpretation¹¹. The computer gameverse is not a substitute for anything: it is its own entity, with a purely textual ecology. Its relationship is by analogy, and its representational ability is paradoxical (because the images involved are not indexical). The code can't be described as the 'indexical' source of gameverse. The text-as-apparatus occurs within a trilogue that is performative and relational; it has no essence or source that can be considered its ur-state. A gameverse inevitably expresses its database-driven and programmed source, however it is 'translated' by the apparatus into a sensual human-centric text. Another way of expressing the paradox is that erealistic experience depends upon the digital *fantastic*.

According to Flusser (2002, p. 27), it doesn't matter if the represented object is real or not, because the only relevance is that it affects our lives. Games are fantastic precisely because their digital, programmed ecology is anathematic to the indexicality of, for example, photography and film. However, computer games simultaneously take advantage of filmic and indexical conventions. Computer games are *anti-film* as much as they are in its maw.



Image 3.3: The anti-indexical, vector-style imagery of *Rez* (2002), whose developers acknowledge the influence of Kandinsky. Analogies to the cyberspace of William Gibson (1984) are also apparent.

This lack of computer game indexicality presents another perspective on problems associated with contrasting 'virtual worlds' and 'nonmediated RL'. Gameverses and 'nonmediated RL' are alike: *both* lack indexicality. They are also both spatial environments that we explore and interact with in real time. The unpredictable nature of game action reinforces the parallel¹². What we call erealism in a game, we call being human, and being alive, in

'nonmediated RL'. The experience is similar (therefore erealistic and analogical). Gameverses are one type of the multiple and sometimes embedded realities that *together* comprise RL.

Erealism promotes immersion, transcendental affect and something similar to mythic experience. As writes Freidrich Schlegel, '[t]here is a type of poetry whose alpha and omega is the relationship between the ideal and the real ... and which must, on the analogy of philosophical terminology, be called transcendental poetry' (1980b, p. 6). Our trilogical media are a complex type of mediated engagement with transcendental attractions: they establish worlds within worlds which are paradoxical and vertiginous in the neo-baroque sense; and are also immersive in the neo-romantic sense.

According to Cubitt, the 'tragedy' of cinematic realism is that it fails 'in its self-proclaimed mission to reveal the world' (2004, p.138). An ontological gulf separates the real world from its representation, and no amount of directorial cleverness can overcome it. Thus 'the thesis of cinematic realism ensures that either the world or the cinema is condemned to unreality' (p. 39). When you are dealing with erealistic texts, this tragedy is spurious: such texts are too distinct to proclaim to reveal the (singular, unified, real) world. Computer games are analogous media, not representational media. We are invited to see parallels, to compare and contrast. The result is insight

about being-in-the-worlds—as multiple realities collide, embed, and possibly even collapse, and identities that become liquid and adaptive.



Image 3.4: *Resident evil X: code veronica* (2001)¹³ is an example of fantastic themes encountered within eréalism.

Thus, tensions between neo-baroque and neo-romantic analyses of computer game experience arise because of the complex nature of experience during gameplay. Analysis focusing on computer games and recent Hollywood FX-centric blockbusters accentuate fantastic aesthetics and thematics (Cubitt 2004, Chapter 9; Darley 2000, *passim*) and underplay eréalism, partly because these

projects address a range of media, much of which is not eréalistic. Thus Cubitt generalises:

For the neo-baroque sublime to conquer, it must sublimate the sense of self. The familiar abstraction of mind and body, of observer from observed, of subject from object, here reaches a new formation: everything will be relinquished in favor of coherence. The new world needs to be utterly absorbing; this is why special effects are so central to the new Hollywood ... Affect, thrill, shock displace themselves from the audience to the spectacle. The vanishing point is no longer in the image but in the rapt attention of the viewer.

p. 236

Such analysis fails however to take account of the experience of game play, and overestimates the parallels between a game and a film. A self fully sublimated would possibly not bother to perform in the gameverse (it is also not clear why such a state is negative, except that it is not valued by an individualistic society¹⁴). ‘Audience’ and ‘spectacle’ derive from the affordances of older media; immersion in the text-as-apparatus is a collaborative experience which such terms seem to preclude. ‘Coherence’ is created by performance; it is dependent on the feedback loop between player-apparatus-programming. The trilogue of programmer-apparatus-player establishes a ‘vanishing point’ derived from the performed feedback loop. As immersion takes hold, the possible world becomes the (only) world; that which

vanishes is 'nonmediated RL', and with it, audience and spectacle alike. This is a different sublime to Cubitt's neo-baroque sublime, an ideal closer to the coherent but awful mythic sublime (numinous experience) which entails

the *feeling of terror* before the sacred, before the awe-inspiring mystery... the majesty ... that emanates an overwhelming superiority of power; he finds *religious fear* before the fascinating mystery ... in which perfect fullness of being flowers ... the numinous presents itself as something 'wholly other' ... something basically and totally different.

Eliade 1959, p. 9-10

The neo-baroque seems to be defined with different emphasis by Cubitt and Ndalians. Cubitt seems to include an impetus I would describe as *neo-romantic* transcendentalism, for example:

they cajole us to step inward, into miniaturized infinities bracketed off from the world. If the sense of presence belongs most to those who are at home in their world, the artificial worlds of the neobaroque offer us a stronger sense of being than we experience outside, among the wreckage of modernity, betrayed by the reality of the world, deprived of truth or justice.

p. 247

Indeed, if immersion is achieved, gameverses do more than 'bracket off' their miniaturized infinities. They consume RL. According to the neo-romantics, this experience is more like transformation than escapism—what is a positive for the neo-romantics meets with neo-baroque disdain.

Neo-romantic and neo-baroque approaches, then, offer different visions of the ontological and even ethical significance of gameverses. According to Heidegger (1971, p. 37), an artwork may be neither a poetic painting of an actual object, nor a reproduction of the general essence of an object '[y]et truth is put into the work'. For the neo-romantics, this truth takes place by analogy rather than by indexicality. The next sections argue that the power of neo-romantic immersion may stem from the same psycho-social experiences that give rise to intense mythic experiences in archaic cultures, although contemporary society limits its impact. Exploring how the traditional mythologising impetus manifests in contemporary society offers a different angle on the significance of computer gameplay, erealism, and immersion.

Flow and immersion

This section focuses exclusively on neo-romantic affect (the neo-baroque is suspicious

of immersion, and indeed, misunderstands its psycho-social allure¹⁵). My interest here is the intersection of identity and ontology, and immersive experience is a rich source of technosocial reflection on these issues.



Image 3.5: blurb for *Diablo II: lord of destruction* (2000) at the Diablo website

literature about computer game play. According to Juul (2005, p. 112), flow results when the game is at the correct level of difficulty for the player's ability. In such environments, the distinction between game and not-game loses its importance. Its equivalent in romantic thought is described as 'that present, where one is caught in illusion—single hours, in which one is, as it were, within all the objects one contemplates and experiences the infinite, incomprehensible, simultaneous feelings of a cohesive pluralism' (Novalis 1980b, p. 135).

First conceptualised by Mihaly Csikszentmihalyi in 1975¹⁶, flow describes a state in which 'we are performing both supremely well and effortlessly and ... participants feel their options for performance are virtually unlimited'. Players lose self-awareness yet still use their skills (Yellowlees Douglas and Hargadon 2000, p. 158-9). Hayles (2001, p. 317) suggests that one of the beguiling features of what I term trilogical texts is that they promote bodily estrangement, and the result is immersion in information.

Flow is a precondition for immersion. One of the most frequently-cited definitions of immersion is from Janet Murray (1997):

Immersion is a metaphorical term derived from the physical experience of being submerged in water. We seek the same feeling from a psychologically immersive experience that we do from a plunge in the ocean or swimming pool: the sensation of being surrounded by a completely other reality, as different as water is from air, that takes over all of our attention, our whole perceptual apparatus. We enjoy the movement out of our familiar world, the feeling of alertness that comes from being in this new place, and the delight that comes from learning to move within it. Immersion can entail a mere flooding of the mind with sensation ... Many people listen to music in this way, as a pleasurable

Playing *Resident evil 4* (2005) can result in physiological responses including elevated heartbeat and perspiration, as well as emotional exhaustion and stress. Time passes without the player noticing. This lack of self- and RL- awareness is referred to as 'flow' in the

drowning of the verbal parts of the brain. But in a participatory medium, immersion implies learning to swim, to do the things that the new environment makes possible.

pp. 98-99

Immersion is a participatory activity (p. 99) which must be 'carefully structured and constrained' and 'appropriate to the fictional world' (p. 105). Players actively collude in creating immersive experience (p. 110), and delight in the sense of agency resulting from electronic environments (p. 126)¹⁷. I have suggested an ontologically-inflected idea of immersion, which is when you are aware of only one world, to the exclusion of the other world/s that the one world might be embedded within.

The intensity of the experience, rather than particular technologies, affordances or even content, leads to immersion. I agree with Salen and Zimmerman (2004, p. 451) that players get immersed in meaning (p. 452)—and, as Nash (2003) points out, the text could be a poem, or anything else¹⁸. Fashions for immersion come and go (Salen and Zimmerman 2004, p. 451), and the computer game is the latest iteration of an immersive sensibility.

Salen and Zimmerman (p. 450-1) accuse Murray of an 'immersive fallacy'—a belief that simulated realities can be so immersive that 'the frame falls away so that the player truly believes that he or she is part of an imaginary world'. They argue that

A player's relationship to a game character he or she directly controls is not a simple matter of direct identification. Instead, a player relates to a game character through the double-consciousness of play. A protagonist character is a persona through which a player exerts him or herself into an imaginary world; this relationship can be intense and emotionally 'immersive.' However, at the very same time, the character is a tool, a puppet, an object for the player to manipulate according to the rules of the game. In this sense, the player is fully aware of the character as an artificial construct.

p. 453

Relatedly, Juul (2005, p 190) takes issue with Murray's holodeck-inspired idea that the ideal immersive system would be indistinguishable from the real world. Indeed, contemporary games are quite unlike the holodeck, and Murray's example now seems somewhat naive. Neo-baroque knowledge of artificiality may impede immersion, and this is one of the reasons why immersion is generally unsustainable. It seems more plausible to say that game players move between different types of states; they swing

between the neo-romantic immersion and the neo-baroque irony as they flip between different worlds and different identities.

Regardless of how commonly is it achieved, the ideology of immersion remains culturally attractive. Six neo-romantic gameverse features facilitate it.

I. The illusion of power

When you are dealing with a trilogue, empowerment and collaboration are more productive terms than domination and control. The programmer has control of the gameverse (if anyone does). Users can configure texts, but only within parameters determined by the programmer¹⁹. However, the *illusion* of power is all-important for computer game immersion. You may not have many real choices when you are playing *Resident evil 4*—the supposed non-linearity of computer game-play is, for the most part, an illusion (massively multiplayer games are different in this regard). However you need to feel that you have options that you haven't taken (because they are too dangerous or do not progress the objective). If not, the analogy between the gameverse and 'nonmediated RL' fades, and so might interest.

2. Diegetic transparency

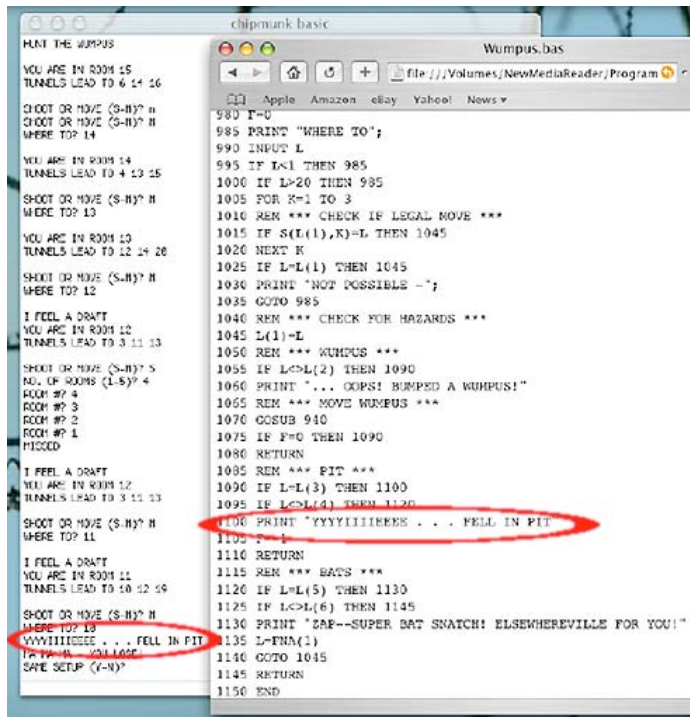


Image 3.6: The programming (right) and surface texts of *Hunt the wumpus* (1973).

In *Winchester's nightmare*, an interactive fiction by Nick Montfort (1999), players spend significant time in an apparently pointless exploration of a nightmarish atmosphere described only in words. Immersion is a tenuous affair, as players abut the limits of the system, signposted by the intrusion of extra-diegetic text. Choices seem limited and rule-bound as diegetic and extra-diegetic references collide²⁰.

Empowerment in this world—and therefore immersion—depends on your

knowledge of correct syntax. Rich media and massively multiplayer games achieve realism and empowerment, immersion and flow in arguably more intuitive ways.

Murray (1997) argues that

Eventually all successful storytelling technologies become 'transparent': we lose consciousness of the medium and see neither print nor film but only the power of the story itself. If digital art reaches the same level of expressiveness as these older media, we will no longer concern ourselves with how we are receiving the information. We will only think about what truth it has told us about our lives.

p. 26

3. Mastery of the learning curve

Flow is rare when you are learning to play a game. Learning *Diablo II: lord of destruction* (2000) consists of acquiring knowledge about its rules of engagement, specified in inaccessible programming text. I deduced these rules not only from the rare explicit

textual instructions displayed by the monitor, but more often from circumstantial evidence derived from performative situations, much as I do in 'nonmediated RL'.

Learning a computer game results from interacting with the display. This triggers procedural operations in the programming, and an unrealistic 'feedback loop from materiality to mind' (Hayles 2002, p. 75) via the display results. The experience of 'distal attribution' in which 'most of our perceptual experience, though originating with stimulation of our sense organs, is referred to external space beyond the limits of the sensory organs' (Loomis 1992, p. 113) occurs after you have learned the computer game (Downes 2005, p. 75).

The tension between the programming and the fact that an individual player's traversal might be very partial, and even relatively insignificant in terms of the programmed possibilities, needs to be taken into account by game designers. Some games are too hard to learn for any but the most experienced players, because, either by accident or design, the 'feedback loop' does not provide sufficient information.

4. Potential, but not actual, storytelling

Your player character evolves as you play. In *Diablo II*, I slowly improved the capacities of Tanet, my player character. Tanet has particular strengths and weaknesses because I distribute the prizes she wins in particular ways. In the programming database, a range of variables are incremented according to my distribution, and as a result of the changing values of these variables, the 'Tanet properties' algorithm determines how well Tanet performs against particular monsters. Other algorithms determine where Tanet can go and what else she can do.

While I am playing the game, I do not construct a story about Tanet's increasing abilities, just as I do not 'narrate' my life to myself as I am going about it. However, retrospectively I can convert game experience into a narrative. Forcing strict narrative criteria on computer games is experientially alienating. In the process of narrativising your player character's progress through a gameverse, you lose contact with the experiential richness of the moment. Immersion is an intimate gestalt which engages players emotionally, intellectually and physically *in the moment*. Writing from a ludologist's²¹ perspective, Markku Eskelinen (2001, p. 2) points to the pivotal nature of configuration in RPGs which for him distinguishes them from classical narrative²³.

Configuration has the affect of situating players in the moment. Creating narrative interpretations requires players to be somewhat removed from the moment.

Alfred Schutz (1962) has explored the idea of multiple realities and he draws similar conclusions about the relationship between the actual experience and deriving meaning from that experience:

Meaning ... is not a quality inherent in certain experiences emerging within our stream of consciousness but the result of an interpretation of a past experience looked at from the present Now with a reflective attitude. As long as I live *in* my acts, directed toward the objects of these acts, the acts do not have any meaning. They become meaningful if I grasp them in well-circumscribed experiences of the past and, therefore, in retrospection.

p. 212

When you make a narrative you are engaging in a type of meaning-making. We are perhaps too accustomed to the ready-made narratives of older types of media, but we also make our own narratives. Gameplay is a venue in which narrative construction takes place.



Image 3.7: In the online multiplayer game *Graal* (1998-2006), three player characters rest after a battle.

According to Henry Jenkins (c.2001) story-telling is, for game designers, wrapped up in the worlds they design and the spaces they sculpt—these are ‘spatial stories’²². Space and spatiality in a good game is more than simply a container in which story-telling unfolds; it becomes the ontologically significant scope of an embedded reality in which a coherent world with its own

physics, history, bestiary and anthropology unfolds.

5. Personal transformation

Jaron Lanier (1992, p. 166) suggests that when the trilogue achieves transparency ‘you don't see the computer any more—it's gone. All that's there is you. So, it's teaching you to be you’. As Tanet’s abilities improve, I evolve as well. Juul (2005, p. 96) points

out that learning games means improving your skill; it also means learning to function in another universe, and developing a world-view situated in that universe.

As I have suggested, our idea of reality and our sense of personal identity seem to be two sides of the same set of concerns. Aarseth (2004, p. 50) suggests that 'unlike literature, games are not about the Other, they are about the Self'. As I shall shortly argue, the transformative power of games is ideally extended by their mythic themes, for

myth ... speaks to the whole man, his entire moral-spiritual being, including his subconscious, causing an aggressively sensuous effect, which is essential for man to be truly touched. Is there a more glorious and fruitful transcendence than the ideal of a fully realized, harmoniously complete man who is able to overcome his own narcissism, enlarge his world, traverse all his 'circles of hell,' and thus become one with the causes of a wider humanity? Myth is a bridge between the 'I' and the 'not-I,' between the heterogenous self-conscious and the homogenous image of the world. It is aversion and wish fulfillment; it is the distant and consoling promise of a possible unity and the creation of a sensible and balanced world.

Biró 1982, p. 74

This *redemptive* immersive gestalt²⁴ operates on emotional, intellectual, ethical, sensual and even physical levels.

6. Subsuming the multiple real

Playing spatial games means creating worlds. You know the qualities of a world by the qualities of the space that can be experienced there. The space of the game hardly exists without the player's demi-urge, who by 'launching' the game, creates it.

Realities have different flavours and different strengths. Ultimately, if naive distinctions between 'nonmediated RL' and gameverse worlds collapse, then the idea of immersion as a mediated, artificial experience also collapses. Reality is where we are *in the moment*. Paradoxes of reality and fiction encountered while juggling multiple realities may be neo-baroque, but their resolution into a momentary experiential unity is neo-romantic. Our nostalgia for such experiential unity underpins immersive appeal: whether, or how often, it is actually achieved is another question.

Positions on immersion depend on whether you privilege neo-baroque or neo-romantic ideals and aesthetics. Neo-romantic immersion with no distance, no irony, no createdness, in which self is sacrificed to flow, is a form of psychosis to some, and an

impossibility to other critics. Nevertheless, game play experience continues, in spite of criticism. I will now turn my attention to the subjective experience of immersion in RPGs, with reference to another type of traditionally immersive experience, mythic experience.

Being programmed

In chapter two I explored the programming aspect of trilogical texts. The programmed text exists outside the ephemeral time and space of the gameverse, and our mediated, partial dialogue with it (a traversal) resembles a dialogue with a permanent but obscure and possibly unpredictable god. Indeed, supernatural powers commonly feature in RPG diegesis, as if game developers seek to represent their own experience of world creation within the gameverse. The fantastic textual ecology of signifiers freed from indexicality is reflected by these fantastic RPG gameverses. This parallel with godlike power is reflected in romantic art theorist Wilhelm Heinrich Wackenroder's (1980, p. 56) belief that 'God views the whole realm of nature or the entire universe in the same way as we see the work of art'.

As being (player character) is programmed, so the trilogue 'programs' Being (player experience): interpretation derives from the trilogical feedback loop between player performance (experience), possible world (and its player character), and the inaccessible, permanent code/data.

If indexicality does not apply to computer game images, the ideas about affect associated with indexical media such as the photograph, famously analysed by Fredric Jameson (1979/80), may seem irrelevant:

The concrete activity of looking at a landscape—including, no doubt, the disquieting bewilderment with the activity itself, the anxiety that must arise when human beings, confronting the non-human, wonder what they are doing there and what the point or purpose of such a confrontation might be in the first place—is ... comfortably replaced by the art of taking possession of it and converting it into a form of personal property.

p. 131



Image 3.8: The technological sublime in *Myst III: Exile* (2001)

However, such ‘disquieting bewilderment’ is also an affect produced by the majestic landscapes of gameverses, for example, those of the *Myst* series (see Image 3.8). Just like photographing a landscape, we can even take screen-grabs of gameverse landscapes (scattered throughout this chapter) resulting in a strange double-mediated indexicality. In other words, we can

have an analogous reaction to a gameverse as we do to ‘nonmediated RL’.

Different games strive for this technosocial sublime in different ways. A neo-baroque reaction of ‘how did they do that?’ prevails in *Spiderman* (2002), which has vanishing points wherever you gaze. Physics engines calculate in real time what can be seen and what not. In *Grand theft auto 2* (2000), the mean streets of Liberty City are lightened by moments of fantastic *esprit*, for example by car stunts and shoot-outs that defy the game physics otherwise so carefully established by the programmers. Likewise, players explore the bizarre alien cultures in *World of warcraft* (2002).



Image 3.9: In *Grand theft auto 2* (2000) you can travel on the bonnet of a moving car.

Despite these elements of fantasy, gameverses generally fall back on the ‘RL’ analogy to some extent—*Spiderman* can go up walls, but is otherwise constrained by Earth-like gravity and ‘surface accuracy’ (Darley 2000, p. 159).

However, such combinations of the fantastic and the pseudo-indexical do not alone account for the gameverse sublime. Many RPGs are populated by archetypal mythical

characters and situations repackaged for a post-millennial age in which technology and magic seem to have become indistinguishable (Stivers 2001, *passim*). As a result of programmatic (and sometimes networked) interactivity, we experience fantasy in a space of play outside the bounds of received morality and religion (Turkle 2001).

In other words, gameverses (and in particular RPGs) often reprise *mythic* themes. Game designer Troy Dunning (2000) recommends the hero's journey as a good mythic theme for games. He presents a breakdown of the activities and structures he plans in an average length game:

Total time of game play	25 hours
Length of non-interactive elements in the game (cut scenes)	1 hour
Number of levels	25 hours
Length of levels (times # of levels)	1 hour
Amount of time spent fighting in level	10 minutes
Amount (sic) of time spent exploring in level	10 minutes
Amount of time spent problem solving in level	10 minutes
Amount of time spent traveling (sic) in level	10 minutes
Amount of time spent waiting for something to happen (hopefully this is zero).	
Amount of time spent 'doing other stuff' in level	10 minutes

The heroic RPG translates mythic scenarios quite fluently, as they reprise 'universal archetype[s] recognizable across all the variations of culture, author, and medium' (Murray 1997, p. 137). They respond to the role of myth to 'bring us into contact with the gods, heroes, and saviors that are latent at the core of our selves' (Billias 1986, p. 15). The hero (player character) is exactly placed at the centre of the gameverse, which is 'the very source of absolute reality, as close as possible to the opening that ensures him communication with the gods' (Eliade 1959, p. 65)—the programmer gods. That is, the player, through the player character, assumes responsibility for creating the world and ironing out chaos, much in the way mythic heroes do.

According to Mircea Eliade (1957, p. 16), myths are impersonal; they reveal super-human beings behaving in an exemplary manner and thus provide a model for human behaviour (p. 23). Lack of real characterisation may therefore be an actual strength in a mythic RPG; we are concerned more with archetypes than with characters, and the hero archetype 'exemplifies the course of action needed to achieve the task of creating the self' (Billias 1986, p. 32).

Players in RPGs thus perform mythic scenarios, via super-human avatars. There are implications for identity-creation. Eva Liestøl (2003, p. 340) draws a parallel between

the game *Duke Nukem* and the myth of the minotaur and the labyrinth. The game performs a myth of rebirth of masculine identity, like many myths before it (p. 342):

Although the masculine body of Duke is absent, his voice reminds us of his masculinity and of his role as combatant. If we hesitate to realise this role, our inactivity is responded to by Duke's ironic remark that tells us that questioning our role is ridiculous.

p. 347

Similar mythic and heroic narratives exist in films and novels (Eliade 1957, p. 35). However, despite Heidegger's (1971, p. 37) belief in the 'timeless and supertemporal truth of artworks', modernism has failed to come to grips with myth (Eliade 1957, p. 24). Narrative alone can't 'carry off' the immediate, experiential aspects of being a hero in a mythic universe.

On the other hand, in an RPG, 'the navigational space of the computer ... makes it particularly suitable for journey stories which ... offer additional opportunities for exercising agency' (Murray 1997, p. 137). Under the impact of eréalism, a player feels herself to be a *witness* to meaning creation and universe generation. On the other hand, she is also *co-conspirator* in the creation of the world—the events that unfold and the pace at which it unfolds. She is radically integrated in the possible world. RPG game diegesis places her player character in an heroic gameverse where she becomes both pivotal and responsible.



Image 3.10: At this moment in *Diablo II: lord of destruction* (2000), the player character enjoys high amounts of mana (blue) and health (red).

Let us consider how a specific mythic trope is employed in a computer game. Mana was introduced to western thought by R. H. Codrington in the late nineteenth century. Mana is spiritual power (Codrington 1969, p. 51) bestowed by the spirits of dead people (p. 57), which allows you to rise through the ranks of society (pp. 103, 115)²⁵. Mana is a powerful eréalistic force in

Diablo II. It provides the player character with supernatural powers; it is regenerative and interactive (that is, mana stocks depend on how the player interacts with mana-algorithms). A skillful player will make constant calculations about the extent of her character's abilities against foes in light of combinations of available mana, health and weaponry.

In *Diablo II*, mana has diegetic significance and extra-diegetic functionality (that is, there is a mana algorithm). Mana thus *performs* the interconnectedness of things in the gameverse, and reveals the sliding scales of raw power to be negotiated and harnessed via manipulation of the algorithmic, linguistic (code/data) text. Mana is a function of programming *and* gameverse interaction, two aspects of the text-as-apparatus that are experientially inseparable.

Joseph Campbell (1968) describes myth's 'fourth and most vital function' as fostering

the centering and unfolding of the individual in integrity, in accord with d) himself (the microcosm), c) his culture (mesocosm), b) the universe (the macrocosm), and a) that awesome ultimate mystery which is both beyond and within himself and all things ...

p. 6; also see Billias 1986, p. 28

A similar ambition is apparent in games—their performative, erealistic gameverses mean that individual player decisions to some extent determine the nature of the gameverse real and identity of the player character, and through that, gameplay experience.

Mythic thought promotes the experience of ultimate unity. As we have seen, 'unity' is an ideal shared by romantic thought, Heidegger and other phenomenologists, *and* the aesthetics of immersion.

Unfortunately for those seeking mythic immersion, the neo-baroque is the antithesis of unity and coherence. It is also a dominant aesthetic, a position which is perhaps supported by secular late capitalism. As a result, whatever media technology we use—from the printed page to *Game boy advance*, immersion in mythic texts consists of brief and possibly stolen moments from our customary awareness of plural realities. Any sort of transcendental, unified experience quickly unravels into nostalgic memory. As the romantics themselves knew, the romantic ideal of unity and coherence is never satisfied:

And when the soul, resting, as it were, under the willows of exile, breathes out its longing for its distant home, what else but melancholy can be the keynote of its songs?

A. W. Schlegel 1980, p. 34

Living your myths via technology is limited by neo-baroque ironies that always encroach upon immersion. Similar ironies have perhaps always encroached upon the possibility of mythic experience derived from textual engagement. To these failures of immersion I will return in the following section. In those failures we may uncover reasons why the computer game has become such culturally contested media.

One types of complaint against computer games is that they lack affect compared to other types of media. In a 1945 article, Maurice Merleau-Ponty argued that films should be simultaneously sensually and psychologically coherent. A film's meaning derives from the integration of its many elements, including, for example, its temporality, because:

a movie has meaning in the same way that a thing does: neither of them speaks to an isolated understanding; rather, both appeal to our power tacitly to decipher the world or men and to coexist with them... A movie is not thought: it is perceived.

p. 343

Film attempts to reveal the bond between mind and body 'and the expression of one in another' (p. 344); in other words, affect in film is derived from revealing that what is inside is reflected in and can be represented by what is outside (p. 354). However, computer games, as an example of postmodern and neo-baroque media, are derided as lacking affect. Jameson (1984) berates a

virtual deconstruction of the very aesthetic of expression itself, which seems to have dominated much of what we call high modernism, but to have vanished away—for both practical and theoretical reasons—in the world of the postmodern. The very concept of expression presupposes indeed some separation within the subject, and along with that a whole metaphysics of the inside and outside, of the wordless pain within the monad and the moment in which, often cathartically, that 'emotion' is then projected out and externalized, as gesture or cry, as desperate communication and the outward dramatization of inward feeling.

p. 61

Jameson suggests that we need to maintain distinctions between media and 'RL' to enjoy affect. The 'depth' and drama of high modernism is based upon the ability of the

signifier to externalize the signified, stunted in the postmodern ‘culture of the surface’ (Darley 2000, p. 159). For Darley, Jameson and others, computer games are superficial compared to the subtle psychological and philosophical heights of modernist high culture, and therefore they only appeal to unsophisticated users²⁶. In subtle ways, Heidegger’s romantic myth about the split between art and technology, and the fall from *techné*, is reprised in this criticism.

In their commitment to a distinction between media and ‘nonmediated RL’, often enshrined in the term ‘virtuality’—a term attractive in its very vagueness—erealism and its rich ontological implications are ignored. Furthermore, there is a strong undercurrent of quite familiar neo-romantic aesthetic theory at work in computer games, experienced as I have argued when you actually play them. It is more productive to explore of this cultural continuum than claim that such media wholly redefines cultural engagement (either positively or negatively).

Indeed, the phenomenology of experience is key to any assessment of erealistic media. Meaning has become an emergent property of transactions in the fluctuating gameverse; it is derived from gameplay rather than narrative or character, and therefore it is impossible to pin down (you can’t quote it). As I will suggest below, these transient texts may evade critical approaches, because they are not easily amenable to traditional critical explorations.

Death and the RPG

Myths bring order out of chaos (Billias 1986, p. 23) because they provide perspective on human origin and destiny (p. 19); they function on a nonrational level, fulfil psychic and spiritual needs, and narrate the human dilemma which is ‘the discordance between our fundamental reality (symbolized as the divine image at our core) and our actual mode of being (symbolized as sinful, guilty, and alienated from or unaware of that core).

If neophyte game players have to learn the ways of a mythic universe before they can really function within it, to what extent do parallels exist with the experience of initiates into the mythic universes of archaic cultures? Novice shamans²⁷, according to Eliade (1958, p. 87), get two types of instruction—ecstatic (dreams, visions, trances) and traditional (social, historical and cultural). When you play a single player RPG, you might get the ecstatic training (erealistic immersion), but you will never get the

traditional training. There is no public recognition involved in being an RPG player; indeed, there may instead be public approbation.

The initiations of neophyte shamans are shrouded in social symbolism. For example, they are painfully separated from their mothers to reinforce a symbolic break from childhood (Eliade 1958, p. 8). In archaic societies, a common world-view, created through myths, is shared and valued (Billias 1986, p. 17) which 'serves to support the current social order and help integrate the individual organically within the group' (p. 27).

Like the mothers from these religious cultures, the mothers of computer game players may also be disturbed by their sons' game-induced 'ecstasy', but in contemporary culture the socially-sanctioned resolution is an addiction clinic, rather than months of intense initiation rituals:

To gain the right to be admitted among adults, the adolescent has to pass through a series of initiatory ordeals: it is by virtue of these rites, and of the revelations that they entail, that he will be recognized as a responsible member of the society.

Eliade 1958, p. x

Whereas for archaic cultures '[personal] wholeness is not fully understood or achieved except in a context of the community. Myths ... are not just about me; they are about us' (Billias 1986, p. 22), the mythic power of computer games in contemporary culture collapses when it clashes with broader mainstream secular culture. Our culture valorises heroic behaviour most clearly in the sporting arena, a status open to only a few. However, heroes remain 'an important part in the formation of European adolescents: the characters in tales of adventure, heroes of war, screen favourites, etc.' (Eliade 1957, p. 33). What, then, happens then to the millions of adolescents who experience intense and heroic experiences without the social integration that helps them reconcile them with the rest of their lives?

In Singapore in 2002, 17-year-old Lei Pui Sang, while playing *Diablo II*, suffered a heart attack and died ('Teenager died after playing computer game for 10 hours', 2002). He had been in the habit of playing the game all night, after working (at a computer) all day. Playing through the night was the only time he could find for game play.

The popular press constantly warns us that in gameverses you can lose touch with what is 'really real' and become addicted to fantasy (Campbell 2006; Miller 2002²⁸). Can you be so immersed in an embedded gameverse that you are completely unaware of your physical condition? Or did Sang decide that his physical condition was irrelevant? Were there two simultaneous deaths, one for each world? Or did Sang's player character continue within the game for some time after Sang's death, slowly running out of health while it waited for further direction? Indeed, absolute immersion is impregnable to all but the most speculative analysis.

The death (and resurrection) of a player character is reasonably common when playing RPGs. Initiates into archaic mythic cultures also have intense experiences which engage themes of life and death. '[T]he body's abandonment of the soul during ecstasy is equivalent to a temporary death', argues Eliade (1958, p. 95):

Initiatory death is indispensable for the beginning of spiritual life. Its function must be understood in relation to what it prepares: birth to a higher mode of being.

p. xiv

Playing alone at night made sustained immersion more possible for Sang, because social sanctions against gameplay were avoidable. Sang immersed himself in the unified gameverse, night after night, for ten-hour stretches. The game ceased to be a game, because he had isolated himself to such a degree that he avoided the intrusion of any world beyond it. Under these circumstances he could intensely immerse himself in the theme of life and death that RPG gameplay, and *Diablo* in particular, offers. In absolute immersion, there is no nostalgia, because there is no other possible world.

Under these circumstances, the death of your player character can be shocking. At often unexpected moments, the gameverse disintegrates before your eyes, and immersion comes to an abrupt halt. You have fallen from grace; you are back in the non-mythic world of the mortal and the mundane. The affect is instantaneous nostalgia for lost mythic unity.

Heim (1993, p. 136-137) warns against computer games and their mythic experiences. In 'RL', mortality/nativity 'impose existential parameters on reality, providing us with a sense of rootedness on earth'. Heim advocates avoidance of game scenarios featuring death (p. 137); he also believes that gameverse temporal progression should be different enough from RL to make it clear that it is not RL. Players should not be able

to take gameverses too seriously. Heim therefore seeks to denude games of the very properties that grant them their experiential intensity: he also thereby confirms mainstream society's suspicion of them.

On surrendering so completely to the gameverse, Lei Pui Sang seems to have turned his back on Singaporean culture. The question of day-to-day mainstream identity failed to hold interest in the face of his exploration of self, world and ontology offered by mythic gameplay. The intensity of this experience seems to have meant that momentary experience was all-engaging, and repercussions or reflections upon his own future being were too remote to register.

Immersive experience is hard to analyse. It is secretive. Traces of an anonymous, deleted post on the Melbourne Goth Forum, retrieved by Google but unavailable at its original URL, offers the nearest thing to Sang's elegy:

Lei Pui Sang , the Diablo II Martyr. " Let's think the unthinkable , let's do the undoable , let's prepare to grapple with the ineffable itself , and see if ...

<http://www.gothic.org.au/forum/viewthread.php?tid=3636> (Googled 25 July 2006; original syntax)

Eliade (1959, p. 51) muses that 'certain traditional images, certain vestiges of the behavior of archaic man still persist, in the condition of "survivals," even in the most highly industrialized societies'. We glimpse archaic vestiges of behaviour in this extract, which suggests a secret society of arcane significance. Indeed, the network itself seems to have censored the critic's access to exchanges concerning what could be described as the immersive, transcendental mysteries of the trilogy.

Kids ignoring their health for 'mythic' immersion; desperate parents committing their kids to expensive detox clinics—it would appear that both positions lack insight into the role of the mythic imagination in adolescent rites of passage. Meanwhile, however, Heidegger can surely rest content: artworks really do open up worlds (1971, p. 41). A sculpture of a god or a computer game really 'is a work that lets the god himself be present and thus *is* the god himself' (p. 42).

Iain Thomson (2000, p. 437) suggests that Heidegger sought 'a work of art which would transform our entire ontological self-understanding in one fell swoop'. Heidegger's well-known disdain for technology, in that it deflects humans from ontological insight, seems undermined by the success of immersive computer games. In

their generative incorporation of romantic concepts, these trilogic texts hold an insurmountable irony for Heidegger. Technology, supposedly the implacable foe to Being, reveals itself to be a means to neo-romantic 'truths'. It is perhaps unfortunate that such 'truths' generally fail to capture mainstream sympathy.

CHAPTER FOUR: IDENTITY IN THE SPACE OF FLOWS

Locality is always in deferral, transition, translation, mediation and recontextualisation.

Hjorth 2005c

From the computer game, that most immersive of technosocial media, I now shift focus to possibly the most neo-baroque media—that designed for the mobile phone.

It is well-nigh impossible to forget context and frame when you are using a mobile phone. Awareness of location and the chance encounters resulting from personal mobility promotes neo-baroque reflection, such as those expressed by Larissa Hjorth above. Pocket-size ‘microworlds’ can not disown their embeddedness within the larger, immersive, physical world around us.

This chapter explores what ‘rich media’ thematics and aesthetics might be appropriate for the distinctive mobile context. Before doing that, I will make some introductory observations about the experience of these embedded realities, and the way in which telecommunications companies are structuring and promoting the device. If the mobile phone is another technosocial device in which personal identity is at play, I will argue that mobile media needs to address identity issues in contextually appropriate ways, and will refer to ways that my own work, *RL-*, explores appropriate mobile aesthetics. Through this focus on the mobile phone I will reprise the technosocial problematic that has been explored from various angles throughout this work. How do humans and their devices cooperate to reinvent the field of human activity, and consequently, reconceptualise who we are or can be?



Image 4.1: some networks address transience¹

Various theorists have considered what happens to interpersonal relationships when they are mediated by the mobile phone. ‘Co-presence’, argues John Urry (2001, p. 258) evolves as ‘virtual travel (especially via new mobile devices that travel with one “on the road”) produces a kind of strange and uncanny life on the screen’ (also see Ito and Okabe 2005; Hjorth 2005c). Alternatively,

Larissa Hjorth (2005c) considers Heidegger’s idea of ‘undistance’: ‘[t]he ubiquity and yet interiorised saliency of mobile telephonic practices create a dynamic of being both *everywhere* and *nowhere*, simultaneously *home* and *away*’. We use the phone to reinforce our friends’ simultaneous *presence* and *absence*, which is elsewhere described by Ingrid Richardson (2005) as ‘telepresence’—‘a kind of distant presence’ (also see Loomis 1992, p. 113).

The impact on consciousness of these embedded mobile microworlds is a ‘double awareness’, which Daniel Downes (2005, p. 75) argues is ‘one of the defining characteristics of our experience of communication in cyberspace’. Those like myself who are sympathetic to relativist epistemologies have little trouble with the idea of multiple realities and double awareness. Mid-twentieth century social phenomenologist Alfred Schutz (1962) suggested that there are ‘probably an infinite number of various orders of realities, each with its own special and separate style of existence’ (p. 207). These orders of realities are in effect

finite provinces of meaning upon each of which we may bestow the accent of reality. We speak of provinces of meaning and not of sub-universes because it is the *meaning* of our experiences and not the ontological structure of the objects which constitutes reality.

p. 230

Indeed, cyberspace has already undermined naive perceptions of border between ‘RL’ and mediated realities (Novak 1992, p. 243). Since Novak wrote, we have further extended our mediated realities into ‘portable microworlds or pocket technospaces’

which our attention oscillates between (Richardson 2005). We generally focus attention on these different realities in a serial mode: ‘[a]ll these different experiences are experiences within my inner time; they belong to my stream of consciousness; they can be remembered and reproduced’ argues Schutz (1962, p. 258). Dreams, myths, looking at art, are all different provinces of meaning, and while you are ‘in’ them, they are ‘as “real” as anything’ (p. 237). Richardson (2005) however, adds a note of neo-baroque caution: we are simultaneously aware of both the ‘here’ and the ‘there’, and therefore the concept of immediacy changes:

[M]obile media elicit variable levels [of] attention and inattention that shift between actual and telepresent space, partially depending on the demands of the immediate environment and the extent to which the interface becomes ready-to-hand in a Heideggerian sense (i.e. its function and usability recede from explicit awareness).

The formerly separable contexts of personal communication and media are currently merging in the mobile apparatus (Richardson 2005). As a consequence, Ingrid Richardson exhorts us to see handheld devices ‘both as communication tools and *info-mediatic* assemblages within which the technologies and practices of communication, information and media come together’. The mobile text-as-apparatus can be as simple as a text message (SMS) or as significant as mobile video or game. Within its specific locative and transient but connected context, the mobile phone, the way it is used, and the media and communications it affords, remain concerned with technosocial issues of identity and humanness, reflected in, but also moulded by, trilogical exchange.



Image 4.3: permanence is about stopping time; it is transcendental.

Wardrip-Fruin (1999) suggests that ‘the Web disappoints us with its too-perfect reflection of our ambivalent relationships with impermanence and openness: dynamic and unstable, diverse and overwhelming’. Perhaps the Web, with its broad expanses of textual real estate, is too easily interpreted as designed to endure; an impression compounded by the

metaphors of 'page' and 'site'.

In contrast, fantasies of permanence are hard to sustain with mobile phone media. Phone memory is too limited to use as an archive of media; downloaded phone media is generally of brief duration; phone-based media consumption occurs in short spurts. As a result, individual mobile texts are history almost as soon as they arrive in your inbox.

The mobile device privileges transient engagements. All text-as-apparatuses lack continuous existence; they exist 'on demand' when users call them up; the rest of the time they are latent and quiescent. Furthermore, when the text-as-apparatus is performed, we experience a *transient* text. It changes with our interactions. When we have finished, we close it, if not trash it. Its footprint on our minds is (hopefully) significant, because its footprint on our desks is not. Our handheld devices deliver contextual experiences, not only because neo-baroque embeddedness is difficult to ignore. The mobile text arises *as a result* of situational context. The media and communications we make and consume on our mobile devices are a response to circumstance (if not specific location).

As with the other digital apparatuses, mobile phones collude in trilogic practices that create transient artefacts. However, their use-context means that mobile devices actively foreground experiences of transience. I argue in this chapter that the mobile phone ameliorates our experience of transience, while at the same time, justifying, confirming and representing transience as an aspect of contemporary lifestyles—we can even set our text messages to self-destruct 40 seconds after they are read². Whether these devices *promote* or merely *respond* to transience is a moot point.

Meanwhile, many people replace their phones every eighteen months to keep abreast of the changing technological environment. The phone demands momentary engagement, but also commitment to the contemporary. *Now* is what matters, when we are using our phones. We have collapsed future and past into brief but fashionable moments of mobile communication and consumption.

Mobile phone as telco 'text'

The way we use our phones is highly dependent on what telecommunications companies (telcos) allow us to do with them. Unlike the Web, mobile phone networks

have always been the province of big business. Telcos and electronics manufacturing corporations drive their development. While smaller groups and individuals may develop specific applications which do not require cooperation from big business, the core affordances of these apparatuses seem destined to remain constrained by combinations of economics, legislation and protocol beyond the province of individuals. If the mobile phone represents and ameliorates experience of transience, this representation is filtered by corporate interpretations of what is good for us—that is, it has to be good for them too.

90% of Australians have mobile phone access³, but the terms and conditions of that access has traditionally favoured communication over media making or consumption. This situation is changing. Bandwidth—the determinant of the speed at which we can transfer messages and media between devices—is increasing. For example, at time of writing Telstra was marketing a single national 3G network on the 850 MHz spectrum ('Next G') that will improve our capacity to interact with the 'rich media'⁴ affordances of 3G phones (video, audio, still image and games), which have been particularly limited in rural and regional Australia.

Corporate telecommunications companies (the major Australian players are Telstra, Optus, Vodafone and Hutchinson/3) and their media-making collaborators have yet to completely succeed in converting communications phone culture into a rich media income line (ringtones aside); however, specific forms of mobile media commerce are slowly emerging.

One model of preferred mobile phone consumer behaviour is Telstra's 'integrated model', which seeks to stem revenue decline resulting from the downturn in traditional fixed telephony and the inefficiencies that result from running three different wireless networks. According to Telstra, this means creating 'a world of one-click, one-touch, one-button, one-screen, one-step solutions that are simple, easy and valued by individuals, businesses and governments alike' (Robbiati 2006). In this vision, rich media content will be distributed over multiple devices for seamless, integrated customer experience, enabled by collaboration between Bigpond broadband and national 3G networks. Whether or not such seamlessness is possible, the corporate payoff is also speculative: when customers become accustomed to this seamless, integrated rich mediascape, they'll be required to pay for it. Telstra's 'pricing

dynamics' will then evolve 'from commoditisation of access, to a model of value-based pricing' (Robbiati 2006).

This vision of consumer behaviour contains a particular idea of what consumers need and want. Technology, suggests Steve Woolgar (2005, p. 29) 'is congealed social relations', and

depictions of new technology constitute a text which 'performs community'. The technology text inscribes and prescribes certain identities, roles and groups and the relations between them. The technology text makes available a moral universe which depicts the rights, responsibilities and expectations associated with the entities which populate it. It follows that the adoption (or rejection) of a claim about a particular technology is equivalent to the adoption (or rejection) of a performed community.

p. 32⁵

The 'text' of Telstra's integrated model confirms the rhetoric of late capitalism, which valorises adaptation to transience. This rhetoric includes viewing Australian employees reliant on the economic conditions of earlier periods of capitalism (such as manufacturing) as marginal as their industries move offshore. It exhorts us to see working life as routinely disrupted rather than continuous. Routine geographical relocation—if not nomadism—is its domestic analogue. Adaptation to continuous change is the pre-requisite to working with technology. The only people who want things that last are the poor, according to Zygmunt Bauman (1999, p. 14). This culture of routine change is predominant in the information age⁶.



Image 4.2: is nomadism dangerous?

In other areas of our lives, change rather than stability is apparent. Pervasive transience is given a positive spin in terms of the freedom of the individual, and distilled down to greater consumer choice, argues Bauman (2000, pp. 90; 97). Even marriage is a shopping exercise, which has evolved from "til death do us part" to "until further notice" (Farouque 2005). Nomadism encourages 'digital

homelessness' (Hoy 2005), the technosocial solution to transient lifestyle. Increasingly, our digital devices—wifi, the laptop, the mobile phone—facilitate and promote particular behaviours and identities for those in the right social position.

The mobile phone, as conceived by telcos, addresses transience and makes it cool. According to mobile phone marketing, it's hip to be nomadic but connected. Hutchinson's (2006) 3Broadband Zone promises that

you'll be the one who can make video calls, experience high-speed email, catch the latest video news updates at a bus stop, watch sports video highlights of the 3 Test Series cricket in a taxi, get score updates of the English premier league at a train station, or watch movie trailers in a supermarket queue. You can even shoot videos and email them to your friends, have your emails read to you and play video games.

Similarly a Telstra I-mode press release promises a 'superior total communications solution' by 'providing our customers with services that are compelling, relevant, timely and—most of all—easy to use'. Telstra will accomplish this by 'stimulating a vibrant content market with thousands of content sites for customers to choose from' (Telstra 2004). Optus and Ninemsn (2005) are joining forces to integrate mobile and broadband services:

Optus customers will receive communications services including e-mail, MSN Messenger, calendar and contacts. When combined with the new portal and a personalized browser, customers will have a level of integration between their PC and mobile phone not yet seen in Australia.

The telco ideal consumer is wealthy, technically sophisticated, at least as interested in media consumption as in maintaining contact with friends, and always on the move. This consumer is presented with an imperative involving convergence and rich media. Content providers and aggregators like Legion Interactive, instrumental in bringing such sexy mobile add-ons to the mainstream convergent media scene as SMS voting in reality TV⁷ and mobile phone soft porn wallpaper⁸, are actively touting the economics of mobile content to media producers, even though 'rich media' is currently only a small proportion of the \$1 billion per year mobile data market (Sinclair 2005).

The future envisaged for the mobile consumer by telcos and handset manufacturers suggests that we may actually *surmount* transience via our devices; physical isolation will dissolve via permanent and instantaneous connection to anyone, anywhere, and geographical movement becomes secondary when we are permanently connected to permanent media, reliable experience, just a download away. Converging the mobile

phone with the Web results in a networked apparatus that can disseminate islands of semi-permanent and reliable audience experience (rich media) within a sea of chance encounter and changing geography. Our double awareness is also, indeed, a double identity. Mediation redeems the brutish facts of non-mediated life.



Image 4.4: Is the mobile phone for shopping?

George Myerson (2001) argues that telco rhetoric entails a radical re-invention of communication, and while his work predates the push to rich mobile media, it contains useful insights into the ways in which we are being asked to reconceive of communication and the mobile device.

According to Myerson, telco advertising takes as its departure

point the ideal of intense (p. 9) and large scale interconnection (p. 19).

Communication is equated with individual freedom and control (pp. 19-20) via a rhetoric of 'getting what you want' (p. 20). In other words, communication is equivalent to consumption. Marketing campaigns stress data flow in systems, and Myerson infers that the basic premise of 'mobilization' is that 'communication works best when there is only one person involved' (p. 21).

Thus, prior to the 'rich media revolution', Myerson was already worried about the fate of mobile phone communication: 'the potential tragedy is that this most rich of technological developments is being packaged in such an impoverishing vision' (p. 53). Myerson quotes telco marketing which idealises the phone as an ordering device that by-passes two-way human interaction altogether (p. 28). He opposes this to Habermas' ideal of communicative action which

refers to the interaction of at least two subjects capable of speech and action who establish interpersonal relations (whether by verbal or by extra-verbal means). The actors seek to reach an understanding about the action situation and their plans of action in order to coordinate their actions by way of agreement. The central concept of *interpretation* refers in the first instance to negotiating definitions of the situation which admit of consensus.

Habermas 1996, p. 136

Instrumental uses largely inform the mobile phone's marketing, but instrumental communication, according to Habermas, is a limited ideal. It 'follows *technical* rules of action and assesses the *efficiency* of an intervention into a complex of circumstances and events' (p. 160; my emphasis).

Written prior to the 2.5-3G 'revolution', Myerson's analysis barely conceived of coupling the mobile phone with capture devices (camera, video) or it being radically integrated with the Web. Seven years later, Telstra is promoting a 3G network coupled with their Bigpond broadband service to create seamless, ubiquitous connectivity (Robbiati 2006).

However, the problem with Myerson's analysis goes beyond the historical moment in which it is situated. Myerson shares with Heidegger a limited concept of the apparatus. He desires a transparent apparatus, which the neo-baroque, embedded-in-multiple-realities mobile phone rarely if ever achieves. He privileges dialogue, and therefore only acknowledges trilogue in the negative terms implicit in the systems thinking of telco marketing: the trilogue (that is, the mediating role of the apparatus) means that dialogue (between humans) is reduced to instrumentality rather than meaningful exchanges brimming with negotiated meanings.

Throughout this exegesis I have been arguing against a techno-deterministic, or 'media ecology' (Downes 2005, p. 19) concept of media technology. I have been suggesting that trilogical communication does, indeed, change the nature of communication because it extends it into the realm of programmed language and data, a type of linguistic 'ontology' favoured by the early Wittgenstein; that is, rational, logical and stripped of confusion. However, trilogical communication also entails human language, with all its contextual and nuanced complexity. The trilogue occurs when one language meets the other: when one type of interpreter meets the other type of interpreter.

The trilogue doesn't privilege machines and protocols. As Downes (2005, p. 18) says, 'we are changed not by technology but by experiences'. Our trilogical engagements lead to new understandings about ourselves, our identity/ies, and our relationship to the world. Myerson's reading of mobile phone networks privileges the monolithic power of the corporations and their technologies. It leaves little room for evolving meanings derived from engagement and experience.

There may be negative aspects of ubiquitous networking⁹, but not because meaning is dictated by the apparatus or corporations. Indeed, the evolution of mobile phone usage is a good example of the ways that individuals co-opt the device to their own ends. Matthew Fuller (2002) has reflected upon critical analysis and its reaction to the unexpected uptake of text messaging. For him, the base-superstructure model, in which property relations determine use, may account for the development of professional mobile media at the expense of innovative mobile art practice. However, critical analysis has failed to account for

the way that this technology has been over-run and conceptually if not infrastructurally reinvented by hordes of what are seen as rather insignificant non-experts. Teenagers, illegal workers, gossip-mongers and so on. All of these subsist and thrive on their powers of connection, of existing in a dimension of relationality rather than of territoriality. It is in their capacity to generate a poetics of this connection that they have reinvented this technology.

Artists, too, have found ‘tactical’ ways of using the phone, despite telco restrictions. For example, *Bluestate* (2006) by John Tonkin and Mark Pesce uses the mobile phone’s bluetooth local networking functionality to create data maps of the city as a social space. Bluetooth technology by-passes corporate control¹⁰. Myerson’s focus on the marketing of corporations to primarily shape how mobile phones are used fails to account for ways in which identity, connectivity and community can be explored, behind the backs of the telcos and handset manufacturers. Usage spawns new uses. A technosocial perspective highlights the ways in which human behaviour and devices collaborate in creating and exploring human identity.



Image 4.5: Is the mobile phone for playing games?

Myerson is nonetheless right to point out that telcos privilege an impoverished vision of communication for economic reasons, although this vision may not be reflected in actual use contexts. The corporate mobile phone ‘text’ suppresses mobile P2P (peer-to-peer) communication—not merely personal texting between friends,

but the larger scale ‘swarming’ behaviour that facilitates democratic expression (Rheingold 2003).

Telcos conceive mobile users as alone in the world with needs and wants satisfiable by consumption, including media consumption. Media as diversion from the excesses of transience is a model far removed from the traditional image of the family-centric living-room TV; it more closely resembles the ‘private radio’ of nineteenth century *fin-de-siècle* telephone-based public broadcasting undertaken by Telefon Hirmondó (Marvin 1999), strengthened by unshackling it from broadcast schedules. Mobile media, as conceived of by the telcos, is essentially diversionary: transient media to fill the temporal cracks in our otherwise full and productive lives. A challenge for mobile media makers is to expand mobile media from the media ghetto of soft-porn wallpaper into responsive and engaged meaning-making.

Phone-to-Web: expanding P2P

Mobile devices can be co-opted to many different ends. The way we read the mobile phone as a ‘text’, and the way we use our phones, might depend on who we are: consumer, prosumer, professional media producer or telco representative. Furthermore, any one apparatus needs to be considered in the light of a *repertoire* of technological practices (Haddon 2005, p. 7). There may be many reasons for choosing a particular technology, not least, because of the other technologies that you do and don’t use. Leslie Haddon (p. 12) contends that ‘thinking in terms of repertoires helps to move the emphasis from being a user of communications to being a manager of communications’. Once again, this suggests the need for technosocial analyses concerned with empowerment, identity and interactive choice. People, not just corporate institutions, are moulding their own experience, sense of self, and place in the world, through their use of media and communications technologies¹¹. Can we make mobile media that responds to this challenge?

The idea that users simply respond to a consumerist agenda set by corporate interests under-plays the tactical possibilities that engagement with the technosocial mediascape presents. Prosumer mobile phone media—messages, images, and increasingly video—are forwarded from user to user, and possibly edited *en route*. Such work has no end-point or destination. It is a quotidian artform, performed by being in transit. The conclusion of performance is really the exhaustion of circulation¹². Furthermore,

as consumer-made mobile phone media is increasingly interfaced with social software databases, tactical media-making potentially extends out from your circle of acquaintance into a glocalised community of interest.

Since Myerson published his seminal critique, telcos and content providers have cross-bred the accessibility of the Web with the economics of pay TV: by forcing the consumer to pay for their downloads, they drive a lucrative wedge between libertarian ideals of free information that still circulate online, and the mobile phone network. However, prosumers are at the same time integrating the phone and the Web in a model of seamlessness with nothing to do with turning media into money.

Prosumers are co-opting the phone for rich media creation. We both produce *and* consume video, audio and still images on our phones. According to Okabe and Ito (2004), most camera phone images are captured for personal visual archiving 'as a resource for personal identity construction'. However, we are expanding our audiences by publishing our mobile phone media to websites such as moblogs and audioblogs. It is also possible to maintain a textual blog from an Internet-enabled mobile phone. Phone-made media that seemed private, transient and unscalable are becoming quasi-permanent and public. Nevertheless, the expression of personal points of view remains pivotal (Okabe and Ito 2004).

Moblogging is the phenomenon of publishing media produced on the phone to the Web. This is usually accomplished by sending an email with an attached image to a particular email address that results in uploading the image to a web server. From there, users may display their media in any way that the blogging system allows, and surfers can access it just as they access any website. Moblogs commonly combine photos and text; less common are video and audio moblogs.

Randomly sampling moblogged media often suggests that, like other prosumer publishing, individual mobile media artefacts derived from quotidian, transitory and insignificant events are unexceptional to those outside the community of interest. Michael Fromkin (2003, p. 860) comments on the soap-operatic nature of many blogs. This impression is compounded by moblogs. However, a series of moblogged artefacts connecting transient events to infer temporal progression and personality, contextualised by geography and culture, can create startling, if perhaps unfathomable, self-portraits.

Example 1: playgirlzz02 (2005)

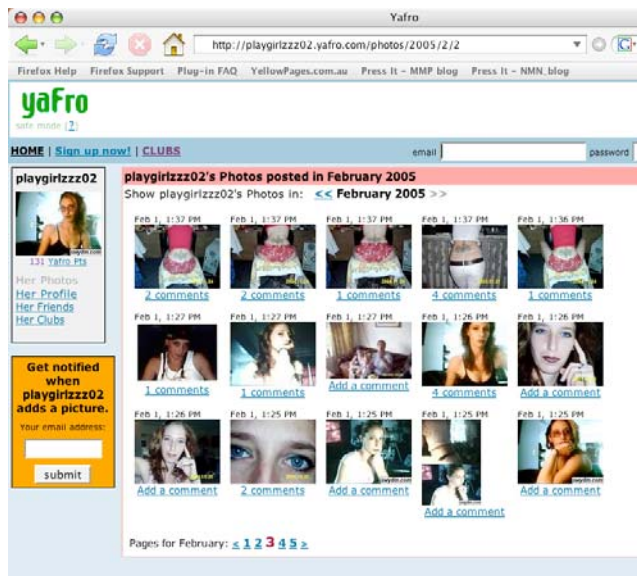


Image 4.6: playgirlzz02's moblog

playgirlzz02's sassy self-image begs a number of questions about desire, representation, self and technology. Her knowing gaze into her mobile phone's lens, and her self-publication of her image on the web, explore both intimacy and distance; she seems to be trading on the distance the technology creates as much as she circumvents it with her erotic self-portraits. She confronts the viewer with a body that can never be possessed while at the same

time suggesting its availability. Her moblog is about the paradoxes of virtual community, embodiment and desire, and the limits of virtual communication.

playgirlzz02 is both consumer and producer. This is a tactical act, in Michel de Certeau's (1984, p. xix) sense—ordinary people, subject to the will and power of big organisations, nevertheless finding ways to transform opportunities and events to their own ends. Feenberg (2000b) agrees that 'the tactical standpoint is far richer':

It is the everyday lifeworld of a modern society in which devices form a nearly total environment. In this environment, the individuals identify and pursue meanings. Power is only tangentially at stake in most interactions, and when it imposes itself, resistance is temporary and limited in scope by the position of the individuals in the system. Yet insofar as masses of individuals are enrolled into technical systems, resistances will inevitably arise and can weigh on the future design and configuration of the systems and their products.

p. 229

As Myerson demonstrates, telcos are concerned with *strategies*—the prerogative of powerful organisations to ideologically dominate and manipulate the less powerful. However, even with such a tightly controlled technology as the mobile phone, it is possible to create spaces for tactical expression.

Example 2: GunFu (2004-2005)

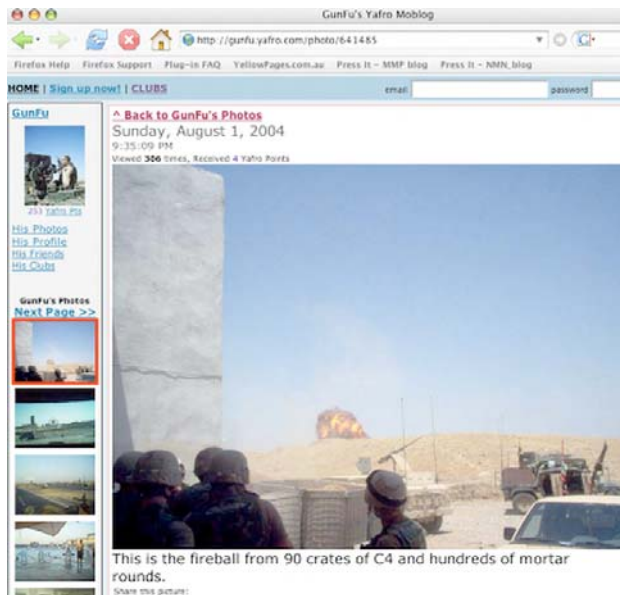


Image 4.7: GunFu on firepower¹³.

with moments of real terror. We experience the life of the unsophisticated soldier who plays his role of survival and aggression in the midst of a strategic and political situation about which he appears to have little interest or understanding.



Image 4.8: GunFu reflecting on life after war¹³.

Other mobloggers lead lives in which the quotidian is extraordinary.

GunFu's moblog is a primary source for a complex and contested moment in American foreign policy and Middle Eastern politics. Concerned mainly with the minutiae of everyday existence as a US soldier in Iraq, his moblog is a personal account of his experience, greatly salted by the ironies of 'innocence abroad', and an obsession with firepower spiced

As an asynchronous (and therefore potentially leisurely) practice that transforms private mobile-to-mobile use into public publishing, moblogged media can be interpreted, repurposed and republished by others (copyright issues aside). Commenting and trackback potentially integrate moblogged media into a larger community of discourse.

To date, few mobloggers extend their entries much beyond the

image, and with notable exceptions exchanges within the moblogging community are superficial. However, the 'remix' culture that is being expanded by mobile phone capture and transfer offers new artistic and collective directions. For example *WJ-s* (Kyles and Roquigny (2006)) is software that 'offers artists a tool to create live multimedia performances from this digital soup' (Varley-Jamieson 2005)¹⁴.

These rudimentary examples of discourse and remixing could be greatly expanded by the semantic web (Berners-Lee et al 2001) (also known as Web 2.0).

'Tagging'—attaching publicly available and searchable metadata to your media—encourages more sophisticated combinations of mobile media and networked communication. For example, your mobile video may become searchable, according to people's names, geography, etc. Users may then be able to track one person's appearance in mobile phone media across separate mobile videos. Another scenario entails compiling all mobile media concerning a particular location at a particular time, with potential ramifications for surveillance and law enforcement. A more artistic project might recombine mobile video to create a documentary of a music event like the Big Day Out with many different points of view, organised on the fly at a specific URI by the next-generation version of *Technorati* (2002-2005) or *Bloglines* (2003-2005). Such possibilities may overcome one current limitation of moblogging, which is that everyone's mobile media remains separate, and interconnection is rare. The emergence of *Flickr*-style social software for mobile phone prosumer video, such as *SeeMeTV* (2006) may start to shape connections between individual media-makers.

Mark Bernstein (2001) envisages hypertexts which are 'extensible and recombinant'; they are modular and potentially ever-expanding, diffuse and decentralised. Users 'will always want to do things that nobody (and no computer) could anticipate'. How hypertextual and algorithmic structures will play themselves out on the networked mobile devices of the near future will always be influenced by the protocols and the financial disincentives that telcos and handset manufacturers impose upon us. Clever tactical responses to such constraints continue to evolve.

At stake in the citizen's ability to make connections between media items is the possibility of collective discourse and community building. Froomkin (2003, p. 855), for instance, believes that blogging enables 'new types of Internet-based discourses with the "communicative power" that Habermas proposes and, in time, [will] educate and mobilize citizens to demand that their governments make better and more legitimate

decisions'¹⁵. Although it is sometimes difficult to find evidence of such a rational collective project emerging from cyberspace, there is evidence that blogging has some impact in nations such as Singapore, in which mainstream political and social discourse is tightly controlled (see, for example, Mr. Brown (1997-2006)¹⁶). We are increasingly able to engage with the individual point-of-view. Even the television news is featuring prosumer mobile phone 'amateur vision', in particular footage from natural disasters, warzones and other unpredictable events.

Educational contexts offer other venues for combinations of mobile phone and Web. Blog-based online communities have been employed in education for some years. James Farmer (2005) argues that weblogs facilitate the three foundational aspects of a social constructivist learning environment—social, cognitive and teaching presence. Extending educational contexts into domains like searchable moblogs might create new competencies in the student-centered classroom¹⁷. The mobile phone has already become a 'naturalised' aspect of secondary school children's lives (Mifsud 2005, p. 240). Harnessing its ubiquity and popularity to deliver 'learning on demand' may technologically enhance learning experiences (Wagner 2005, pp. 42-3). Instructional technology and instructional design programs should embrace 'the value of experience design for learning' (p. 49). In my own teaching practice, we are developing projects that involve a student-centered and tactical approach via mobile media creation.

However, Myerson (2001) cautions that telco mobile phone marketing rhetoric refutes contemporary ideals in education and democracy:

Habermas would not see acquiring the maximum information in the minimum time as a good definition of learning. But it is the definition implied by the mobile rhetoric of data-pushing and swift access.

p. 56

The limited pedagogical vision implicit in the consumerist telco model can be contrasted with that of John Seely Brown (2001), whose innovative use of earlier generation mobile technology like walky-talkies for distributed many-to-many problem-solving not only increased worker satisfaction but impacted impressively on costs by leveraging the social fabric of the organisation:

What we are really saying here is that we are constructing knowledge all the time, in conversation, through narrative. We are personalizing it that way, we are constructing it, for ourselves.

P2P behaviour in this sense subverts dominant media relationships and challenges the telco rhetoric surrounding mobile phone rich media. What this analysis points to is a sharp divide in ideas of the mobile device imaginary. While 'Faster, neater, sharper!' (Myerson 2001, p. 62) seems to be the catch-call of a telco industry intent on establishing pay-per-view mobile 'television' as the ideal purpose of the mobile, as the mobile apparatus becomes more greatly theorised as a cultural artefact, it is to be hoped that it will be exploited by niche discourses performed in an arena beyond the reach of consumption patterns and income streams.

A technosocial perspective on rich media production



Image 4.9: Boy-meets-girl: some formulae work in any media

particular reference to my own narrative project, *RL~*¹⁸. It may seem that to focus on this more passively consumed rich media lessens the focus on identity creation. However, as we shall see, a mobile phone text-as-apparatus is a peculiarly intimate and contextual text. Because of this use-context, mobile phone 'rich media' addressing issues of personal identity may have particular piquancy.

The *RL~* project is more a prosumer than an avant-garde project, but at the same time illustrates ways in which these positions are cross-fertilising each other. Creating media for new technosocial contexts demands a thoughtful amalgam of the familiar and the novel. Audience resistance may be partly overcome by reprising familiar themes. For example, soap opera is a durable type of story telling. It has been successful across different media and cultures, and its elements can be discovered throughout the

Throughout this exegesis, I have been exploring ways in which the more intimate, ontological aspects of personal identity are facilitated and indeed, produced via our experience of the media and communications technology we use.

In the remainder of this chapter I will flesh out the sorts of rich media thematics and aesthetics that might be suited to the phone, with

history of narrative, from Greek mythology to *Neighbours*. Formulaic character-driven narratives are easy to relate to and can be adapted to many types of media.

However the affordances of different apparatuses leave their imprint on story telling. As we shall see, mobile phone media is constrained by screen size and file size, but perhaps of more interest, the very mobility of the mobile phone can be appropriated by story-tellers in unique ways. The mobile phone is a very personal device. Marisa Maio Mackay from mNet Corporation argues that phones have become an extension of the individual

and that's often irrespective of age...The more that people play with mobile phones, the more they personalise them. It is really an extension of themselves—to demonstrate who and what they are—whether it is through wallpapers, ring tones—it is really about who they are.

quoted in Hjorth 2005b

Maio Mackay concludes that the mobile phone functions in this sense as 'a form of identification'. Rich media producers would therefore be wise to customise their products to respond to the intimate status of the phone as constant companion *and* as personal expression. The mobile phone is a networked apparatus which expresses, defines and alleviates human transience. It is nodal: wherever we are, our bodies become spatial locations in the network. We are satellites, with all the overtones of distance and connectedness that this metaphor entails.

Succinctness, speed and privacy—these words seem to summarise the reasons behind the rapid uptake of mobile phones. In a survey of Japanese youth mobile phone use, Ito (2005, p. 7) finds that Japanese youth may send up to 56 messages per day to each other. Mobile rich media can respond to the intimacy of the apparatus, and the transient contexts in which we use it¹⁹. One approach is to combine mobile media with P2P interactivity, precisely to personalise user engagement. For example:

Sprint's mobile phone drama [*The spot* consists] simply of images and voice dialog....But the service does include one feature that the Verizon mobisodes lack so far: community. Viewers of the mobile phone segments (600 so far) routinely email and leave voice mails for the actors, who improvise up to 90 percent of their lines. Those fan communications are often stitched right into the plot. Stewart St. John, *The Spot's* executive producer, calls the concept 'blurred reality.' He'd love to see a groundswell of fans that could lead to a real TV series.

Stroud 2005²⁰

The producers of *The spot* respond to this proliferating media climate with a customised niche product promoting a community-oriented media experience. *The spot*'s marketing video promises 'journals from the spotmates', an intimate media experience recalling the email communications of *Online Caroline* (2000-2001), which trade on the idea that Caroline is a personal friend. *The spot* subscribers are texted the spotmate's thoughts from the perspective of best friend. Lines of intimacy are being blurred, if not crossed. 'Spot on' also gives you the ability to text or MMS the spotmates back (Sprint 2005). In these ways, *The spot* recognises the transient, quotidian and intimate context in which mobile media is consumed.

A different response to the intimacy of mobile phone media is Jim Shomos' and Paul Baiguerra's *Forget the rules* (2005) whose by-line is 'why just watch when you can control what happens?' *Forget the rules* is an interactive drama/comedy simultaneously delivered to phone, web and pay TV. You are asked to vote on the scenario for the next week's episodes which the producers then write, produce and edit over the following four days. The producers intend to make community with the audience by dismantling the divide between audience and producer.

Both *The spot* and *Forget the rules* offer valuable lessons about producing media which addresses intimacy and community, transience and identity: pre-eminent themes that simultaneously represent our phones as 'communication tools and *info-mediatic* assemblages' (Richardson 2005) which are radically incorporated in daily life.

A mobile aesthetic: Noirishness



Image 4.10: umbilical devices for risky situations

Our experience of transience and nomadism can be transmuted into feelings of alienation and danger quite easily. Fernando Paragas (2005) describes the ironies of mobile phone use in Manila. While 'mobile phones serve as a link between the student-informants and the people who are concerned for their safety' and 'imbue the chaotic streets with some

semblance of order by helping locate people through micro-coordination' (p. 125), they

are also becoming threats to one's security ..., as seen in the incidence of mobile phone-snatching incidents ... at least on one occasion this has led to murder ... Further, a mobile phone is said to have detonated the bomb that exploded in a bus in central Metro Manila ...

p. 119

Leaving the safety of our homes and the familiarity of our families, we confront a cityscape pervaded by risk and unpredictability. The mobile is an umbilical device. With it, we reassure ourselves in the face of alienation. This paradigm has emotional parallels with a particular era of movie making

whose characters circle warily around each other in a world of night clubs and truck stops, backlit theatre of memory where women's faces disappear in cigarette smoke and the world is erased by the blare of rumba bands.

O'Brien 1991, p. 43



Image 4.11: 60 years of violent urban space

Most of us circulate in an urban environment represented by politicians and the mainstream media as routinely threatening. We cling to our connectivity apparatuses in case of an ever-lurking emergency. At the start of the twenty-first century, a *noirish*²¹ interpretation of everyday life often pervades its representation.

It is not possible to recreate either the mood, culture or technology of the *noir* period of cinema (1945-1955 American culture), nor the impact of French existentialism that summarised, if not philosophically instigated, *noir* (Porfirio 1976, pp. 213-215). However, a *noirish* psychology has infected the way we view ourselves; life in the big city is pervaded with potential threats. The premise of my own mobile phone drama is that users identify with aspects of this psychology, particularly when it is presented on an apparatus specifically designed to ameliorate the alienation resulting from transience.



Image 4.12: impossible first person narratives establish the psychology of *noir*

My own project, *RL~* (2005-2006)²² is a microsoap following the life and loves of the plucky but somewhat misguided Sarrorn, who herself inhabits a dangerous city. My narrative engages *noir* conventions. For example, its initial scene mimics the start of *Sunset Boulevard* (1950), in which the hero Joe Gillis (William Holden) narrates events leading up to his own death (Porfirio 1976, p. 216)²³. This first person narrator directly addresses

the viewer on her mobile phone and asks for help. This is powerful device when the viewing apparatus is one that normally delivers messages from our friends.

Implicit in the mobile phone microscreen is claustrophobia, a psychological condition associated with *noir* (Walker 1993, p. 26). The mobile phone microscreen opposes itself to cinematic space, and as a result, communicating claustrophobia is by no means challenging. The producers of *Appointment* (2005), ‘a super-modern love story made for the small screen’ (Hoo 2005) also respond to the claustrophobic microscreen:

‘The gestures I make are very limited,’ said Luo Ji, who plays one of Gang’s suitors. ‘Your emotions should only come from facial expressions. It’s quite difficult acting.’

Appointment has little dialogue and few wide shots. I use similar artistic direction in *RL~*. However, because of the way in which the *RL~* images are produced (from a game engine) their quality is limited, and close-ups capturing facial expression and nuanced acting are virtually impossible. I have tried to turn gross ‘over-acting’ into one of the quirky features of the environment. This stylised, schmaltzy ‘acting’ also lends itself to *noirishness*.

Other producers of mobile phone narrative have also responded to the *noir* analogy.



Image 4.13: the poetry of violence

(2005a) respond to the same environment:

Scary things suit the small screen as they can be viewed in spaces of isolation. The environment can add value to the content.

Keep 2005b



Image 4.14: claustrophobia

Here the male is the dangerous enigma and the heroine's experience of him is the structural equivalent of the hero's experience of the *femme fatale* in *film noir*.

p. 18

While moral standards have changed since the 1940's Production Code stipulated the promotion of marriage and domesticity (Walker 1993, p. 19), entrapment and

For example, Marsha Berry's *Julia's obsession* (2005a) combines text and moving image to create a poetic and mysterious environment. She notes that she is 'drawing on silent screen and early talkies where the visual refers to moods and states of mind' (Berry 2005b), but also believes that '*noir* is definitely part of it'.

Dean Keep concurs. The aesthetics of his mobisode *Missing Emily*

The claustrophobia and mystery of Berry's and Keep's projects is also explored in some of my episodes (particularly episode seven).

Michael Walker (1993) offers this characterisation of a series of *noir* films, particularly those associated with Alfred Hitchcock:

In these films the *noir* atmosphere of claustrophobia, entrapment and threat is focussed on a heroine with whom we closely identify.

claustrophobia remain the essential psychological trauma of Sarrorn, the main character in *RL~*.

The solitary contexts in which we use our mobile phone further compounds its *noirishness*. Kylie Robinson, creator of *Girl Friday* (2005) enthuses:

I love the fact that entertainment and communication from my mobile is a solitary and intimate experience. It's changed the way we behave socially, flirt, date and correspond. This gives me an opportunity as a storyteller, to encourage an intimate connection between the user and live action characters. It also helps to blur the boundaries between reality and fiction by allowing me to utilise tools on the mobile such as SMS and MMS for the purpose of the narrative. It's also about portable entertainment, disconnecting you from the desk and giving you freedom with interactive content. I also find that it's a more active viewing experience from the handset—the audience are already in the process of clicking buttons, listening, texting, calling etc.

quoted in Hjorth 2005a

Our mobile phones simultaneously represent to us that we are very alone and very connected. Such a circumstance encourages us to play with ideas of identity and place. *Noirishness* is not necessarily a negative frame of mind. It is a technosocial condition, attached to specific types of text-as-apparatus and responding contextually to the world around us. It is a result of our double awareness and double identity, as we embed our mediated lives within our geographically transient experience.

Practical constraints

Writing drama for mobile delivery presents particular challenges. Matt McCullough of Steamfish Productions agrees:

The killer for the lo-spec phones is the file size they can handle and the lateral thinking game that's involved in telling an engaging story within that.

That being said—it demands efficiency in the use of design and screen language and working within those constraints has, to some degree, been quite liberating.

quoted in Pace and de Silva 2005



Image 4.15: remixing media

My solution to these challenges is influenced by the way that my microsoap is being produced. As a prosumer work with no budget, I am reliant on image capture from computer games, in particular *The Urbz: Sims in the City* (2004), a PlayStation game based on *The Sims 2* (2004). Reasons for taking a ‘machinima’ approach were not merely because it offers an alternative to casting actors and

shooting video. A thematic of *RL~* is the relation between nonmediated and mediated realities. This is a thematic we experience whenever we use our networked phones ‘on location’. I weave into my narrative reflections upon the mediascape, and the complicated and even paradoxical concept of reality that results when mediation is always present. Using machinima also sets up a remediating practice (Bolter and Grusin 1999 *passim*), not without its own ‘realistic’ ironies.

Specific challenges include:

- The one-minute narrative

With sound effects, that’s 170 words. The voice-over is terse, every word pregnant with the temporal breathing space it takes up. Sometimes in *RL~* the narrative is purely visual. The stills sometimes illustrate the voice-over, and sometimes tell a slightly different but related story. Since viewers can re-watch episodes as much as they desire, dense scenarios seem viable.

Creating a ‘cliff-hanger’ at the end of each 80-second episode is unviable. Instead, I cluster episodes together to create a ‘chapter’ of plot events. This also allows me to suggest passing time. Even if you watch the episodes one after another, having to start the next episode suggests temporal disjunction.

- Trade-off between image and audio

Because of the need to limit the file size (most of my files are between 200-300 kbs), I have opted for a combination of stills with continuous audio. Other 'mobisodes' have taken a similar approach. Acquiring images from a game engine limits the range of images I can get. For these reasons, the voice over must flesh out what may only be implicit in the images.

- Distribution

Robinson suggests various principles informing her own larger-scale cross-media production, *Girl Friday*:

- a. Only relevant story elements will be delivered via mobile...
- b. The user must be able to contribute/correspond with the program...
- c. The live action content for the mobile must be personal and aimed directly at the user.
- d. The content must be available on demand
- e. The content should be customised to the user where possible...
- f. Users without 3G must receive alternate content...

quoted in Hjorth 2005a

Media producers seeking to make money from mobile products by controlling distribution to specific phone models, payment plans, or to customers of specific telcos, risk ghettoising their product. However, once a consumer has downloaded a video onto their phone, that media may be copied (depending on file type). Every bluetooth transaction or MMS is a potential violation of traditional copyright law.

The political, cultural and legal systems that protect media and art are challenged by mobile, connected devices and digital information they create and exchange. At the moment, many of these potential issues are circumvented by protocological, technical and corporate control, on top of the prohibitive cost of downloads.

Mobile rich media exists at a nexus of political, legal and technological complexity which currently stymie not only consumption but production as well. For example, *Mobile Journeys* (2005) required a dedicated technical person to crunch out compressed versions for apparatuses that share neither specifications or protocols. As Nathan Mayfield and Tracey Robertson of Hoodlum Entertainment exhort:

You have to serve your audience and make sure it is narrative first and technology second. We had the best technology at the time to develop it, but as far as the audience was concerned it was entry-level technologies.

quoted in Rennie 2005



Image 4.16: killing time

I want people to be able to access RL~ on the move, whilst experiencing the transience of their own lives—acquire, watch and trash while waiting for train or doctor. This media circulates and then at some point, demand withers and it dies. To flourish, this media *must* be MMSed between friends. Transient distribution is viral distribution. Producers who prevent this form of file exchange

are betraying the reasons we love our phones.

The space of flows

As we have seen, mobile media has unique formal and thematic considerations. Many of these considerations are also evident in the way we use our phones to communicate. For example, since text messaging does not presuppose geographical specificity, a lot of text messages concern location—‘In mshpt, where r u?’ The swarming mentality of SMS-enabled teenagers (Mitchell 2003, p. 32), and approximeetings (Plant 2001, pp. 61-4; McCamish, 2004, p. 3; Mitchell 2003, p. 157) results from unshackling communication from location. Location: it is pre-eminent in all aspects of mobile phone use. While telco marketing puts a positive, and perhaps superficial spin on nomadism, there are other interesting perspectives that can be explored by mobile media makers.



Image 4.17: transience, alienation, cities

exponents are most closely drawn, emphasizes life's meaninglessness and man's alienation ...

Porfirio 1976, p. 213

The phone inhabits and projects an environment charged with uncertainty, change and human transience. We can get a measure of 'virtual' relief from the device in our pockets, but it is an ironic relief: the digital information that the phone sends, receives and displays may compound our sense of enclosure in ephemerality. Values like heritage, timelessness, permanence, tradition, value and curatorial care²⁴ seem lost in the context of the essentially disposable nature of movement, phones and their media.



Image 4.18: living for the moment

I have suggested that *noir* 'existentialism' pervades mobile media: ephemerality is the core experience that mobile phones and their media have become the symbolic inscriptions of. This *noir* existentialism

places its emphasis on man's contingency in a world where there are no transcendental values or moral absolutes, a world devoid of any meaning but the one man himself creates ... Its negative side, the side to which its literary

Perhaps as a result of positive marketing campaigns, we tend to congratulate ourselves for our sophisticated nomadism. However, the more we rely on the ever-present network to intercede on our behalf when our also-ever-present geography becomes excessive, the more we experience ourselves as ontologically 'between' material space and the space of flows (Stadler 2002). As types of

co-presence and telepresence shape our experience, the relevance and meaning of space is changing.



Images 4.19 and 4.20: there are many networks, some inhabit static space, and others inhabit the space of flows

(Stadler 2002).

The mobile phone exists at the intersection of two types of space. Through it, we trilogically learn to negotiate, and even reconcile, different realities, different spaces and ultimately different identities. The mobile phone is a trilogic node in cyberspace which can't be meaningfully separated from the geographically-specific human that 'wears' the node. We live 'between' networked and geographical space. We have doubled consciousnesses, operating on different planes with different types of awarenesses; it is as if we are multitasking our ontologies, as we negotiate the co-

For example, sociologist Manuel Castells (1996, p. 407) defines space as 'the material support of time-sharing social practices'. The overwhelming barrier of physical distance that constrained us in previous eras seem no longer so relevant to what we mean by space. Indeed, there are now different types of space: static space is (old-fashioned) location-based space, but the 'space of flows' is the space of information age. It consists of three elements:

- the medium through which things flow (digital communications technology);
- the things that flow (information);
- the nodes amongst which things flow (people and apparatuses)

existence of two ways of being. Identity shunts between whatever space engages it more urgently: both enclose our friends and our interests. Both enclose, and expand, our selves.

Identity is 'both an assertion and an assessment', argues Louis Hyde (2006). Sometimes it asserts itself simply if we believe in it. Indeed, identity is the ultimate mashup (Shapiro 2006). The contemporary self experiences moments in which identity is disjunct with geographical specificity; at those times the self is recontextualised by the text-as-apparatus, reaching out from the space of flows to transcend the specificity of transient locations. Self is reclaimed through trilogic networked mediation.

There are, according to Slack and Wise (2005, pp. 149-150) 'technologies of identity' which 'not only create and alter identity, but reinforce or challenge particular notions of identity, including the questions of what it means to exist or to be human'. As engagements with technologies change, so does identity—it becomes fluid and malleable (p. 163). 'What connects to what?' is the question we ask our networked apparatuses: 'I' to it, and it to you, and the trilogue begins. Individual identity plays itself out in tension with trilogues that themselves evolve.

Trilogical engagements constitute a 'fundamental shift in subjectivity' (Mitchell 2003, p. 62), as fixed identities dissolve into fluid ones (also see Bauman 2000 *passim*). Ideas about identity result in communication, self-expression and media consumption; those acts feed back into our next 'identity mashup'. These trilogical feedback loops take de Certeau's faith in the deviousness of consumption (1984, pp. xii-xiii) to a new level. Castells agrees (1996, p. 408). The resulting networks are 'the space of places, function, meaning, domination, and challenge to domination, in increasingly complex and contradictory patterns'.

In retrospect, Martin Heidegger's complaint against the monolithic nature of technology appears historically specific. The 'hardware era' of 'heavy modernity' (Bauman 2000, p. 113) in which Heidegger lived valued territorial conquest, because 'wealth and power was firmly rooted or deposited deep inside the land' (p. 114). If we surmount the literalist idea of space, the logic of heavy modernity subsides, and with it, some of the basis for Heidegger's critique of technology. Geography is not redundant; however, the traditional cost of mobility—isolation—is ameliorated by the technologies of 'light modernity' (p. 119). We are no longer so deeply concerned with

literally colonising territory as we 'surf' the space of flows with ease. Ultimately, 'durability loses its attraction', according to Bauman (p. 126). As our technosocial lives privilege the transient, 'the work of culture' may be changing:

Indeed, throughout human history the work of culture consisted in sifting and sedimenting hard kernels of perpetuity out of transient human lives and fleeting human actions, in conjuring up duration out of transience, continuity out of discontinuity, and in transcending thereby the limits imposed by human mortality by deploying mortal men and women in the service of the immortal human species. Demand for this kind of work is nowadays shrinking.

p. 126

It remains to be seen how telcos and corporate media, still perhaps rather too accustomed to the values of heavy modernity, reinvent themselves for the light, fluid, double consciousnesses and multiple identities that are emerging. Our use of the mobile apparatus extends beyond the vision of corporate media. As we radically integrate our apparatuses in our lives, we embark together upon the reinvention of humanness. As Donna Haraway (1985, pp. 28-29) proclaims, the cyborg—humans who are embedded in technology and *vice-versa*—is our ontology and our politics; it structures the possibilities of transformation. As non-professionals progressively embrace the role of media-maker as well as consumer, the trilogical experiment means that communication and representation have become predisposed to this cyborgian world-view.

CONCLUSION: FLUID IDENTITIES AND MULTIPLE REALITIES

*Truth, far from being a solemn and severe master,
is a docile and obedient servant.*

Goodman 1978, p. 18

This exegesis has introduced a particular approach to media that I have called technosocial analysis. I have developed this theory because it seems to best express the range of concerns that I explore in my own practice, which encompasses many different activities that nevertheless have one thing in common—an engagement with contemporary media and communications apparatuses.

All media has technosocial implications, however those implications are foregrounded in contemporary networked, digital and interactive media (and their mediums). In particular, this media privileges intimate exploration of issues of personal identity and ontology. Such exploration extends beyond individual identity and accordingly my own critical investigation has extended into more philosophical and ontological realms. More broadly, our media and their apparatuses engage ideas about what it is to be human.

Identity and ontological meanings arise from technosocial engagement. I have not been referring to a narrow concept of meaning derived from a close reading of a specific text. Rather, I have explored a type of meaning arising from the trilogue (human programmer—apparatus—human user) that is embedded within the performative text-as-apparatus. These meanings are ontological: they concern what it is to be human in the broad sense, and what it means to be a specific individual, in a specific moment, in a narrower sense. We create some of these text-as-apparatuses ourselves; others are explored more than created. Either way, through *praxis*—through *performing* the text—we also create the technosocial self.

These text-as-apparatuses are linguistic objects, even if they display very little text to the human user (for example, in a rich media computer game). They are linguistic because they depend for their functionality on the existence of programming code, data, and protocol that is inscribed in software and digital databases. The symbolic meanings we discover or encase in our digital texts result from ‘translations’ into the sorts of ‘language’ that the apparatus can interpret. The linguistic ‘ecology’ of digital textuality impacts on the terms and conditions of the trilogue. As a result, identity and

ontology are explored *in collaboration* with the apparatus. The self evolves as a function of the way we perceive our media, and ourselves, as *interdependent with* the apparatus.

Language itself is the ultimate mobile technology—it flows between geographies, between cultures, and even between entities. It finds ways to insinuate itself and do the work of world creation. Language fires our technosocial engagements; it is at the heart of the trilogy, it is the oil that makes the text-as-apparatus perform. Language is the precondition for the technologies I have explored. However, media technologies can be in themselves a type of language. They, too, carry meanings beyond what is overtly contained in their texts.

Our increasingly ‘intelligent’ apparatuses challenge us to conceive ourselves as collaborators in extra-human relationships. However, our media and communications apparatuses are not like pets; they are not seeking to please us. While they enjoy a limited sort of agency, they are not intuitive. They are bound by rules. We adapt ourselves to their capacities, and have rich and ongoing relationships with, and through, them.

Contemporary media and communications technologies—and the idea that they exist together, as a suite that we choose from—mean that we consciously consider the ways we behave, or could behave, with technology. These technologies help us explore who we are or want to be. Some, like networked social software, help us explore collective identities; others, like single player computer games are more private and intimate.

The media and apparatuses that I have focused on do not represent an end-point in the trajectory of media evolution. Although trends may be discernable, specific technologies are as transient as the texts we make.

In chapter one I introduced three technosocial ‘positions’:

1. The prosumer. It has become ‘a commonplace of postmodern mass media that we are all insiders now’ argues Nicholas Mirzeoff (1999, p. 99). The idea that we can all play producer was a theme followed up in chapter four.
2. The technosocially-sophisticated avant-garde artist, the focus of chapter two.

3. Corporate media producers, who are attempting to reinvent themselves in the face of the changing mediascape. I considered some of the media they produce in chapter three.

In chapter two I explored the experiences and relationships established when you create programmed media. The focus of these experiences concerns the trilogy, which hinges on the unique and pivotal role of language in digital media. As my project work for *Concatenation* demonstrated to me, being a programmer/artist obliges one to think in terms of a text with two different 'audiences' with different interpretive and linguistic capacity. Writing programming is an act of 'translating' a text for one type of interpreter into outcomes that another type of interpreter finds meaningful.

I concluded in this chapter that the identity of the technosocial avant-garde artist is difficult to sustain, given the notorious ephemerality of this type of textuality.

Indeed, the transient nature of these texts, and the human experience of transience that it reflects if not promotes, is a theme returned to on several occasions throughout this exegesis. Underneath diverse and ephemeral surface phenomena, people are interrogating, exploring and manifesting ideas about humanness and transience. Still-dominant modernist ideals about permanence (and progress and unity) may be threatened by mainstream culture's engagement with transience as lifestyle choice and aesthetic.

Chapter three explored the experience of computer games via my own technosocial practice as a player/consumer, and specifically the impact of immersion on ideas of reality and identity. Traditional ideas of realism derived from other types of media do not seem appropriate to computer game experience. This is because the performative nature of computer games establishes an 'experiential realism' (erealism), whose impact is derived not from indexicality but from an analogy to momentary living in the nonmediated world.

In chapter three I also argued that immersion, and the neo-romantic ideology that it relies upon, is an opposing aesthetic principle to the postmodern neo-baroque. I suggested that absolute immersion in a computer game is the technosocial equivalent to archaic mythic experience. This religious impulse is prevalent in RPG gameplay. Heroic journeys are common to computer games and mythology; computer games may regenerate myth from 'dead' story to 'lived' performance. The power of myth is

obscure to all those except initiates, thus immersion in computer games is widely derided, and ultimately fails.

In contrast with immersive computer games, multiple realities and the multiplied 'I' dogs our every step when we integrate the mobile device in our lives, the focus of my discussion in chapter four. The aesthetic here is more neo-baroque than neo-romantic: we have embraced the pervasive presence of multiple realities enthusiastically. Perhaps this is because the mobile phone, and the online network it maintains access to, offers some relief from contemporary feelings of nomadism, transience, contingency and even threat.

However, the mobile phone as media device is not yet well conceptualised. Corporate media, prosumers, artists and consumers all have different interests. Its affordances are further constrained by telcos, who have their own agendas. As a result, a variety of types of mobile media vie for legitimacy. I argued that those mobile text-as-apparatuses that engage *technosocially*—that explore personal identity and humanness in a way sympathetic to a transient context—are more valuable, and I suggested directions that corporate 'rich media' can take, with reference to my own work. Prosumers, who publish mobile media to the Web, are already showing how this device can be technosocially co-opted.

Mobile media is locative. The textuality that emerges contextualises the self in relation to a geography that has become layered with information. This results in double awareness, multiple realities and mashup identities as our bodies act as moving nodes in the always-on network, and attention alternates between different types of reality as whim or necessity moves us. We alternate between geographic space and the space of flows.

In summary, the technosocial offers a conceptual lens through which media and communications technology impact upon identity creation. We create media that broadcasts who we are; via our trilogical engagements, we then revise and create new statements about identity. Identity is, indeed, a mashup: it is performed differently in different contexts.

Several issues have been left unexplored by the current work because of length limitations. For instance, does technosocially explored identity translate into collective or politically engaged activity?¹ Does the desire for collectivity recede in the face of

technosocially-facilitated individualism, or can the self-interest of thousands of individuals create meaningful communities of collective interest? Future qualitative research using the conceptual frameworks promoted here may provide an opportunity to explore and analyse technosocially-mediated collective behaviour.

This exegesis might be read as perhaps exhibiting a problematic implicit Platonism, derived from privileging the role of language in world-creation. For some critics, such as Heim (1993, p. 89), '[c]yberspace is Platonism as a working product'. The threat of this, as Heim conceives it, is that:

At the computer interface, the spirit migrates from the body to a world of total representation. Information and images float through the Platonic mind without a grounding in bodily experience. You can lose your humanity at the throw of a dice.

p. 101

Having reflected on the various aspects of technosocial practice and associated project work I am more of the view that humanity is a fluid thing, changing with our environment, and therefore, not easily 'lost'. However, if there is a necessary connection between idealism and believing that worlds are linguistically dependent, that is an appellation I will happily bear.

My approach could also perhaps be accused of mind-body dualism², but the decision not to dwell on this issue is more due to spatial limitations than to the logic of my position. Marcos Novak (1992, p. 241) muses on the cyberspace paradox that 'even as we are finally abandoning the Cartesian notion of a division of mind and body, we are embarking on an adventure of creating a world that is the precise embodiment of that division'. The way forward is perhaps clearest in regards the mobile phone, whose use-context has a transparent relationship to location and embodiment (Richardson 2005).

I have been agreeing with Heim (1993) and indeed, Heidegger (1971) that as language formulates the way we conceive of the world and our relation with it, programming in the text-as-apparatus flavours the experiences that result. Humans negotiate multiple types of language, and engage in acts of translation between one type of language and another.

The issue of language and technology brings us back to Martin Heidegger, a figure who has 'haunted' this exegesis as both a scourge and a prompt. As I argued in chapter

three, Heidegger belongs to a romantic trajectory, broadly contrasted with postmodern and neo-baroque analyses.

Heidegger believes there are good and bad technologies, determined by his preference for straight-forward embodied relations with the environment (Idhe 1993, p. 107). As Idhe has shown (1993, p. 111), this is a value-laden, and ultimately political analysis, which remains under-acknowledged by Heidegger. While Heidegger recognizes that technologies are contextual (p. 108), this prevents him from conceiving of technologies as objects of fascination in their own right (p. 109), which is clearly an aspect of our use of contemporary communications technologies.

Heidegger's focus on 'heavy modernism'—major infrastructure, plant and equipment (1977, p. 16)—means that he interprets the essential facts about technology in a particular way. He believes that the purpose behind developing this technology is to create a 'standing-reserve' (p. 17; also see Idhe 1993, p. 106-107) of ready-to-use resources (in particular, energy) to meet the contingencies of human existence, and as a result

man in the midst of objectlessness is nothing but the orderer of the standing-reserve, then he comes to the very brink of a precipitous fall; that is, he comes to the point where he himself will have to be taken as standing-reserve. Meanwhile man, precisely as the one so threatened, exalts himself to the posture of lord of the earth.

1977, p. 27

As a result, the universe becomes a human construct, and man (*sic*) 'always encounters only himself', and any wider sense of being in the world is lost.

In many respects, it is easy to sympathise with Heidegger's condemnation of this older style of technology. However, the technologies of 'light' modernity, including digital technology, were beyond Heidegger's ken. Heidegger opposed technology and art, but the text-as-apparatus demonstrates their synthesis. It even appears to facilitate the ontological engagement that Heidegger seeks from art (for example, immersion in the possible worlds of computer games).

As Idhe (1993) perceptively notes, the Heideggerian negativity addresses the way cultures use technology rather than technology *per se* (p. 113). For Heidegger, artistic inspiration was poetry. Language 'not only puts forth in words and statements what is overtly or covertly intended to be communicated; language alone brings what is, as

something that is, into the Open for the first time' (1971, p. 71). Within our digital machines, language rules³. I have referred to Wittgenstein's life-long project concerning language, and indeed, have found constructivism to offer an antidote to Heidegger's apparent blanket condemnation of technology. The *linguistic* apparatus has overtaken God as the entity against which we compare, measure and test ourselves. Perhaps, however, this competitive, defensive way of thinking about our relationship to the apparatus is giving way to deeper and more useful understandings of collaboration, evolution and identity-building. It is in experiencing, and then articulating, such relationships that my own practice has been instrumental.

ENDNOTES

Preface

1. 'Apparatus' is Flusser's (2005) term. Adapting from him, I will use it to mean any programmed or programmable machine. Often these machines are networked. Flusser uses 'apparatus' in a negative sense, to imply a functionality which exceeds human dignity.
2. Not a term I will use, because appropriate use is tied to a close reading Heidegger which I will not be undertaking. I will be using the term 'identity' to refer to both sociological and ontological explorations of the self.

Chapter one

1. Resnick adds that ICT hasn't always lived up to its promise (2001, p. 3), and points to the possibility that technologies can mould people's behaviour in directions that may not be conducive to democracy.
2. The problem with a language-essentialist idea of reality is that '[t]he technological convergence that allows messages to be coded and transmitted into an electronic public sphere also threatens our conception of self by arguing that language *is* reality. Our messages are split first from the mind and then from the physical body. Technological enframing seems to be accompanied by a fragmentation or dispersal of the subject that supports a dualist separation of mind and body, machine and human. This suspicion of technology is related to a theological and philosophical suspicion of the body and a desire to "escape the flesh" through technological means' (Downes 2005, p. 34). Downes is wrong to assume that a language essentialist position ultimately derives from such a 'philosophical suspicion'. However, I agree that these are challenges for a technosocial theory that is 'language essentialist'. Downes argues that Heim, Heidegger (and by implication, me) have a 'transcendental' concept of language: via language, 'symbolised thought becomes placeless' therefore 'digital writing, or electric language, is a form of expression that abstracts communication from embodied experience' (p. 26). This leads to accusations of Platonic idealism. Downes avoids Platonism and Cartesianism by arguing that unmediated perception is possible, which is not a solution I can share. Downes' charge can be overcome by expanding the concept of the trilogue (see chapter two) into the realm of embodiment, however this project is beyond the scope of the present work.
3. Praxis—the activity of doing something—is a central theme of phenomenological inquiry. Don Ihde (1993, p. 2) for example, eschews the more 'transcendental' extremes of the phenomenological tradition; instead he wants to stress the primacy of praxis. In textual analysis, this focus has led to reader-response theory, although for Ihde, this critical practice possibly suffers from the ills of 'social constructionism' (p. 5). I would say that the technosocial contexts extends beyond reading into writing, and the relationship between the two, which emerges out of praxis.
4. During the last 30 years, the figure of the cyborg has been a powerful trope for imagining human-apparatus relations, however it will not be the focus of the current work, partly because of the range of work that has already been done, and partly because my focus is limited to the production of art, media and other communication. Aarseth has reflected upon the relevance of the cyborg but also avoids using it: 'If we see the text as a kind of machine, a symbiosis of sign, operator and medium... then the cyborg perspective is already implied' (Aarseth 1997, p. 55).
5. A technosocial position agrees with Ströhl (2002, p. xiid), who views media and apparatus as an extension of the body's organs therefore undermining any attempt to ultimately distinguish a text and its performance or interpretation. In other words, relations, not things, are real (p. xiii).
6. The field of cultural production is contained within the field of power. Creators are relatively dispossessed members of the field of power, and their power is determined by the position they assume within the field of cultural production. Indeed, there are 'few fields ... in which the antagonism between the occupants of the polar positions is more total' (Bourdieu 1993, p. 46) as they struggle with each other to impose 'the legitimate definition of literary or artistic production' (p. 46).
7. Indeed, Lenhart and Fox (2006) find that 'the American blogosphere is dominated by those who use their blogs as personal journals. Most bloggers do not think of what they do as journalism.

'Most bloggers say they cover a lot of different topics, but when asked to choose one main topic, 37% of bloggers cite "my life and experiences" as a primary topic of their blog. Politics and government ran a very distant second with 11% of bloggers citing those issues of public life as the main subject of their blog.

'Entertainment-related topics were the next most popular blog-type, with 7% of bloggers, followed by sports (6%), general news and current events (5%), business (5%), technology (4%), religion, spirituality or faith (2%), a specific hobby or a health problem or illness (each comprising 1% of bloggers). Other topics mentioned include opinions, volunteering, education, photography, causes and passions, and organizations.' (2006, p. ii)

8. The BBC's model for convergence, aimed for implementation by 2012 (Sherwin 2006), is glocal, convergent and cross media (Jenkins 2001). Resnick (2001, p. 19) suggests that the 'social capital impacts are ambiguous: if weak ties with a larger social network displace stronger ties with a few people, there are both gains and losses to social capital'.

9. 'Audience', a term with connotations of mass broadcasting and passive consumption, seems inappropriate. Ben Neill (2002, p. 4) argues for a parallel, technosocially-fostered development in rave culture: 'In this type of event, artists are not the center of attention; instead it is the role of the artist to channel the energy of the crowd and create the proper backdrop for their social interaction.'

10. 'Social Software can provisionally be said to have two strands. Primarily it is software built by and for those of us locked out of the narrowly engineered subjectivity of mainstream software. It is software which asks itself what kind of currents, what kind of machine, numerical, social and other dynamics it feeds in and out of, and what others can be brought into being?

The second current is related to this. It is software that is directly born, changed and developed as the result of an ongoing sociability between users and programmers in which demands are made on the practices of coding that exceed their easy fit into standardised social relations' (Fuller 2002).

11. The ambitions and scope of metadesign are related to those of 'second wave' critical technical practice, created by Phil Agre (1997). Wardrip-Fruin and Moss (2001, §3.6) describes this practice as 'using crucial tools to re-see technical problems and solving technical problems via these insights, a combination which may be motivated either by reaching a technical impasse or by a crucial/social engagement (or both)'.

12. Participatory design values ordinary people's views; and practices the relevance of philosophy, sociology and anthropology with the understanding that democracy can be manifest in the process (Wardrip-Fruin and Moss 2001, §3.1).

13. A traditional aesthetic criterion is that artworks possess unity. Many phenomenologists believe that unity is the starting point for human experience. Don Ihde (1973, p. 133) conceives of language as a unified system. Heidegger devalues the 'ontic', which pertains to the 'fragmentary world of empirical observation, representation, and correspondence' (Coyne 1999, p. 258). For example, according to Heidegger, 'Being-in-the world' ... 'stands for a unitary phenomenon', which is 'a state of Dasein which is necessary a priori, but it is far from sufficient for completely determining Dasein's Being' (Heidegger 1965, p. 303; Coyne 1999, p. 148). In phenomenology 'There is clearly no escaping the unity theme' argues Coyne (1999, p. 279). Multiplicity and unity exist together as facets of human experience, where experience of unity appears to be prone to momentary collapse into the fragmentary 'ontic'. It is not, therefore, surprising that phenomenological aesthetic theory tends to reify this principle.

14. *Found Magazine* (c.2001-2005) is one of several websites dedicated to found objects, which exemplify the migration of the flâneur attitude from street to Web.

15. Derived from Manuel Castells' concept of the space of flows, discussed in chapter four. Flusser makes a similar point about photography. Photography is quantum, atomised, grainy—this structure is 'characteristic of all things related to apparatus, and ... even those camera functions that appear to slide (eg film and television pictures) are actually based on punctuated structures' (Flusser 2005, p. 67).

16. See Teer-Tomaselli (2006) on John Reith and the BBC.

17. While positioned in the tradition of natural history documentary exemplified by David Attenborough (Scott and White 2003, p. 321), there is nevertheless always a question at the back of the viewer's mind: 'How did they do that?', and sometimes the producers seem unable to resist bringing such questions to the fore. The most famous of these

moments is from episode six, when Tyrannosaurus Rex salivates on a nonexistent camera lens (p. 323). This scene simultaneously realizes immediacy (presentation of the real) and hypermediacy (foregrounding the technology). This neo-baroque attitude, which seems to exist in tension with the more immediate, immersed and romantic view of media experience, is discussed further in chapter three.

18. This is a type of audio compression. Files are uploaded to a website, and then may be downloaded to a stand-alone MP3 player, most famously an ipod.

19. For work which explores the limits of traditional copyright, see Olia Lialina's *My boyfriend came back from the war* (1996-2005) and Mark Napier's *Riot* (2000), among many others. Cory Doctorow's (2005) defence of copyleft is an impassioned introduction.

20. Similarly, Heim's definition of 'virtual reality' (1993, p. 160) seems like immersion. We can trace uses of the term to refer to experiences derived from the transparency of the technology so that 'we lose consciousness of the media and see neither print nor film but only the power the story itself' (Murray 1997, p. 26).

Chapter two

1. Meadows (2003, p. 26) notes that programmers and interface designers are writers: 'the roles of the reader and writer get blurry because both roles (reader and writer) are adding information and meaning to a dataset'.

2. Some artists not only program the apparatus, but invent the hardware that encases and materializes their concept, for example *Intimate transactions* by Keith Armstrong (2005). This type of work is not my focus because it does not represent my practice. However it and many other works reveal the apparatus as far from a black box. As a result, most of the dire predictions that Flusser makes about the fate of humans in a world ruled by the apparatus are questionable.

3. Macromedia Director™

4. Cramer (2001) says 'Computers operate on machine language, which is syntactically far less complex than human language. The alphabet of both machine and human language is interchangeable, so that "text"—if defined as a countable mass of alphabetical signifiers—remains a valid descriptor for both machine code sequences and human writing. *In syntax and semantics however, machine code and human writing are not interchangeable.* Computer algorithms are, like logical statements, a formal language and thus only a restrained subset of language as a whole' (my italics). The italicised sentence indicates the distinction I am making between 'significance' (for the computer) and 'meaning' (for humans).

5. Memmott uses the term 'recombinant' (Coverley 2003).

6. 'Authorship in electronic media is procedural. Procedural authorship means writing the rules by which the texts appear as well as writing the texts themselves. It means writing the rules for the interactor's involvement, that is, the conditions under which things will happen in response to the participant's actions. It means establishing the properties of the objects and potential objects in the cultural world and the formulas for how they will relate to one another. The procedural author creates not just a set of scenes but a world of narrative possibilities' (Murray 1997, p. 152-3).

7. Logic students learn to 'translate' every day language into symbolic logic, according to Heim (1993, p. 20-1). However, 'When the computer automatically and invisibly converts input into algebraic bytes, the user is shielded from the translation into modern logic. Instead of the human mind puzzling over how language fits the system, the computer does the fitting; it transforms our alphabet into manipulable digits' (p. 21).

8. Elsewhere Wittgenstein defines these as the propositions of natural science (Monk 2005, p. 25).

9. Limited because Wittgenstein ultimately wants philosophers to 'transcend' the limitations of expressing logic and philosophy in language, and do away with it (Monk 2005, pp. 18-19).

10. '[T]here is no nature that is not already mediated, not only by the personal construction of the psyche but by the social constructions of media technologies, from the ritual of the caves to virtual reality. The social does not die, and being does not fade, because both are becoming, in mutual mediation' (Cubitt 2003, p. 79). Distinguishing between RL and the technosocial on the grounds that one is nonmediated and the other is not, is false. Chapter three will develop this theme to a greater extent.

11. An online version of Queneau's work has been created by Magnus Bodin (c.2001).
12. As explained by William Burroughs (1963). Cayley (2004, p. 212) argues that traditional literature already had the signal qualities of the digital, and Gysin's cut-up method reveals that 'programmability' is certainly not digital *per se*, nevertheless programmatic manipulation goes hand-in-glove with the apparatus. See also *The cut-ups* by Antony Balch *et al* (1966). Comparisons may be made with 'Screenfull' (2005) and the contemporary remix culture, whose most mainstream manifestation is DJ and VJ practice.
13. Glazier argues (2000) '...one must stop associating innovative digital practice solely with hypertext. Link-node hypertext only constitutes a small part of the range of possibilities before us and may, indeed, be a specific ideology within print technology, as Aarseth has commented, rather than an actual digital technology'.
14. Tzara's dada-iste programme is outlined in Tzara (1918). Memmott also shares a concern to find ways to use recombination that nevertheless maintain coherence (Coverley 2003).
15. *When you reach Kyoto* (2004) is not a part of my PhD because it is a collaboration with Brian Kim Stefans.
16. As defined by Richard Dawkins (1978, p. 206): 'a unit of cultural transmission, or a unit of *imitation*'. 'Examples of memes are tunes, ideas, catch-phrases, clothes, fashions, ways of making pots or of building arches. Just as genes propagate themselves in the gene pool by leaping from body to body via sperms or eggs, so memes propagate themselves in the meme pool by leaping from brain to brain via a process which, in the broad sense, can be called imitation'.
17. This term is used in the sense that Freud appropriates from Jentsch concerning 'doubts whether an apparently animate being is really alive; or conversely, whether a lifeless object might not be in fact animate' (1925, §1). According to Royle (2003, p. 23), the uncanny changes as society changes and now increasingly concerns technology. Seeing ourselves in the machine is uncanny (Coyne 1999, p. 214). Aarseth (1997, p. 129) identifies what is basically the uncanny fallacy as a fundamental problem in computer poetics in terms of 'the aesthetic relation between a human narrator and a machine narrator and what happens when the latter is forced to simulate the former'. The problematic dissolves in the trilogical relationship, in which oppositions between programmer and apparatus fade into collaboration. Bojana Kunst (2005, p. 420) makes a similar connection.
- As Slack and Wise (2005, p. 122) point out, one of the risks of actor-network theory is that it tends to promote the anthropomorphism of the machine and therefore you restrict 'the attribution of agency to technologies alone and ignore the activity of the network'.
- Works such as those by Mez and Ted Warnell are characterised by Florian Cramer as 'prime examples for a digital poetry which reflects the intrinsic textuality of the computer. But they do so not by being, to quote Alan Turing via Raymond Queneau, computer poetry to be read by computers but by playing with the confusions and thresholds of machine language and human language, and by reflecting the cultural implications of these overlaps. The "mezangelle" poetry of mez (Mary Ann Breeze), which mixes programming/network protocol code and non-computer language to a portmanteau-word hybrid, is an outstanding example of such a poetics' (Cramer 2001). These works play on the uncanny.
- John Cayley (2002) criticises the linguistic neologisms/creole approach to electronic literature 'as if the distinction between natural and programming language has broken down and the two scripts are mingling promiscuously inside the computer'.
18. In Flusser's opinion, the apparatus turns linear textual culture into magical, image-based culture. However, the proliferation of text-as-apparatus contradicts Flusser's postulation of an anti-textual, anti-linear historical trajectory. Such works do not sideline text (although they may obscure it), however they question linearity and permanence with algorithm and transience.
19. Indeed, Wardrip-Fruin (1999, §7) argues that for Vannevar Bush, 'The origins of hypermedia contain traces of the quest for eternal life', a bizarre vision in which '... we are not only immortalised by our additions to the paper train (which are stored identically in innumerable memexes), but can preserve and pass on our very pathways of thought'.
20. Montfort (2002) defines a 'session' as 'what happens during the execution of an IF [interactive fiction] program. The session begins when an IF program starts running. It ends when the program terminates'. A 'traversal' ... 'is what happens in one or more sessions, and one or more interactions, when the interactor completes a work of IF by going

from the beginning until no more can be narrated.' These terms may be loosely applied to any programmed media. In particular, a 'traversal' may be made without reaching an endpoint, beyond the endpoint of exhausting a user's attention.

21. Aarseth (1997, p. 62) suggests '[s]criptons are what the ideal reader reads'. For a technosocial approach there is no ideal reader, but various readers with various and limited experiences. Situating humans within the trilogical relationship seems a more nuanced and contextual approach to the problematic of a textuality whose materiality is non-trivially distinct, thus forcing humans into specific types of engagements with it—either as creators or as users. Ted Nelson's original distinction was between back-end and front-end. See Nelson 1974, p. 9; Wardrip-Fruin 1999, footnote 5.

22. Ullman (1997, p. 6) observes that the programmer enjoys experiences of being right which may be far more absolute than the sort of rightness and truth we can experience in RL. The binary transparency of the programmed text represents perhaps a nostalgic consummation for those for whom postmodern aesthetics remain problematic. However, there are many ironies derived from locating 'truth' within the 'ontology' of programmed textuality: we commit to truth being a feature of the linguistics of apparatuses.

23. See also Stefans 2003. The idea of a programmed text as an instrument that is performed—a key feature of the text-as-apparatus—can be related back the 'happenings' of the 1960s, in which risk and the possibility of failure were inherent (Kaprow 1961, p. 86). Such events were understood to be transient, emergent events, tied to specific environments (p. 85-86). Cramer (2001) and Cayley (2002) note the parallel between Fluxus events and programming art 'where the record of inscription is problematised (the work is an event, or the publication of a set of materials which must be manipulated by the reader/user), and where the presence/absence dialectic has been sidestepped by representations which may literally absent an artist-author' (Cayley 2002).

24. Many writers reject new technosocial directions that seem to question their status. Robert Coover decries the fate of the writer's voice (Hayles 2002, p. 44).

25. '...the possibility of unintentional sign behavior makes cybernetic media creatively emergent and, therefore, not subsumable by the traditional communication theories' (Aarseth 1997, p. 124).

26. Projected as a part of *Transmedia: 29:59* into Toronto's Yonge-Dundas Square. Also available at <http://www.year01.com/transmedia2959/>.

27. The disturbing thing about this archive—for the archiver, at least—is that this is a pseudo-archive. The code is html and not php. If the code were the original php, then the archive itself would continue to decay, and thus the archive's hope of capturing the performance of the work would be in vain.

28. Some reactions are quoted by 0100101110101101.org on their website:

'The artists have created a mini-hysteria over their piece. More than 1,400 of the shirts have been sold at \$15 apiece. And they've sold three CD-ROMs, at \$1,500 each (the collectors chose to remain unnamed for legal reasons). Yet the potentially damaging code is available for free on the artists' homepages'—Reena Jana, *Wired*

'These radical artists are in the Venice Biennale... they are selling their work... 0100101110101101.ORG have taken-over as most famous net artists by criticising fame...—Sarah Thompson, *Easyweb*

'Is it Art? Do you care? It is skillfully crafted; it has a poetic component; in its expression it is a statement about Art. But if it's Art, it may be the most aggressive self-replicating piece of art I've ever seen'—Pike van Kemenade, *Deaf 04*

(http://www.0100101110101101.org/home/biennale_py/feedback.html).

Chapter three

1. This is a very specific way of conceptualising myth, and I am referring to it because it ties into the neo-romantic argument I develop in this chapter. The anthropological tradition discussed is quite distinct from, for example, the structuralism of Claude Levi-Strauss (1969); the psychoanalytic archetypes of Carl Jung (1969), or the post-structural cultural analysis of Roland Barthes (1972).

2. I have argued in earlier chapters that this concept is problematic. However, it continues to feature in discourse surrounding the computer game, so it will be referred to using quotation marks. Gameverses often seem to be interpreted in a 'contrast and compare' way with 'nonmediated RL'. The complexity of analogous thinking is compounded when players interact with game characters, and possibly avatars of other players, within the game scenario in terms of their 'nonmediated RL' life. For example, Chinese players of the massively multiplayer game *The fantasy of the journey west* (1997-2006) recently protested against a 'rising sun' Japanese flag motif displayed within the game (Hutcheon, 2006). Loomis (1992, p. 113) suggests that it is precisely the exposure to simulated worlds that promotes knowledge of the mediated nature of the world; however there does appear to be evidence to the contrary as well. Loomis exhorts us to carefully separate the physical from the phenomenal world when we philosophise about the real.

3. This argument will be fleshed out at the end of this chapter. When myth is properly integrated into a culture (actively believed in and incorporated into daily life) it has particular potency. Billias (1986, p. 18) lists these potencies, which include: 'help[ing] humans in their quest for the religious self' through narratives which 'deal with the Absolute Reality at the core of the self, the essence of the self, which is both transcendent (true for all times and places) and immanent (true here and now). Myths convey concrete information about how Absolute Reality should be approached (p. 18). Myths may be false, but they belong to an eternal present and bespeak infinite truths (p. 20), in which humans keep rediscovering themselves (p. 19) through 'a special kind of story that describes the basic mysteries of life and provides a way to respond to them' (p. 20).

4. Traditionally capitalised as a proper name of an aesthetic theory, I have followed Ndalianis' lead by using lower-case, for fear that it would be incomprehensible to have a 'baroque' and a 'neo-baroque' in the same sentence as a 'Romanticism' and a 'neo-Romanticism'.

5. It also occurs at the start of the essay 'What are poets for?' (Heidegger 1971, pp. 87-140). Romantic theorists generally considered the world to be in a graceless state. 'The world must be romanticised. So its original meaning will again be found', argues Novalis (1980c, p. 3). Anne-Louise-Germaine de Staël (1980, p. 26) expressed this fall in terms of a mythology surrounding the simplicity and nature-harmony of the ancient Greeks. See also Idhe 1993, p. 105.

6. For example, Coleridge seems to adopt Kant's idea that beauty is disinterested (Coleridge 1980b, p. 98).

7. See Ndalianis 'Introduction' (2004) for an excellent survey of related texts.

8. Baroque works 'invite the spectator to test the nature of his or her own reality through the work's construction of alternative realities that actively invade real space' (Ndalianis 2004, p. 160). A theme of the baroque is what is realist and what is illusion? (p. 196).

9. In contrast with vector images, rasters are pixellated images which can give the impression of photography. This pseudo-photography and pseudo-cinematography has reached such a point of perfection that image designers are paradoxically obliged to add noise to images that otherwise seem too perfect (and therefore 'unreal') (Manovich 2001, p. 137).

10. Even Heidegger recognises that artworks are 'distinguished by being created so that its createdness is part of the created work' (1971, p. 62).

11. Using Pierce's terminology, Darley suggests that computer images are iconic, not indexical 'in the sense that photography is an index (not necessarily reliable) of there having been something in the world (staged or not) previously' (Darley 2000, p. 88).

12. Juul's interesting observations on the relation of play time to event time are significant here (2004, p. 131-142). Compare play time and event time to Eliade's concepts of sacred time and profane time: 'The experience of sacred time will make it possible for religious man periodically to experience the cosmos as it was *in principio*, that is, at the mythical moment of Creation' (Eliade 1959, p. 65). It would be wrong to take the parallel too literally—it is hard to see, for example, how *Resident evil 4* could be considered a sacred experience. However, there is a some experiential parallel with stepping out of profane time into the 'magic circle' temporality of games and myth.

13. Image has been greatly enhanced for printing purposes.

14. Downes also worries about self sublimation (2005, pp. 70; 76). Immersion dissolves the sense of self 'because the illusion presented on the screen is more compelling than reality' (p. 79); the result may well be psychosis (p. 79). Downes is not the first to link immersion to psychosis. Heim believes that psychosis sets in if we don't maintain the contrast between virtual and real worlds (1993, pp. 135-137). Murray points out that such apocalyptic thinking accompanies many introductions of media types (Murray 1997, p. 21). The basis of this criticism—that there are 'fake' worlds, is the basis of my disagreement with them. Self is always in world, but self is fluid, and worlds are multiple.

15. For example, Ndalianis' use of 'immersion' is undefined and rare. On page 102, immersion is related to labyrinths. She prefers concepts like suspense (p. 104); the focus is always on an intertextual knowledge that seems to work against immersion. She describes situations which I would interpret as going in and out of immersion without recognizing it (p. 106). The focus on magic (how did they do that?) (p. 227-8) rather than momentary experience is a neo-baroque perspective. The neo-baroque celebrates something like the trilogical uncanny (p. 241) discussed in chapter two. No doubt the lack of dealing with immersion is partly a result of Ndalianis' project being more historical than phenomenological, but the different focus also extends into the 'ideology of aesthetics'.

16. 'In the flow state, action follows upon action according to an internal logic that seems to need no conscious intervention by the action. He experiences it as a unified flowing from one moment to the next in which he is in control of his actions, and in which there is little distinction between self and environment, between stimulus and response, or between past, present and future' (Csikszentmihalyi 1975, p. 36).

17. Seymour Papert has a related concept of proximity or 'closeness to the object'. Papert (1993, p. 201) describes one subject, Kevin, who 'psychologically places himself in the same space as the screen turtles. He experiences his spaceship as tangible, sensuous, and tactile. He is down there, in with the sprites, playing with them like objects in a collage. Kevin talks about these objects using gestures of hand and body that show him moving with and among them. In speaking of them, he uses language such as 'I move here'.

This seems to meet Ivan Sutherland's (1965) ideal. He sought 'the ultimate display', in which 'the computer can control the existence of matter. A chair displayed in such a room would be good enough to sit in. Handcuffs displayed in such a room would be confining, and a bullet displayed in such a room would be fatal. With appropriate programming such a display could literally be the Wonderland into which Alice walked'.

18. Immersion is not technology-specific. It derives from the intensity of meaningful situations. Adam Nash (2003) for example suggests: 'I've had truly moving, memorable experiences (and yes, I'd call it immersive) looking at a 160x120 QuickTime window on my computer monitor, and have also been completely bored in an iMax theatre. When I think back on a novel I have read, I don't think of the physical situation I was in whilst reading (aside: reading is interesting because the beholding of a novel often takes place over temporally and spatially disparate situations), I enter the world in which the novel takes place. That, to me, is true immersion.'

19. Much has been made of operator power to construct the text. Rosenberg (1994) explores the notion of a 'wreeder' (writer/reader). 'Media essentialist' (Eskelinen 2002, p. 1) hypertext theorists such as Bolter (1991) and Landow (1997) argue that hypertext surrenders authorial power to the operator. In my opinion, a user who lacks power to change the instantiating text (apart from configuration) may be empowered, but he is not an author.

20. Diegesis 'designates the universe of the first narrative' (Genette 1980, p. 228). Authorial voices impeding in the narrative are extra-diegetic (p. 229). These terms 'designate ... relative situations and functions' (p. 229).

21. Juul (2005, pp. 15-17) defines ludology simply as 'games as something unique', which has historically been opposed to narratology (games as stories).

22. 'Spatial stories ... respond to alternative aesthetic principles, privileging spatial exploration over plot development' (Jenkins c.2001). Similarly, Aarseth's (1997, p. 114) concept of intrigue 'constitutes a multidimensional event space and unfolds through the negotiation of this space by text and user'.

23. Narratives have 'metaphorical' algorithms, and therefore narratives and games similarly require a user to 'uncover their underlying logic while proceeding through them' (Manovich 2001, p. 225). Ryan suggests that 'the abstract cognitive structure we call narrative is such that it can be called to mind by many different media, but each medium has different expressive resources, and will therefore produce different concrete manifestation of this abstract structure. Put in simpler words: there are plot types and character types that are best for the novel, others are best for oral storytelling, and yet others are best for the stage of the cinema. The question, then, is to decide which types of stories

are suitable for digital media.' Ryan suggests that the answer to this question lies in determining what is distinctive about digital media—which is its ability to respond to changing conditions (Ryan 2001). I agree with Ryan and Manovich (2001) that different materiality facilitates different user experience. The 'narratives' of RPGs are described as 'spatial stories' or fictional worlds'.

24. Romantically expressed, for example, by Keats (1980, p. 65): 'Poetry redeems from decay the visitations of the divinity in Man'.

25. 'A man comes by chance upon a stone which takes his fancy; its shape is singular, it is like something, it is certainly not a common stone, there must be *mana* in it. So he argues with himself and he puts it to the proof; he lays it at the root of a tree to the fruit of which it has a certain resemblance, or he buries it in the ground when he plants his garden; an abundant crop on the tree or in the garden shews that he is right, the stone has *mana*, has that power in it. Having that power it is a vehicle to convey *mana* to other stones. In the same way certain forms of words, generally in the form of a song, have power for certain purposes; a charm of words is called a *mana*. But this power, though itself impersonal, is always connected with some person who directs it; all spirits have it, ghosts generally, some men. If a stone is found to have a supernatural power, it is because a spirit has associated itself with it; a dead man's bone has with it *mana*, because the ghost is with the bone; a man may have so close a connexion with a spirit or ghost that he has *mana* in himself also, and can so direct it as to effect what he desires; a charm is powerful because the name of a spirit or ghost expressed in the form of words brings into it the power which the ghost or spirit exercises through it. Thus all conspicuous success is proof that a man has *mana*' (Codrington 1969, pp. 119-120).

According to Ernst Cassirer (1953, p. 65), it is difficult to conceptualise mana because its nature changes when put into language. It needs to be experienced to be understood. This is probably true of all mythic experience.

26. Stereotypically, RPGs offer violence to teenage boys. Other theories of the reason why computer games appeal to this demographic include Jenkins (1998) theory that computer games aim to recompense boys for their loss of space in which to explore traditional boy culture.

27. Also known as medicine men and described by Eliade (1958, p. 95) as 'specialists in the sacred'.

28. Such stories are ubiquitous in the popular press, for example 'Addicts hooked on games' (June 19 2006).

Chapter four

1. Stills from the following films were used in the collages in this chapter: *Destination murder; The locket; On dangerous ground; Sunset Boulevard; Pickup on South Street*.

2. The technology is called StealthText (2006), developed by British company Staellium.

3. As of June 2005, according to the Australian Communications and Media Authority (2005, p. 24).

4. Ellen Wagner (2005, p. 51) argues that the following attributes are important to rich mobile internet experiences:

- *'Ubiquity:* How widely available is the media player that will be required for the viewer to see the application on the device display?
- *'Access:* How widely available is the wireless network that will distribute the mobile content?
- *'Richness:* Do pages load quickly? Do animations play in a smooth and seamless manner?...
- *'Efficiency:* How large is the client that will be required to make use of a particular media player? How fast will the application load and play?
- *'Flexibility:* Will the application be viewable on a variety of devices? Can content designed for use with one kind of device or operating system be played on other devices with some expectation of comparable quality?
- *'Security:* Is the interactive mobile device protected from worms and viruses? Is the shared content protected from being intercepted unintended recipients?
- *'Reliability:* Will content be displayed in a consistent manner, regardless the browser, device, and screen
- *'Interactivity:* Does the application allow users to interact freely display and the content?'

5. Heim has a similar approach: 'When we look for the essence of a technology, we are engaging in speculation, but not in airy speculation. Our speculation involves where we plant our feet, who we are, and what we choose to be. Behind the development of every major technology lies a vision. The vision gives impetus to developers in the field even though the vision may not be clear, detailed, or even practical. The vision captures the essence of the technology and calls forth the cultural energy needed to propel it forward. Often a technological vision taps mythic consciousness and the religious side of the human spirit' (1993, p. 118).
6. As Manuel Castells says 'The development of the network enterprise translates into downsizing, subcontracting, and networking of labour, inducing flexibility of both business and labour, and individualization of contractual arrangements between management and labour. So, instead of layoffs what we often have are layoffs followed by subcontracting of services on an *ad hoc*, consulting basis, for the time and task to be performed, without job tenure and without social benefits provided by the firm' (1996, p. 402). Bauman (2005, p. 147) refers to research that suggests that young Americans can expect to change jobs 11 times.
7. Products include *X Factor* (2005) and *Big Brother* (2001-2006).
8. See for example http://images10.blueskyfrog.com/graphics/bsfemail_ad/fz_newprod.html. As Hjorth (2005c) argues, companies like Legion Interactive seems incapable of coming to terms with niche demographics, including active and inventive female mobile phone users.
9. For example, Bojana Kunst (2005, p. 420) explores chaos, paranoia and uncanny affect (see chapter two).
10. 'The inspiration for *BlueStates* is drawn from the recognition that most of us, most of the time, carry that most common of 21st century appliances, the mobile phone. Most of these mobile phones are equipped with a wireless technology known as Bluetooth. A Bluetooth mobile phone user creates a radius of electronic awareness—what we call a 'bluesphere'—extending as much as ten meters from their body. When two Bluetooth devices pass in proximity to one another, each senses the other. Data is exchanged—and promptly ignored. *BlueStates: Exploring Relational Space* uses its own, custom software sensors—which run on mobile phones, PDAs and computers—to listen intently to the bluesphere. These sensors contribute to a database record of proximal encounters, and this data is then used to build views into the social life of the city's residents' (Tonkin and Pesce 2006).
11. The proposed approach to analyzing the implications of trilogical engagement ties in with what Nathalie Jeremijenko (2004, pp. 262-263) describes as the 'structure of participation', which is an approach which allows us to 'pay attention to peripheral participation, the participation between users and around things; between users and things within systems. It is an approach to human (singular)-computer (singular) interaction that reconsiders interaction as a form of participation and escapes the simple dichotomy between social and technological'. Sociologically engaged approaches such as 'structures of participation' and 'repertoires of practices' help contextualise telco marketing rhetoric.
12. Other types of networked text, such as joke email, enjoy this mercurial flow through the network.
13. Entry appears to no longer exist.
14. 'The group proposes to create 'a strong cybernetic experience, captivating, sensual, and shifted where [...] the flow and the extreme pleasure of surfing are moved into a performative framework' (Varley-Jamieson 2005). David Berlind *et al* (2006) discuss the nexus between remix or 'mashup' culture and identity.
15. Froomkin (2003, p. 767) stresses that he is referring to Habermas' more recent writing, in which Habermas relaxes the demand for an 'ideal speech situation' for a 'discourse ethics that depends upon an ideal that is realizable, although it does call for a far more demanding type of discourse than one commonly encounters in the political arena'.
16. I am indebted to my students Pamela Chew, Hwee Hwee Tan and Jing Han Foo for this example.
17. Such a project is currently being developed at RMIT.
18. Other types of rich media include mobile games and ringtones. They are less relevant to my own production and therefore will not be discussed.
19. Professional media producers are increasingly in competition with prosumers in this arena, as the latter's semi-professional works are taken up in fine art or cinema circles. *Cellbytes* (2004) was screened at the 2005 St Kilda Film

Festival (an event sponsored by Siemens). This sort of production has received the blessing of major art galleries, for example the L.A. Center for Digital Art's *Cell-outs and phonies* exhibition.

20. It is unfortunate that some rich media producers still consider this type of media with its intimate, community focus second-best to a television series. A somewhat more honest approach is the cross-media one, such as *24: conspiracy* (2005), whose producers view the phone media as only an add-on to the main television product.

21. A neologism I have made purposely uncomfortable, to ensure that it is not considered the same as *noir*.

22. RL~ was distributed to mobile phones as part of the dLux media arts (<http://www.dlux.org.au>) 'd>Art05' distributed art showcase, commissioned by Mobile Journeys (<http://dlux.org.au/mobilejourneys/>), a national initiative.

23. Thanks to Allan James Thomas for this insight.

24. Attempts to communicate these values seem via the phone seem doomed. For example, the strange cross-pollination of modern art and mobile digitality explored by Nokia's *Connect to Art* (2004) project (only available for certain models of Nokia phones). Transferring images of large material works such as Louise Bourgeois' 'You and Me 1-3' (2004).

Conclusion

1. Bauman (2005, p. 148) suggests that 'The present-day uncertainty is a powerful *individualizing* force'. We can't predict where common interests lie.

2. The existence of implicit mind-body dualism in virtual environments and specifically in computer-based media has been commented on by Shields (2003, pp. 8 and 14) and Bey (2001, pp. 116-117) among others.

3. Feenberg argues that Heidegger would have considered that the computer manifests an impoverished view of language, which can never rise to the heights of poetry, which 'opens language to being' (Feenberg 2000a, p. 448). He (2000a, p. 449) continues: 'What has actually happened to language in a world more and more dominated by computers? Has it in fact been reified into a technical discourse purified of human significance? On the contrary, the Internet now carries a veritable tidal wave of 'saying', of language used for expression as always in the past. Of course, we may not be interested in much of this online talk, but that is another story. The simple fact of the case is that these 'posthumanist' reflections on the computer were wrong. They not only failed to foresee the transformation of the computer into a communication medium, but they precluded that possibility for essential reasons...'

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