Research Writing Chronotopes and Constitutions of Possibility

by

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Abstract

This research experiment works toward a research writing form which recognises and facilitates the role of research in the creation of new possibility in the world. The ways we research and write shape knowledge and shape the world. In academic, social science contexts, this idea has been practiced and theorized in particular forms, including writing-as-research, writing as inquiry, autoethnography, fiction as research, and rhizomatic writing. This research examines and experiments with the forms of time and space constituted in such research texts, by reading these through similar patterns in fiction texts.

The philosophical premises of the experiment first engage with new materialism and draw from Barad’s onto-epistemology of agential realism. Here, research apparatuses are understood to be entangled with phenomena in the world and to be co-constituting of ontic manifestations and possibilities. It is essential to understand ethics as already entangled with and inseparable from the constitutive research apparatus. Second, the experiment uses as a focus the Bakhtinian notion of the chronotope: the image of spacetime explicitly and implicitly constituted in the novel, arguing that the chronotope is also a significant constitutive component of the research writing apparatus. An experimental and diffractive writing apparatus is developed to read textual patterns through one another, to attend to, create and extend conjectures about different chronotopes and their possibilities for human identity, research, epistemology, worldly forms and agency, ontology and relationships, including that between humans and the universe.

Three chronotopes are the foci and creation of the experiment. In the humanist heroic path chronotope, to write research is to heroically choose a path of transformative ordeal, and engage in a journey toward territorialisation of the self through self-discovery, self-assertion or self-expression against a backdrop of concrete, determinate nature. This spacetime and epistemology enable growth of human resources, resilience, empathy and social empowerment, but restrict possibilities by
anthropocentric understandings supporting a human-nature binary. In the rhizome chronotope, research writing is to connect, keep flows moving, disturb and disrupt in order to liberate new contents. Spacetime and epistemology are an infinite, dynamic, unstable plane enabling an ideal of unrestricted growth, becoming, and liberations, but they restrict consciousness of ethical possibilities by the creation of detachment between research, phenomena, effects, time and space. An alternative chronotope; the coral reef, enables spacetime and research writing of porosity and indeterminacy, inseparable from sedimenting matter itself. While anthropocentrism remains enfolded in this chronotope, it also facilitates an epistemology of wonder, which is significant in enabling more ethical co-responsiveness with an indeterminate universe, as is indicated in agential realism.
There is a well in the ice. It is a distance of just three or four paces away. It has been given a low lip of around a hand-span in height and the same in width. The ice has been roughly scraped together and then packed to form this lip. We cannot see very far into the well. Inside it is dark.

It is a perfectly still day.

A long distance away we see moving across the expanse of grey ice, a figure. Its progress is slow.

Closer, we see that the legs of the figure are thin and her steps on the ice surface are high, careful and awkward. There is something self-conscious, verging on the absurd in these movements. She wears a pale, folded and hooded grey-green garment or exterior of a substance like soft, dull plastic. Her face inside the hood, reminiscent in shape of that of a goat, is a dark ochre, shiny, and marked everywhere by deep creases. Her serious eyes are yellow and close-set. Her hood is angled as though the better to hear something.

From high in the air we can see that her trajectory will miss the well.
1. Introduction: Possibilities in research writing

Sophisticated readers are accepting the fact that an improbable and unmanageable world is going to produce an improbable and hypothetical art. At this point, realism is perhaps the least adequate means of understanding or portraying the incredible realities of our existence.

(Le Guin, 1979, pp. 57, 58)

This thesis experiment is part of methodology, research writing, intertextual, ‘post’ and new materialist discussions to reimagine social science methodologies. It explores the question:

How might we reconstruct and employ a conceptualisation of research writing to enable it to recognise as well as to facilitate a role in the creation of new possibility in the world?

In the quotation at the top of this page, the science fiction writer Ursula Le Guin (1979) wrote of the possibilities of writing for understanding existence. Le Guin was referring to science fiction writing in this case. But the quote is exciting for its implications for research writing. It poses the still relevant question: How well do our forms of writing meet or approach the incredible realities and potentialities of the world and of future worlds?

Research writing is not the unproblematic ‘writing up’ of investigations. The ways we research and write, themselves shape and create what we know in the world, in hidden and complex ways. In the academic, social science world,
this has been explored and discussed in various ways, for example: ‘writing-as research’; writing-as-inquiry; ‘autoethnography; ‘fiction as research’; and ‘rhizomatic writing’. This project draws on these discourses as some of its starting places.

This thesis aims to experimentally diffract (Barad, 2007) the forms of time and space constructed in certain fiction and research texts, in order to attend to the patterns of possibility they enable with regard to research writing apparatuses and epistemology. It aims to consider the implications of these for understanding how research writing works, and might work, as part of an apparatus which helps to co-constitute reality. It develops an experimental writing apparatus, to attend to and create diffractive patterns and extend conjectures about different chronotopes used in fiction and in research writing and to some of their possibilities for agency, causality, identity, epistemology, and the relationship between humans and the universe.

In this introduction to the thesis I provide an overview of the philosophical and theoretical frameworks of the project and the methodology it follows. I explain why the thesis does not rely primarily on research questions, but instead on material-discursive forms. I argue that the entangled contextual conditions of neoliberalism in the academic research climate create a range of restrictions for research and for what it is possible to know, and therefore that there is a need for more meaningful ontological discussion in research for ethical and creative reasons. I provide a brief justification for the use of agential realism in the project on the basis of these conditions, and for the experimental approach I have chosen. I develop these two discussions further in Chapter Two. Finally in this chapter I provide a summary of the aims of the research and an outline of the structure of the thesis.
Philosophical and theoretical frameworks

Agential realism and its implications for research

The philosophical background to this exercise draws heavily on Karen Barad's (2007) agential realism, which stems from the new materialism movement. New materialism queries the anthropocentric narrative that has founded our understanding of the world since the enlightenment, predicated on the role of humans as makers, doers and central protagonists in the world. The discourse of new materialism has developed out of alarm and concern for the consequences of this anthropocentric narrative; an excessive and unbalanced care for ourselves at the expense of other phenomena and the unsustainable destruction of the world used as a passive resource for ourselves (Bolt, 2013). Other movements have supported and engaged with these concerns, with the decentering of humanity in the universe and disturbance of the human/nature binary. These movements include quantum physics (Bolt, 2013), and feminist critiques, from which joint perspective Barad enters the discussion.

Barad’s agential realism (2007) is, in part, a theory of the inseparable entanglement of material and immaterial phenomena in the world with the ontological and the epistemological. One of the implications of this is that ways of knowing help to bring things into being. Barad is a physicist and this argument is drawn from her understanding of Niels Bohr’s experimental quantum physics, which shows that the research design and apparatus themselves actually help to create what it is that is discovered. Barad explains that research apparatuses are not passive observing instruments:

*Given a particular measuring apparatus, certain properties become determinate, while others are specifically excluded.*

(Barad, 2007, p. 19)

*Different quantities become determinate using different apparatuses.*

(Barad, 2007, p. 20)
A research apparatus is an instrument designed to attend to and determine certain phenomena in the world, and by this process of determination, these phenomena are brought into being. Our knowledge concepts, research concepts, and writing concepts, are part of research apparatuses. Through these complex research writing apparatuses, among other forms of material and non-material entanglement, real phenomena in the world are produced.

Barad (2007) argues strongly that if epistemology and research co-constitute ontological phenomena, this means that we need to understand research ethics more profoundly. The researcher and their epistemology are not positioned objectively outside of, or subjectively in the center of the research apparatus, but are agentic components among others. This is not an argument for subjectivity at the core of science, as Trifonas (2012) argues for, nor an argument for an ontology where culture is the central dynamic of change and matter is ‘dumb’ (Clough, 2009, p. 44), outside of culture’s mediations, or independent from subjective interpretations. Instead, subjective experience and objective matter are entangled phenomena that people have a hand in constituting. These concepts do serve some purposes, but as stable or central categories, they are not the only ways to understand research.

As Barad (2007) argues, this view offers more than a challenge to anthropocentrism, it is also a challenge to knowledge and the establishment of knowledge as historically gendered acts by male scientists. As research writers we need to see ourselves, our humanity, our gendering, our knowledge, and our writing as co-constituting entities, entangled not just in the research process, but also already in the research products and in the possibilities in the world that we help to enable and to reinforce. From this Baradian position and in line with post-neoliberal critiques (for example, Lather, 2013) it is an aim of this research writing to bring new possibilities into being and an ethical imperative to understand better the constitutive processes and implications of our knowledge constructions. Every apparatus brings things into being.
While every apparatus enables us to understand and create in certain ways, every apparatus also closes down other opportunities to understand/create. A number of global conditions seem to highlight an urgent need to understand both this creative and restrictive power of knowledge apparatuses. Climate change is one compelling example.

As a number of commentators including Klein (2014) have said, climate change science illustrates to us clearly that established human roles and linear cause and effect descriptions of events are inadequate for understanding complex global phenomena:

*The shift will require rethinking the very nature of humanity's power – our right to extract ever more without facing consequences, our capacity to bend complex natural systems to our will. This is a shift that challenges not only capitalism, but also the building blocks of materialism...*

*Because, underneath all of this is the real truth we have been avoiding: climate change isn’t an ‘issue’ to add to the list of things to worry about, next to health care and taxes. It is a civilization wake up call. A powerful message - spoken in the language of fires, floods, droughts, and extinctions – telling us that we need an entirely new economic model and a new way of sharing this planet. Telling us that we need to evolve.*

(Klein, 2014, p. 25)

Klein (2014) implicates the problem of not listening to the language of the planet to tell us of the inadequacy of contemporary economic, science and social understandings. Jessica White (2014) writes about how traditional fiction is also an extremely limited form for representing climate change. Conventional novels, with their anthropocentricity and causally realist plots, cannot deal with the way that climate change occurs discreetly and incrementally, and involves the expression of connections between events at vastly different scales. These limitations in ontological thinking are inevitably present in research writing. Climate change is a complex and increasingly obvious challenge. It cannot be understood by conceiving of humans as outside of nature and cannot be reduced to simplistic causes and effects. I argue that so too are other phenomena, such as learning, democracy, social justice, race and cultural conflict. These are typically regarded as social or human
phenomena, but from an agential realist (Barad, 2007) perspective it is profoundly misleading to conceive of these as separate from matter and nature. The problems of how to narrativise, understand, and re-represent such increasingly disturbing and undeniable challenges are common to both fiction and research. Effects and change in such phenomena are often unpredictable, occurring by complex entanglements between material and non-material entities (Barad, 2007). Climate change helps us to see the inadequacies of our ways of knowing. Seeing the world as made up of mechanistic and deterministic processes existing in the world independent of our knowledge constructions, is inadequate and inaccurate – not just for understanding large-scale global phenomena and change, but in general.

As Barad (2007) says, understanding and manifesting are inextricably linked. ‘Climate change’ is both a material and an intellectual phenomenon. Agential realism (Barad, 2007) proposes that it is not our inability to understand and measure climate change that is the problem, but that it is the measurement itself which determines the phenomenon. That is, we need to move toward understanding how it is that by our very apparatuses for knowing, we help to bring this problem into being. These are not easy issues to grapple with.

**The chronotope and its implications for research**

Because of this complex emphasis on the relationship between research apparatuses and ontic constitutions, I also identify the Bakhtinian theory of the chronotope (1981) as important in this project. The Bakhtinian concept of the chronotope (Bakhtin, 1981) is strongly in sympathy with agential realism (Barad, 2007). The chronotope – literally ‘timespace’ – is the shape of time and space implicitly and explicitly constituted in the novel: an expression and constitution of time, space, matter and existence. In Bakhtin’s words:
Fiction gives us apparatuses for extending and concretising conjecture; for asking, what if? The concept of the chronotope illuminates this concretisation of conjecture in spatio-temporal terms, and therefore gives us a means to focus attention on fictional possible material and immaterial worlds. Bakhtin argues that novelistic texts are in a co-constituting relationship with the world: They are ‘intimately interwoven with those direct changes in reality itself that also determine the novel’ (Bakhtin, 1981, Chapter 1, location 345).

The chronotope then helps in the difficult task of materially and discursively (re)imagining the ways ontic phenomena are co-constituted. The way time and space are constructed in the text determines what can happen. For example Agatha Christie’s Miss Marple novels, such as The Body in the Library (1942/2014), like some positivist research, enable tidy reconstruction of events into a fixed and linear narrative in time, which reveals ultimate and determinable cause and effect in the form of ‘whodunit’. Miss Marple’s spacetime also creates possibilities similar to those of traditional ethnography – the rich detail of lives of people in her own little village of St Mary Mead, are drawn on to reflect on context and lives inside the murder settings. Subjectivity and authenticity and the surfaces and depths of human nature and identity are somewhat problematised: Are other people really who they say they are? Are we ourselves who we think we are? (Klapcsik, 2012). But on the other hand Christie’s work does not enable alternative constructions of time and space themselves, in the way that a postmodernist or speculative fiction novel chronotope might. The Christie chronotope then enables possibilities of linear causality and of problematised human epistemology, but does not enable epistemological questioning about time and space, matter and non-human phenomena. The focus on chronotopes in this project provides a way
of attending to textual and worldly co-emergence of, or restriction of, a range of entangled phenomena in the world, including human and non-human, time and space, the material and the immaterial.

**The research apparatus: Overview**

The research question the thesis is concerned with can be stated broadly: How might we reconstruct a conceptualisation of research writing to enable it to both recognise and facilitate its role in the creation of new possibility in the world? However, the thesis does not break this reasonably broad question into further, specific research questions for focus and analysis. This is because the research apparatus is conceived fundamentally as an apparatus attending to patterns of the material-discursive nature of forms in time and space, rather than to the mostly discursive nature of written, analytical questions. That is, I wish to shift from a conceptualisation of research writing as mainly discursive and to manifest an opportunity to conceptualise research in material, spatial, temporal terms as much as I am able, in order to performatively enact the experiment.

In the thesis I am using writing to experiment with chronotopes in research. In Baradian terms, an experiment is part of the ‘open process of mattering through which mattering itself acquires meaning and form through the realization of different agential possibilities’ (2007, p. 141). To experiment is to co-create and realise possibilities of meaning and form in phenomena. I view chronotopes (images of spacetime) as a significant part of any research apparatus. In the experiment I am reading patterns associated with chronotopes which emerge through and between texts to create and attend to their specific co-constitutional potential in the world. That is, their possibilities for agency, causality, identity, epistemology, and the relationship between humans and the universe. This methodology draws on Barad’s diffractive analysis (2007), which is explained further in Chapter Two. The methodology is also developed around certain images, because the use of images is a means to attend to writing and methodology as embodied and material, as well as
discursive. The use of images is also a means to avoid the concretising of the methodological process, to help it to remain fluid, as images do not have stable meaning. These main methodological guiding images are: *Maggot*, *data glow*, *chronotope* and *ice floe*. The experiment explores diffractive patterns (Barad, 2007) in the chronotopes in texts and uses the images mentioned above as a guiding process, as I explain further in Chapter Two.

To carry out this experiment I draw on a range of writing genres which offer different kinds of speculations on possibilities in spacetime. My reading of fiction genres and texts is not such that belongs in a thesis in literary studies. The reading does not critically analyse or synthesise issues of genre, theme or craft. The diffractive process (Barad, 2007) instead understands texts as entangled material-discursive entities, in relations with each other and with other entities. The thesis is primarily interested in the possibilities emerging from these relations; the forms and the patterns of intensity which are created in the world when texts are entangled.

The social science texts I attend to are mostly those in conventional, poststructural, feminist poststructural, and arts-based research discourses in the academic social science context, in which the dominant subject is writing-as-research, that is, critique and representation of the role, aims and process of writing as a constitutive, rather than a representational research method. These include Richardson’s idea of ‘writing as inquiry’ (2000), Barone and Eisner's concept of ‘fiction as research’ (2012) and Deleuze and Guattari’s ‘writing machine’ (1986).

The fictional texts I attend to come from social realist, modernist, postmodernist and liminal fantasy genres. I distinguish between modernist and postmodernist fiction in McHale’s (2004) sense of the terms. Modernist fiction is that which asks mostly epistemological questions, while postmodernist fiction is that in which the dominant form of questioning is ontological. Liminal fantasy is a form of postmodernist fiction in which the distinction between ‘real and ‘alternative’ worlds and realities is ambiguous
I also refer to SF at times – an ambiguous term used to indicate science fiction, speculative fiction and fantasy (Le Guin, 1979).

The neoliberal context and research instrumentalism

The constant warning against premature conclusions and foggy generalities implies, unless properly qualified, a possible taboo against all thinking. If every thought has to be held in abeyance until it has been completely corroborated, no basic approach seems possible and we limit ourselves to the level of mere symptoms.


Our primary hypothesis is that the dominant university model in Australia .....will prove unviable in all but a few cases over the next 10-15 years. At a minimum, incumbent universities will need to significantly streamline their operations and asset base, at the same time as incorporating new teaching and learning delivery mechanisms, a diffusion of channels to market, and stakeholder expectations for increased impact.

At its extreme, private universities and possibly some incumbent public universities will create new products and markets that merge parts of the education sector with other sectors, such as media, technology, innovation, and venture capital. Exciting times are ahead — and challenges too.

(Ernst & Young Global Ltd, 2012)

Next I discuss a rationale for the project, developing several contextual themes. These include the neoliberal economic climate as an inhibiting and narrowing force in academic research culture.

Research writing apparatuses are political. In this age of neoliberalism, the common social science research apparatus produces a superficial, ‘common
sense’ understanding of ‘knowledge’ which suppresses and narrows the role of ethics, care and human encounter (Connell, 2013) and has lost ‘sight of its potency’; its liberating potential (Barnacle, 2005, p. 186). It is anthropocentric and instrumental, as I discuss in this section. Rationalism, instrumentalism in the service of the economy, and empirical data gathering have a stimulating place and function in research but have never on their own made leaps forward in any field, cannot alone transform understanding about what it means to be human, and cannot alone create alternative and inspiring futures (Gough, 2004; Lather, 2007; Richardson, 1990). In this thesis I use the term neoliberalism to mean the strong prevailing political and economic ideology dependent on the idea of the purity of free market logic for organising society (Bourdieu, 1998). This logic emphasises the importance and security of private property, of policies for the optimisation of economic growth, the minimisation of state welfare and protection for individuals and the destruction of any collective organisations which might serve as obstacles to the free market (Bourdieu, 1998). Neoliberalism is here seen as a co-constituting dimension of the broader processes of globalisation, in which the state is implicated in both hands on and hands off measures to both work within and reinforce a highly flexible environment, and as such works in complex, messy and paradoxical ways (Bauman, 2006).

In spite of commentary from a wide spectrum of society including neoliberalist quarters characterising the modern world as contingent and unpredictable, containing ambiguous, fluid boundaries, requiring the ability to deal creatively with the unknown, risk-taking, speculation and conjecture, the neoliberal shaping of education, pedagogy and research has not supported these aims well (Connell, 2013). In acknowledgement of the above global conditions, while epistemological diversity is now ostensibly accepted as commonplace, neoliberalism positions global conditions as ‘a kind of indeterminacy haunted by crisis’ (Clough, 2009, p. 52) in which there are urgent imperatives in education to think clearly about ‘basics’ and ‘what works’ and to develop the scientific ‘evidence-base’ for these. Education serves the knowledge-economy, in which humans are social capital (Davis, Evans, & Hickey, 2006) harnessed
to consolidate, justify, compete within and extend the policy and practice of state or private capitalism, to deregulate, expand market freedom, and privatize, and to increase the difference between privilege and poverty (Connell, 2013). These instrumental aims in the apparatus have resulted in reductionism and quantification of education (Lather, 2012). In the early part of the last decade there were renewed and urgent pressures to transform education into such an evidence-based field, and for training in more rigorous methodology and statistics to meet this need (Lather, 2006). In writing about Australia, St. Pierre (2012) discusses the ways that the move to quantify the quality of academic tertiary scholarship is continuing into this decade. Australian University representative Universities Australia has responded to recent policy stressing the commodification of higher education with reinforced urgency: ‘Education, innovation, ideas and entrepreneurialism are the 'new wave' commodities desperately needed to drive the transition to a knowledge economy. They are essential if we are to seize the opportunities of the future’ (Universities Australia, 2015, para. 6).

This neoliberal agenda has enabled some constitutions which may be conceived as enabling of creative and ethical research. These include increasing applied and professional discipline participation (Barnacle, 2005), and an orientation toward the future, flexibility and change rather than toward social reproduction (Connell, 2013). However the relationship between the economy and creativity is messy and paradoxical. Modern education systems work both within and against reigning ideology, in that they are conservative (Conroy, 2004), and designed to support the philosophical, political and cultural status quo, while are also expected to teach and stimulate thinking and critique. When the status quo is corporatization and economic competition, applied also to universities, this balance becomes much more difficult to achieve. The logic of neoliberalism is that economic growth stands at the top of the hierarchy. The potential of educational transformations to produce creative and independent thinkers is undermined by these renewed pressures to conform to the traditional norms of empiricism and positivism, quantitative reductionism (Lather, 2012) and logic and systematic planning (Turkle &
Objective truth and neutral evidence are again supposed unproblematic research aims (Lather, 2006; St. Pierre, 2012). Methodologists, researchers, teachers and learners of social science research, hold the difficult position of working within and against this situation.

Constitutions in research

The conditions of the competitive knowledge-economy have enormous influence on research. Future doctoral students and researchers begin to consolidate their understanding of the possibilities of research, what it is, and is for in their early years at university, for example when undertaking the ‘research paper’. While this might be seen as an opportunity for students to explore the connection between epistemologies of research and their own lives, or the production of cultures and phenomena in the worlds they care about, in the neo-liberal context, research methodology is not taught alongside the philosophies and histories of social science (St. Pierre, 2012) or connected to lives and selves. Students are not given early opportunities to consider that research has ontological implications. The pedagogy of research and research writing is in many institutions underwritten by the ‘banking concept’ of education (Freire, 2000). In a study by Schwelger and Shamoon (2000) about perceptions of the aims of the research paper, social science and humanities undergraduate students generally viewed the research paper as factual rather than interpretive; designed to show off knowledge of library skills and documentation process. It was an exercise in information gathering, not an act of discovery, and its audience was a professor who already knew about the subject and who should evaluate the effort based on the quality and quantity of information presented and correctness of documentation. The student responses suggested that they viewed research as a closed exercise to seek and find the right answers, and reflected an empirical and reductive view of knowledge and its discovery.

The metaphysical kind of thinking which can assist us to explore the ways that methodology might be understood as an apparatus which both examines and
co-constitutes social, material and all other forms of reality, is unsurprisingly unpopular in the neoliberal climate of education. While it is ostensibly standard wisdom in social science research texts that methods, methodology and epistemology all stem from or are intertwined with ontology, the ontological fundamentals are often paradoxically glossed over. For example, Grant and Giddings (2002, p. 12) state that:

...ontology refers to our most basic beliefs about what kind of being a human is and the nature of reality. This is the basis for developing an epistemology which defines the nature of the relationship between enquirer and known, what counts as knowledge, and on what basic we can make knowledge claims. ...Methodologies in turn, express ontology and epistemology in terms of modes of inquiry.

(Grant & Giddings, 2002, p. 12)

But on the other hand, texts such as Crotty’s (1998) which are widely used in Masters courses for providing the foundations for undertaking higher degree research, present ontology as an aspect to be acknowledged but not unduly explored or questioned. Crotty (1998) argues that the topic of ontology can be dispensed with for his purposes, which are to provide an initial scaffolded or foundational explanation of the way social research is constructed and conducted. This is partly because ‘ontological and epistemological issues tend to emerge together’ (p 10), and in the literature which ‘plays up’ (p. 11) the significance on ontology, in many cases, the authors are not talking about ontology, but about something else; sometimes theoretical perspective or epistemology. According to Crotty (1998), the sequence of events within the research process usually moves from identifying a problem or question, identifying the aims and objectives of the research, identifying a strategy (methodology), identifying the methods by which the strategy directs us to achieve the aims and objectives, justification of the chosen methodology and methods which will enable the project to be judged as sound (theoretical perspective and epistemology). There are no steps in which ontological constructions, assumptions or implications are explicitly considered.
Neoliberalism helps to naturalise this consensus perspective of research as representational in an unproblematised ontology. The neoliberal and consensus approach to research stems from a largely empirical realist ontology, assuming the independence of the world from the mind, and a scientific realist epistemology, assuming that the propositions produced by the scientific method genuinely inform us about the external world. The writing of research is the following of determined steps and the unproblematised representation of writing methods and knowledge. The ‘posts’ (for example, poststructural, feminist poststructural and arts based critiques (for example, in Barone & Eisner, 2012; Lather, 2007; Law, 2004; Richardson, 1990; Richardson & St. Pierre, 2000) have extensively critiqued this assumption that language and writing are representational and discussed the way this dismisses the role of these in making the world (St. Pierre, 2013). MacLure (2013a) argues that in spite of much change and challenge in the field of methodology, representation still now dominates much of what is considered qualitative research.

This traditional, unproblematised, representational notion of ‘writing up’ the research obscures the fact that writing is an aspect of thought central to making meaning and to creation in the world, and ignores the role of writing as a dynamic and creative process. Thus, the potential of writing as a creative act is poorly utilised and understood. Part of this obscuring and limiting of creative potential is the determinism, reduction and simplification of the processes and methods of writing. The normative representation of writing methods reduces them to a discrete set of decontextualised skills and a matter of rational choice-making and technical know-how. This representation leads to a disproportionate emphasis on surface features of the writing process such as structural genre conventions, argument signposts, and spelling and referencing accuracy (Richardson, 1990). Furthermore, this linear and transparent representation is alienating for students whose own experience of writing is counter to its straightforward implications.

This knowledge-economy model of research and its accompanying stifled dialogue about theoretical, pedagogical and epistemological possibilities of
research have complex and lasting ontological and epistemological implications. Research presented to students as detached from lives and emotions (Barnacle, 2005; McDonald, 2000), results in student disengagement (Schwelger & Shamoon, 2000). Students are positioned outside of the academic research community, as aspiring observers and reporters rather than participants (McDonald, 2000). This results in risk aversion in social science research projects (McWilliam, Sanderson, Evans, Lawson, & Taylor, 2006), and a lack of preparedness of postgraduate students for challenging, re-interpreting and evaluating (McDonald, 2000), and for independent study in general (Ford, 2000; Gardner, 2008; Lovitts, 2008). PhD research is ‘by definition original research. This means the candidate is expected to theorise out of the data. Original research means the candidate goes beyond existing research to theorise unique results’ (Davidson & Tolich, 2003, p. 93). Yet the processes and the possibilities for producing originality are not well explored or understood. Students who experience the methodologies of research as transparent, systematic processes, disconnected from themselves and their curiosities and passions will have little cause to examine and explore these as the enablers or limiters of possibility.

To sum up: This academic culture co-constitutes academic conformity. Knowledge becomes instrumental and convenient, and ‘loses sight of its potency’; a potency both dangerous and liberating (Barnacle, 2005, p. 186). This version of knowledge suppresses and narrows the role of ethics, care and human encounter in research (Connell, 2013). It generates a pragmatic understanding of research as valued for and restricted to the generation of conceivable and practical economic consequences (Trifonas, 2012). Innovation becomes a commodity (Barnacle, 2005; Davis et al., 2006; Fitzsimons, 2007). Commodifiable research is research which can be patented, for example, technological and bio-medical research (Connell, 2013). Simultaneously, disciplines which tend not to generate commodifiable products such as philosophy, are in decline, and philosophical thinking in general is devalued (St. Pierre, 2012). And this all re-entrenches an anthropocentric, instrumental view of research as a tool for humanity to make
use of the environment and a belief system about the ontic relationship between humans and environment which is similarly complacent and instrumental.

Lather (2013) comments that since the early part of the last decade the conversation has moved forward, from the application of universal positivist-inspired standards in education research, towards diversity and an emphasis on the importance of understanding the epistemological underpinnings of methodologies and the need to be reflective in order to do so. Post-qualitative critiques of the positivist return have made their impact. However while the debate has become more sophisticated, neoliberalism has not gone away. In Australia, education policy makers are still ‘(n)eoliberal politicians, businessmen, measurement experts, economists and education system managers’ (Connell, 2013, p. 109). Australian privileged educational wisdom reflects instrumental pseudo-science in unproblematised, common-sense slogans: ‘direct instruction’; ‘zero-tolerance’ (Connell, 2013, p. 109). Australian tertiary education policy continues to emphasise education as an export industry and to increase hierarchical competition, to encourage branding and managerialism (Connell, 2013) all of which undermine academic democracy. Recently proposed policy in Australia further emphasises economic innovation, competition and entrepreneurship in the tertiary sector (Department of Education and Training (Australia), 2015).

The narrow forms of education about research and the now increasingly narrow opportunity to engage in alternative kinds of research mean the restriction of access to new understandings, ways of knowing, what it is possible to know (Lather, 2007; Law, 2004), and what is. They restrict ontological possibility.
A need for ontological thinking

There is, then, a powerful need for research methodological understandings to provide the means to attend to ontological premises and possibilities. As others (Gough, 2003; Lather, 2007; Richardson, 1990) have said, rationalism, instrumentalism in the service of the economy, and empirical data gathering have a stimulating place and function in research but have never on their own made leaps forward in any field, cannot alone transform understanding about what it means to be human, and cannot alone create alternative futures. As Barad (2007) argues, ontological thinking is an ethical responsibility in research.

In partial response to neoliberal ideology and renewed ‘disciplining’ in education and social science to conform to an evidence base, Lather (2013) summarises the more recent turns in social science methodology. Methodology moved from phases of ‘conventional interpretive inquiry’ (p. 634) which emerged from humanism, to then ‘acknowledge multiple realities and voices, messy texts, reflexivity, dialogue, empowerment and so on’ (p. 635), while remaining grounded in humanist understandings of power, reality, language, knowledge, truth and the subject. Then a kind of ‘interpretive mixed methods’ (p. 635) began to enter the picture, which used ‘postmodern theories to open up concepts associated with qualitative inquiry’ such as ‘validity, voice, data, empathy, authenticity, experience’ (p. 635). Lastly, post-qualitative research, which ‘is becoming in the Deleuzian sense’, that is, inquiry which cannot be tidily described and is not methodologically instrumental, but is: ‘non-totalizable, innumerable, resisting statis and capture, hierarchy and totality, what Deleuze might call a thousand tiny methodologies’ (p.635).
Such post-neoliberal discussions as Lather’s (2012; 2013) raise questions about how researchers can think beyond neoliberalism to meet an indeterminate, contingent world more ethically. Explicit ontological thinking is required in order for methodological discussions to be extended in this way. St. Pierre (2013) argues that the ontic and the material have always been implicated in ‘post’ critiques of humanism and positivism but that these ontological concerns are just now coming to the fore, over what were seen as more urgent epistemological problems. For example, Foucault (2005, p. xxii) described the way that the ‘*fundamental codes of a culture*’ in language enable different philosophical interpretations of the order of things; different ontologies and epistemologies. Barad (2007) argues explicitly that such codes contribute not just to ontic thought, subjectivities and human and social experience, but to all material, non-material, relational ontic phenomena themselves. The ontological should now be foregrounded as integral to the next phase of methodological thinking (St. Pierre, 2013).

The poststructural position offers (at least) three initial approaches in this quest to foreground and rethink ontology. First, it often approaches the issue of writing truth and ontology by an argument for exploring the messy, less comfortable, inconclusive places (for example, Lather, 2006). Non-linear writing methodologies are seen as important for disturbing consensus ideas, as are those that deliberately hold together incompatibilities and drawn on diverse approaches to research. This is about thinking difference differently, and about allowing and making productive use of hybridities, ruptures, failures, breaks and refusals (Deleuze & Guattari, 1987; Lather, 2007). In this project I draw on this reminder to facilitate the play and patterns of ontological constitutions together, and to try to resist setting them up in competition with each other or to make evaluative judgements about which is better.

A second powerful insight from poststructuralism about reframing research and ontology is the emphasis on increasing humility in the research culture and apparatuses. Authors such as Lather (2007), Latour (1993b), Benjamin (1999), and Derrida (1997) demonstrate their commitment to moving toward honesty in their representations. They endeavour to demonstrate personal
responsibility for the communication of the forms and meanings which have come from them; not to pretend that these ideas conform to a generic form and meaning shared by all; and not to attempt the misrepresentation of a tidy and convenient packaging. Similarly, Law (2004) argues for a less automatic, slower, vulnerable, quiet, modest, uncertain, diverse method. The danger of unproblematised method, Law states, is that it gives over to mechanical replacement. Others in the arts-based research movement draw on aesthetic, experiential, affective, responsive, and performative methods, in order to make research representations with humility. Brecht (cited in Barthes, 1977, p. 104), suggests that an aesthetic approach can counter ‘repetitive, tautological, militant discourse’. The possibility of a different ideology ‘creeps in by means of a fiction’. Humility does not necessarily facilitate the reframing of ontology, but it is a good orientating position for enabling the possibility of ontological hesitancy and suspension of judgement, which is important in this thesis.

Reconsidering anthropocentrism in research and ontology, is one example of how humility and ontological hesitancy are significant and is a third key place for beginning this foregrounding of ontology in research. The ‘posts’ have deconstructed the implications of humanism on research and epistemology (St. Pierre, 2000, 2011). The humanist individual is generally conceived as stable, conscious, rational and autonomous. They also have ‘inherent agency’ (St. Pierre, 2000, p. 500); the power to effect change. In research this agency is assumed, among other ways, in the will and freedom to express themselves in language (St. Pierre, 2000) for transformation. In contrast, individual identity in poststructuralism is unfinished, and unstable. From this perspective, agency and research epistemologies are problematised. The subject does not exist outside of epistemology, agency, is ‘the slippage of the fragmented and mobilised subject’ (St. Pierre, 2000, p. 505) and epistemology is both a tool for making sense and an effect of discourse. In this thesis I draw on these discussions in my investigation of chronotopes and their patterns.

However, the more deeply engrained ontological constitution of the human-nature binary, which is also characteristic of neo-liberal thought is not

The move to foregrounding ontological thinking in research writing is essential for re-framing global conditions such as climate change, race, religious or cultural relationships, the constitutions of globalisation, and the culture of fragmentation and securitisation. As I discuss further throughout this thesis, neoliberalism and globalisation help to naturalise a world of anxiety, fragmentation, fragile bonds between people and people and places (Bauman, 2007). We are constituted as disconnected or tenuously connected to each other and the planet, and ‘pre-emptive logic’ (Clough, 2009, p. 48) is normalised as means to manage risk, maintain safety and compete in existence conceived as continuous state of drift and contingency.

A need for fictional thinking

What we need in literature today are vast philosophic horizons - horizons seen from mastheads, from airplanes; we need the most ultimate, the most fearsome, the most fearless "Why?" and "What next?"

What is truly alive stops before nothing and ceaselessly seeks answers to absurd, childish questions. Let the answers be wrong, let the philosophy be mistaken- errors are more valuable than truths; truth is of the machine, error is alive; truth reassures, error disturbs...

(Zamyatin, paraphrased by Le Guin, 1979, p. 221)

Above, Le Guin (1979) paraphrases an essay by the science fiction author Zamyatin in her argument that fiction – especially science fiction – is a vital force in our capacity to profoundly challenge global crises, expand and see new horizons

The generic skeleton of the novel is still far from having hardened, and we cannot foresee all its plastic possibilities.

(Bakhtin, 1981, Chapter 1, location 297)
and create new realities and truths. This thesis explores the diffraction of fiction and social science writing and sees these both as powerful agents in the co-constitution of new realities.

The idea that the social sciences are continuous with fiction literature follows from the critique of objectivity, positivism, scientific method and the representational nature of language. Both social science and fiction can be seen as interpretations of the world (Rorty, 1980). Fiction is a place in which to find many possible worlds.

Fiction also presents ways of knowing not easily available in conventional academic writing, as life external to the book is interwoven with what is created inside it. Gough (2003) argues that the strengths of fiction mean that it is more adequately complex to meet the needs of representing and problematising work such as education research than are conventional textual practices.

But Law (2004) has commented that the unique forms of knowing offered through fiction are under-utilised in social science research. The models of modernist and realist fiction have so far been more extensively utilised in social science writing-as-research than those of any other. Autoethnography and narrative-based research such as that which Richardson (1997) draws from and was prominent in establishing are examples. In modernist fiction and in autoethnography, the writing process and the writing product are deeply intertwined. The aesthetic process and products enable the viewing of phenomena in new ways and the asking of new questions (Barone & Eisner, 2006) about human experience and knowledge. They enable critical reflexivity about the experience and representation of the writing-self in different contexts. They remind us that research writing is ethically implicated, contextual and rhizomatic (Richardson, 1997).

In this project I am interested in a wider range of fiction models, not only those used in reflexive narrative and autoethnographic forms. The use of fiction here is not primarily critical or evaluative, and I am not an expert in literature or literary criticism. Instead the use of fiction draws on and acknowledges its
already existing patterns, waves and shadows in my work in social science research. My interest in combining fiction and social science methodology as ways of knowing is an aspect of my before-mentioned belief in the value of ontological hesitancy and questioning: an instinctive scepticism about established binaries between real and unreal, fact and fiction. The emphasis on presence and immediacy implied in realism in both fiction and research is characteristic of the status of these in Western thought in general. But these are modes of thought rather than inflexible truths (Attridge, 1992). Challenges to normative views, Western or otherwise, of what is real and what is unreal are an aspect of the kind of ontological hesitation which seems essential in order to reconsider methodology from a new position of humility and anticipation of possibility. Like Deleuze and Guattari, (1988) I am interested in the use of language as an art to pursue these aims.

My own most notable and profound experiences of the creative-constitutive potential of research have often occurred through the intertextual frisson between reading and writing research and reading and writing fiction. This intertextual frisson is highly tenuous, like Barthes pleasure of the text:

> The text: it produces, in me, the best pleasure if it manages to make itself heard indirectly; if reading it, I am led to look up often, to listen to something else. I am not necessarily captivated by the text of pleasure; it can be an act that is slight, complex, tenuous, almost scatterbrained; a sudden movement of the head, like a bird who understands nothing of what they hear, who hears what they do not understand.

(Barthes, 1974, pp. 24, 25)

This tenuous sense of frisson is the half-glimpse of something else; the sense of the approach of encounter. In the work of Deleuze, the encounter contains both a rupture and an affirmation of the possibility of a new world (Deleuze & Guattari, 1988). Agency in these intertextual encounters ‘feels distributed and undecidable’ (MacLure, 2013a, p. 661).

Fiction is rich in these encounters with the possibility of new agency in new worlds. Fiction as a form is primarily interested in the possibilities extended
by questions about diverse worlds and realities, as the science fiction writer Le Guin (1979) and literary scholar McHale (2004) have noted. Philosophy scholar Attridge (1992) argues that the pleasure of reading good fiction and reading good philosophy might be seen as similar. Both seek to make the subject strange, offering a fresh perspective. Rather than encapsulating a simplified and reduced discourse they are appreciated for their capacity to be re-read in order to be apprehended differently. As Davies (2001) says, we enter fictional texts not for the purpose of grasping or analysing meaning, but as another form of living in the world: to expand and open life rather than to reduce it. In research too we can decide to enter texts to expand and open thought, consciousness and life rather than as reductive exercises. Writing and reading fiction provide us opportunities to bring familiar ideas and experiences into new relationships (Gough, 2003). Fiction is therefore important in the constitution of research which aims to open possibility.

I became even more interested in the potential of the contribution of fiction to writing methodology as I began to consider the elements of the kind of novels I often find memorable; those which explore shifting, indeterminate realities, for example those of liminal fantasy (Mendlesohn, 2008). In this genre the distinction between ‘real and ‘alternative‘ worlds and realities is ambiguous (Mendlesohn, 2008). This fiction lends itself well to facilitating the kind of ontological hesitation which assists in more radical thought. Fiction in general is a means of hypothesis and conjecture which, by provision of support, lead us to a state of suspension of belief as well as of disbelief (McHale, 2004). The special logical status of fiction is a medium in which we allow the in-between, neither true nor false. Postmodernist fiction, including speculative fiction (SF) and liminal fantasy even more especially lead us toward the capacity of expanding our sense of the possible, by allowing ourselves to abandon what we perceive as the logical rules of the supposed actual world and to adopt the different ontological perspectives offered in the texts.

Fictional texts such as Mary Shelley’s *Frankenstein* (1818/1992) demonstrate that speculative fiction can both critique and co-create phenomena in the real world (Gough, 2003). *Frankenstein* speculated on humans’ ability to use
science to create life and put into circulation an early notion of the cyborg. Rather than a feat of prediction or imagination, Barad’s agential realism (2007) would frame this novel as intra-acting with other technological and scientific constitutions to eventually co-manifest some of its ontological speculations about different forms of existence in the world, for example involving organ and limb transplants, prosthetics, and human-mechanical and human-cyber hybridisation.

It is far more acceptable to explore the notion of radically alternative and mysterious ontologies in fiction, than it is in social science. And yet, many fiction authors discuss this exploration as the expression of real belief systems, not as imaginative flights of fancy, or metaphor. For example, two-time Booker Prize winner Hilary Mantel:

"The mystery that lies behind the visible world is certainly the preoccupation in Beyond Black, which is where I take on the subject explicitly – is the world as we see, or are there competing and overlapping realities? I am a fan of the latter concept, but I have to phrase this carefully so as not to sound mad. I feel as if I am conscious all the time of different realities that are forming and reforming and humming about one’s head, and this restless and quite frightening idea creeps into Fludd but absolutely suffuses Beyond Black."

(Mantel, 2005, About the author, location 2562)

However, postmodernist fiction, with its potential for questioning reality, seems less frequently used as a model for research than modernist and realist fiction. Among those who have made significant use of postmodernist fiction and social science co-constitutions are several prominent poststructural
theorists. The philosophical/literary experiments in Latour's *Aramis* (1993a) Deleuze and Guattari's *A Thousand Plateaus* (1988), and Haraway's *A Cyborg Manifesto* (1999) are notable examples of writing which not only discusses postmodernist or poststructural theory, but enacts it in versions of literary form. The texts achieve this through various means including: hybrid texts, writing as open-ended function, destabilising of conventional writing techniques, ambiguous syntax, structures and meaning, irony and metaphors of deconstructed dualisms and of the postmodern condition. But, according to McHale’s (2004) definition of postmodernist fiction, the attribute which places these texts in this category is less their set of techniques than it is their dominant aim, which is to question the nature of ontic constitutions and ontological knowledge. These texts invite speculation about the world itself, the future world and other possible worlds. They extend conjectures about transformations in the world, which while also extending to human experience, are not primarily about interrogating that experience.

This ontic questioning of the nature of the world distinguishes these texts from many poststructural texts, including Lather & Smithies’ *Troubling the Angels* (1997). While postmodernist in that it uses many of the above-mentioned techniques and presents truths as multiple, partial and contingent, this is not itself an example of postmodernist literature in McHale’s (2004) sense, as the dominant form of questioning it invites is epistemological. That is, it asks: How can I understand these (multiple and contingent) experiences? On the other hand, Gough (2003), who draws on SF by posing the question of what narratives of educational research would look like if modelled on SF rather than modernist or detective fiction, does follow this tradition of ontological speculation. He describes SF narrative possibilities as revealing a plurality of worlds, staging confrontations. Rather than personifying inquiry in the detective-like protagonist, worlds themselves are central to the inquiry focus.

The aim of this thesis is to explore the ontological and epistemological possibilities enabled by co-constitutions of social science research together with fictional texts. Because of its ontological emphasis, postmodernist fiction
offers significant opportunities to explore different versions of spacetime; of chronotopes, constituted in texts.

**Summary of the aims and structure of the thesis**

As science fiction author Le Guin says: *'We like to think we live in daylight, but half the world is always dark'* (1979, p. 11). It has been the aim of this introduction so far to argue that we live in an indeterminate, unmanageable, and transforming world, which under the influence of empirical realist neoliberalism we pretend is in daylight – ultimately knowable and straightforward. The processes for the creation of new possibility are ostensibly highly valued, but they are not well facilitated, or well understood. Fiction can tell us important things about exploring in the dark.

Having grown accustomed to the problematisation of research writing as representation, the fact remains that it is still hard to think about it differently. The epistemological and ontological alternatives are hard to think (St. Pierre, 2013). We cannot construct a laboratory experiment for investigating this, but I argue that it might be useful to experiment with the relationships between ontology and research by diffracting chronotopes in texts. The traditional forms underlying social science writing: classic chronological narrativity, discourse, causality, logic, methodology, argument, objectivity, subjectivity, might be re-constituted with new chronotopes.

This thesis co-constitutes certain chronotopes and their patterns of ontological possibility by reading texts through one another. I do not argue that these are the only research chronotopes in use, or that this is the only way to interpret their possibilities. As I explain in Chapter Two, these patterns emerge from the particularities of this experiment and they are contingent and slippery. I also do not aim to set the significant chronotopes discussed here up in opposition or as mutually exclusive constructions. The *humanist heroic path*, the *rhizomatic chronotope*, and the *coral reef* are also entangled in each other and these entanglements leave traces and have effects.
The reader should also note that the thesis does not contain a distinctly separated literature review. Rather than producing a thesis in which the presence of a literature review is unproblematised and made distinct from ‘findings’, in this project the literature is a component of the experimental apparatus itself. Literature both informs the apparatus, its structures, epistemology and methodology, and is experimented with as material-discursive sources of data. In this introduction literature is reviewed as it pertains to the context of research writing in the social sciences, in order to rationalise and contextualise the experiment. Literature is also reviewed as it pertains to informing the philosophical approaches and the methodology of the project, in Chapter Two. Finally in Chapters Three to Seven, literature (specifically certain fiction and social-science-writing-as-research texts) is explicitly experimented with, to attend to its relationships and the emerging diffraction patterns of possibility of time and space.

The structure of the thesis is as follows:

In **Chapter Two**, I develop and discuss the apparatus for the experiment, including the onto-epistemology of Baradian agential realism (2007) and an experimental diffractive (Barad, 2007) methodological approach guided by four images, or figurations (Braidotti, 2013), enabling attention to material-discursive forms of spacetime in texts. These figurations are *maggot, data glow, chronotopes and ice floe*.

**Chapter Three** is the first of the five chapters in which I carry out the experimental diffractive analysis. In this chapter I entangle text fragments from fantasy, modernist and realist fictional texts, from which a chronotope emerges which I call *terra incognita: The humanist heroic path in fiction*.

In **Chapter Four** a different iteration of the humanist heroic path emerges, as I introduce text fragments from social science writing-as-research to the apparatus. This chronotope I call *terra authentica: The humanist heroic path in social science writing-as-research*. 
Chapter Five attends to a new chronotope emerging from entangled postmodernist fiction text fragments. This is called the rhizomatic city chronotope in fiction.

In Chapter Six, an iteration of this rhizomatic chronotope emerges when I entangle rhizomatic social science writing-as-research in the apparatus, and I name this the faltering machine chronotope in social science writing-as-research.

Chapter Seven is a last chapter which both re-iterates and extends the diffractive patterns created and attended to, in the form of the coral reef chronotope in fiction and in social-science writing as research. This last chapter serves to both summarise and to enable the patterns and process which have developed to maintain ongoing motion and responsiveness with the world.

The chapter structure above indicates the iterativity of the diffractive process. In each of the chapters Three to Seven a different set of texts are drawn from, alternating through the chapters between fiction and social science texts. But through each chapter also resonate traces and intensities of the patterns of the other chapters.

All of the chapters One to Six make heavy use of quotations – text fragments – as these are considered the data of the experiment. The methodology involves formatting these text fragments to float on the page, something like ice floes, as an explicit embodiment of their role in the co-constituting structure of the research apparatus, as I explain further in Chapter Two. Thus, many chapters and chapter sections begin with a floating text fragment. The purpose of these text fragments, especially in the experimental chapters (Chapter Three onwards) is less often to substantiate an idea, and more often to manifest a form or an entity with which the rest of the writing, and other texts fragments can intra-act. In these cases the meaning of the text fragments is not explicated, and neither is the fragment always explicitly connected to the following text. Instead the text fragments should be read in terms of the emergent possibilities they suggest, in their relations with the reader, with the rest of the text of the thesis, and with the world.
Barad warns: ‘Performativity, properly construed is not an invitation to turn everything (including material bodies) into words; on the contrary, performativity is precisely a contestation of the excessive power granted to language to determine what is real’ (Barad, 2007, p. 133). How then, can I rationalise a thesis investigation which privileges words to the extent that it is largely about the performativity of words, and is enacted by using words performatively? Barad also emphasises the inseparability of everything; material, discursive, immaterial. Language is neither first nor last in the constitution of the world, but is mutually implicated in its co-constitution. The thesis apparatus tries to resist assuming the privileged nature of language in manifesting reality. It recognises and acknowledges the exclusions of possibility it will construct by its focussing interest on chronotopes of writing. It also acknowledges the entanglement of other agencies in the apparatus, including spaces, software and material technologies, and my prior research training, fascinations and habits.
2. Ice floe: Research apparatus and methodology

From the ice you can’t tell the horizon from the sky.

(Senior, personal communication, 2013)

...a diffractive methodology, a method of diffractively reading insights through one another, building new insights, and attentively and carefully reading for differences that matter in their fine details, together with the recognition that there intrinsic with this analysis is an ethics that is not predicated on externality but on entanglement. Diffractive readings bring inventive provocations; they are good to think with. They are respectful, detailed, ethical engagements.

(Barad, in Dolfijn & van der Tuin, 2012, p. 50)

...the point is not merely that knowledge practices have material consequences, but that practices of knowing are specific material engagements that participate in (re)configuring the world. Which practices we enact matter – in both senses of the word. Making knowledge is not simply about making facts but about making worlds, or rather, it is about making specific worldly configurations – not in the sense of making them up ex nihilo, or out of language, beliefs or ideas, but in the sense of materially engaging as part of the world in giving it specific material form

(Barad, 2007, p. 191)
An apparatus for a diffractive writing experiment in chronotoposes

Given a particular measuring apparatus, certain properties become determinate, while others are specifically excluded...Different quantities become determinate using different apparatuses.

(Barad, 2007, pp. 19,20)

The aim of this project is to consider new possibilities for co-constituting worlds in research, and to develop a deeper sensibility of the morality of taking part in such co-constitutions. This research writing is an experiment, using a diffractive process (Barad, 2007) of textual intra-action, attending to the patterns of chronotoposes (Bakhtin, 1981) – figurations of spacetime – which emerge.

The experiment does not aim for a Baradian analysis, but to undertake a diffractive process. This distinction is important. In Chapters Three and Four for example, the diffractive process puts to work texts and chronotoposes from literary modernist and realist traditions to see what emerges via their intra-action. What emerges is a particular humanist, modernist, realist figuration – the heroic path, which is explored for its mattering affordances and exclusions. The experiment explores what co-emerges with/between the texts. On the other hand, a Baradian analysis would pursue that which might be alternative affordances provided by viewing these texts in Baradian New Materialist terms. Rather than to give texts a New Materialist reading, the intention is that this writing experiment makes the process of mattering somewhat more visible. It aims to enable intra-actions and emergence of co-constitutions which are both credible and recognisable for the reader and which by their enactment enable examination of such intra-actions and emergence. The overriding aim is to enable understanding of the mattering we enable by our writing traditions, while also opening new writing-mattering space, new
thinking about and new possibility in research writing, and thus, the world, by intra-acting with alternative texts with alternative ontic assumptions.

...we know so little about the imagination that we can’t even ask the right questions about it, let alone give the right answers.

(Le Guin, 1979, p. 140).

Le Guin’s (1979) comment above is in part an indictment on the discourses of imagination and possibility available in our cultural and political era. As Lather (2012) says, the concept of post-neoliberalism helps us to see that there are alternatives to the ideology of neoliberalism. I argue further that Barad’s ont-epistemology of agential realism (2007) provides us opportunities to see an ontological alternative, which can assist in imagining and creating different ontic possibilities.

While I hold only a simple and uncertain understanding of the quantum theory principles I discuss in this project, I try to take up the challenge suggested by Barad (2007) that as a matter of ethics researchers need to examine the ontic implications of the assumptions of history, data and truth, which are entangled in the principles of research with which we work. I argue that this must involve experimentally articulating these ontic implications, and that this in turn will take us to places in which we are unsure of ourselves. I also attempt to follow Barad’s guidelines that to avoid a quantum theory bandwagon in which the science quoted is inaccurate and inappropriately applied, quantum theory should not be used as mere analogy. I aim for a close reading of her material, attention to any distinctions and diffractive disturbances between my aims and hers, and the consequent careful constitution of my methodology and inter/intra-textual work.

This chapter will describe the research apparatus and methodology and their diffractive and intra-textual principles. In this chapter I first outline the key aspects of Barad’s agential realism (2007) and Bakhtin’s (1981) theory of
novelistic discourse and the chronotope which are significant to this project. I then describe the apparatus and methodology in terms of a series of figurations: maggot; data glow; chronotope; ice floe. These figurations are material and discursive. They demonstrate the writing apparatus as engaging the material force and entanglements of language and the world (MacLure, 2013a).

**Barad and Bakhtin in intra-textual entanglement**

- they change the very possibilities for change and the nature of change.

(Barad, 2007, p. 391)

Three particular aspects of agential realism (Barad, 2007) are significant for understanding the research apparatus and methodology and some of the prominent diffraction patterns which emerge later in the thesis. These aspects are diffraction, agential intra-action and indeterminacy. Two particular aspects of Bakhtin’s theory are also significant: the concept of the chronotope, and the concept of intertextuality.

**Diffraction, intra-action and the constitution of reality**

In this thesis the phenomenon of diffraction is understood as a fundamental aspect of any research apparatus. The experiment does not try to reflect and describe a reality but entangles itself in diffractive patterns and pattern making, which co-constitute reality.

Barad (2007) proposes that reality and its phenomena are co-constituted through intra-actions. ‘Phenomena are sedimented out of the process of the world’s ongoing articulation through which part of the world makes itself intelligible to some other part’ (p. 207).
Intra-actions, like waves, are not entities but disturbances (Barad, 2007). Intra-actions and waves manifest a number of characteristics which are not held by matter. For example, unlike particles, waves can be superimposed on one another and they can diffract. Central to understanding how phenomena are produced by these intra-actions is the phenomenon of diffraction – disturbance patterns made by intra-actions. Diffraction refers to what happens when waves (for example, of light, or of water) overlap, combine or encounter an obstruction. Their diffraction demonstrates a number of patterns: they bend, spread, emerge in concentric half circles, they intensify where crests coincide, they diminish or cancel each other out when peaks coincide with troughs forming a space of calm, they form ‘diffraction fringes’ (Barad, 2007, p. 76); dark lines in light regions and light lines in dark regions, near to the borders of objects which confuse the boundaries.

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**The point is that more is at stake than “the results”; intra-actions reconfigure both what will be and what will be possible…**

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The resultant wave is a sum of the effects of each individual component wave; that is, it is a combination of the disturbances created by each wave individually. This way of combining effects is called superposition.

(Barad, 2007, p. 76)

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Phenomena are the effects of diffraction: the superposition or entanglement of difference patterns. Barad (2007) argues that diffraction is not merely a useful analogy, but is a fundamental feature of the constitution of the universe, revealed through quantum physics. Diffraction is central to the ‘two slit’ experiment which demonstrates the paradox of wave-particle duality, emblematic of the mysteries of quantum physics, and impossible to explain by classical physics.

Barad (2007) and Haraway (1992) have both argued that diffraction serves as an important counter-point to the dominant image of reflection as form of
knowing. Reflection is deeply embedded in Western modes of thought and research. Traditional notions of research as observation and description are premised on the idea that descriptions are the linguistic mirror of phenomena. Both reflection and reflexivity imply the optic image of the mirror, which in turn implies a fixed object held at a distance and examined. Barad’s diffraction (2007), on the other hand, involves intra-action with/between objects and world. It entails attention to the entanglements or disturbance patterns manifesting as part of these intra-actions, and the processing of small, but consequential iterative differences.

This experiment rests on the notion of diffraction as the process/enactment of knowledge-making simultaneous with reality constitution. The research methodology in this experiment views writing as an apparatus for the co-creation and entanglement of waves and for attention to the particular diffractive disturbance patterns this co-constitutes. The mapping of diffraction and interferences shows entangled structures and patterns of the world.

Diffraction is also a multiplicity of ‘iterative re-patterning’ (Barad, 2014, p. 169) of relational entanglements. Research writing, by this thinking then, is constituting/attending to this iterative re-patterning, which involves attention to both the iterative and intensified constitutions of the diffraction and to their re-patterning potential, that is, their contingency and their alternate possibility.

**The complementarity of phenomena, the indeterminacy of reality and the implications for research apparatuses**

What is the root of complementarity? It is the impossibility of drawing any sharp separation between an independent behaviour of atomic objects and their interaction with the measuring instruments, which serve to define the conditions under which the phenomena occur. In other words, the inseparability of objects and agencies of observation is the basis for complementarity.

(Barad, 2007, p. 308)
In entanglement with this notion of diffraction, Bohr’s quantum mechanics principles of complementarity and indeterminacy are formative agencies in the agential realist ontology (Barad, 2007) and in this experimental project. It should be noted that Bohr’s complementarity is a concept open to many disputes, dialogues and interpretive inconsistencies (Beller, 1992), and that Barad makes little mention of the contribution of Bohr’s dialogues with physicists such as Pauli to the development of the concept. However, this work is not a summary of the development of this aspect of quantum mechanics, but an application and experiment using Barad’s philosophical perspective. In Barad’s interpretation, indeterminacy refers to the fact that the universe and its phenomena are dependent on intra-actions producing diffractive patterns, entanglements and cuts, and without these the universe is fundamentally indeterminate. Complementarity refers to the quality that indicates that measurement of certain phenomena cannot occur simultaneously, due to the fact that the measurement itself brings the phenomena into being.

For example, position and momentum are complementary measurements, meaning that they cannot simultaneously be measured (Barad, 2007). Their measuring apparatuses are mutually exclusive, so that the measurement of one, at any one time, excludes the measurement of the other. The reason that we cannot know both the position and the momentum of a particle simultaneously, is because their measurement is the cut that brings them into being. This complementarity is also evidenced in the dual nature of matter and light, from which the paradox of wave-particle duality emerges. The dual nature of matter and light is demonstrated by the consistent manifestation of matter and light as particles when using one experimental apparatus and its consistent manifestation as waves when using another apparatus.

It is significant to note here that quantum mechanics is not considered a set of theories that applies only to the microscopic domain, but is understood widely by quantum physicists to be relevant in nature at all scales (Barad, 2007). With regard to research in general, the principle of complementarity shows that the nature of the observed phenomenon changes with corresponding changes in the research apparatus. Barad (2007) argues that it is of crucial significance to
understand that Bohr means that indeterminacy and complementarity are ultimately ontic, rather than epistemic findings. That is, it is not that our knowledge is limited by our inability to measure both position and momentum at once, but that it is the measurement itself which creates the phenomenon.

What he is doing is calling into question an entire tradition in the history of Western metaphysics: the belief that the world is populated with individual things with their own individual sets of determinate properties……there aren’t little things wandering aimlessly in the void that possess the complete set of properties that Newtonian physics assumes (e.g. position and momentum); rather, there is something fundamental about the nature of measurement interactions such that, given a particular measuring apparatus, certain properties become determinate, while others are specifically excluded. Which properties become determinate is not governed by the desires or will of the experimenter but rather by the specificity of the experimental apparatus.

(Barad, 2007, p. 19)

The ontic implications of the agency of measurement are outlined by Barad in the text fragment above as far-reaching. They include profound implications for a notion of pre-existing determinate entities of any kind. The determinate nature of phenomena does not already independently exist, but is brought into being by a specific apparatus. This further implicates the lack of real distinction between the object of the measurement or experiment and the measurement itself. In Barad’s words:

In the absence of a given apparatus there is no unambiguous way to differentiate between the object and the agencies of observation; an apparatus must be introduced to resolve the ambiguity, but then the apparatus must be understood as part of what is being described

(Barad, 2007, p. 118)
Barad extrapolates further epistemological and ontological implications. There is no special reason accounted for in physics, why measurement should be a special case with its own special effects in its interactions with matter. Therefore, in agential realism, measurement stands not just for laboratory experiments, but for any and all intra-actions of a knowledge-making kind, including theorising. And in fact, all knowledge-making intra-actions are also not unique in themselves, but are only some of the possible forms of phenomenal intra-actions which are involved in the manifestation of other phenomena. Knowledge-making intra-actions are thus one form of agential intervention among many, all with change-making, constitutional potential. Therefore, any specific apparatus or any research methodology is involved in determining the conditions for possibility; for enabling some possibilities and for excluding others. The research writing methodologies we employ need to be understood for the ontological effects they are responsible for co-constituting. Different research writing methodologies assist in co-constituting different phenomena and, different realities.

To repeat, the apparatus alone is not responsible for possibility and thus reality creation, but is itself an aspect of the material and discursive agential intra-actions which bring the phenomena into being. This leads us to what Barad (2007) believes is the heart of the lesson of quantum physics: that we are part of the nature that we seek to understand. Our knowledge-making practices do not sit outside of the world but should be seen as intra-actions among others in the universe, which in their entanglement and diffractive patterns bring forth possibilities and phenomena themselves. Theorising and experimenting are not conducted externally – no such external position exists. They are intra-acted from within as part of nature; part of the phenomena produced.

**The principle of indeterminacy disturbs the metaphysics of individual determinism**

One of the most profound implications of Bohr’s indeterminacy principle is its consequences for the metaphysics of individual determinism. While
poststructuralism also suggests that research methods help to produce the reality they seek to understand (for example, Lather, 2007; Law, 2004), agential realism extends this discussion by proposing a scientifically and ontologically consistent theory of how this occurs which unpacks the metaphysics of individual determinism as a central obstacle in our understanding of these processes.

The metaphysics of individualism refers to the concept that phenomena including humans are discrete and stable, individual entities (Barad, 2007). This metaphysics of individual determinism undergirds the common-place ontology that the world itself is composed of individual entities with individually determinate boundaries, and the consequential possibility of separating knower from known. However, as previously discussed, in an agential realist ontology, matter and phenomena become determinable entities or objects only through entanglements involving ‘measurement’ or other forms of agential intervention. There are no essential individually determinate phenomena.

Barad's (2007) particular form of realism (which she believes was shared by Bohr) then, is not a realism of ‘thingness’; not a realism of determinate objects existing within the container of space. It is a realism based on quantum physics, of phenomena not as individual identities or mental impressions, but as entangled material agencies. These agencies are material yet cannot be localised to a point. They emerge from waves and disturbances constituting patterns and intensities in/with the world.

Importantly, this re-configuring of the metaphysics of individualism in agential realism enables the reconfiguring of some major ontological implications of certain common-place and powerful contemporary social science entanglements and diffraction patterns which I argue in this thesis are limitations to some significant conceptualisations of research. These patterns might be seen broadly in terms of diffractive patterns of humanism and poststructuralism. While it is problematic to attribute particular views to these complex paradigms (St. Pierre, 2000), I argue here not (for example) that there
exists a definitive poststructural view of power, agency or multiplicity, but that there exist entanglements which create some strong diffractive patterns, among others, which have certain limiting effects. These entanglements and patterns involve ideas and constitutions of individual determinism, multiplicity, power, fragmentation, conflict, ethics, anthropocentrism, language primacy and linear causality. I pick up these themes and patterns again later in the thesis.

To sum up so far, agential realism evidences that our knowledge concepts and research concepts, including our writing concepts, are all aspects of research apparatuses, enabling certain things to become determinate, while excluding others. According to Barad (2007, p. 26), the philosopher-physicist Bohr’s message was that ‘we are part of the nature we seek to understand...our ability to understand the world hinges on our taking account of the fact that our knowledge making practices are social-material enactments that contribute to, and are part of the phenomena we describe’.

Research apparatuses, including writing, enact entanglements between knowledge constructions and material features, and focus attention on particular phenomena. And through this entangled relationship between attention, knowledge, and material features, the world is co-constituted. Noting diffraction patterns enables attention to these co-constitutional research processes and materialisations, as diffraction patterns show where different constitutions emerge in these entanglements (Barad, 2007).

*Chronotopes as the focus of attention in the writing apparatus*

This thesis shifts from the poststructural position of discourse as primary, the prescriber of what can be thought and represented (Bolt, 2013) toward a position informed by agential realism, of discourse, text and language as entangled among other entities in the co-constitution of possibility and reality. Bakhtin (1981) describes novels as enacting ‘reality itself in the process of its unfolding’ (Chapter 1, location 345). Each fictional text, in relations with its world and conditions, constitutes its own chronotope, which is a
representation of those physical realities that are ‘available in a given historical stage of human development’ (Bakhtin, 1981, Chapter 3, location 1306), for example, the epistemological opportunities and the image of humanity. Each version of spacetime co-enables certain possibilities and excludes others.

The chronotope – the image of spacetime constituted in the novel – enables both the unfolding of this reality with/in spacetime, and the possibility of the attention to the patterns of this unfolding. To give an illustrative example of Bakhtin’s (1981); the epic genre, by its historicising and removal from the everyday common place activities of the world, valorises the past and an authority view. ‘The past’ is sacred, authentic, reliant on tradition, impossible to change. The epic is a genre of finality, conclusiveness, depriving itself of the conditions for continuation of development. It is clothed in distanced, official literary style, inaccessible to personal experience or an individual point of view or evaluation. In this it actively constructs an illusion of non-dialogism, an inhibition of the sense of the outward facing, anticipatory impulse of language.

These claims can (and have been, especially in poststructural critiques) equally be directed at conventional forms of social science research writing. Like the epic, conventional notions of research writing are reliant on tradition; supposedly objective, non-individualised evaluation and point of view. The textual recipient is constructed as passive, and thus a mutual encounter is not supposed to occur, and nothing new that enters into the discourse is acknowledged. The concept of the chronotope adds to the many poststructural discussions on these texts, the capacity to see and examine their material-discursive nature. Conventional academic discourse thickens, manifests its disembodied authority and imperviousness as temporal and spatial dimensions. Conventional objective discourse manifests, as Mills (1973, p. 243) puts it, as ‘an autonomous sound in a great empty hall’.

This experiment attends to how chronotopes constitute ontic, material effects with which ethics can be seen as entangled. Lindqvist (2007) provides an example. He discusses how the imperial fiction of _terra nullius_ – no one’s land
has in Australia co-constituted the conditions for near extinction of the Indigenous people. The apparatus of *terra nullius* also co-constituted the nullification of both human and non-human history prior to colonization, and a particular set of possibilities of time, space and land and their relationships with human beings. Lindqvist comments: ‘*When the natives deny the occupiers access to their records and traditions, scholarship declares that such do not exist...When the settler community has stolen land from its original owners, scholarship finds that the natives have no land rights*’ (2007, p. 38, 39). All of these constitutions have real, material and un-erasable effects in Australia.

Bakhtin takes issue with the Kantian concept of time and space as forms of cognition and defines them instead as *forms of the most immediate reality* (Bakhtin, 1981, Notes, location 6211). Time and space are *physical*, not just mental and cultural, aspects of the universe and are entwined and are co-emerging and material. Barad’s (2007) account of the constitution of space and time in the universe is similar to Bakhtin’s account of their constitution in the novel. The ongoing flow of agency and intra-action does not take place in space and time, where time and space are exterior parameters, but it is part of the making of spacetime itself. Temporality and spatiality emerge through the same process of agential relations as other phenomena, are iteratively reconfigured in the materialisation of phenomena in the universe, as happens in the novel.

This experiment uses this malleable quality of the material-discursive constructions of space and time in the chronotope as a means to subvert normative ontological thinking. The notion of space as a container and of time as divided into evenly spaced increments marking a forward and linear progression of events is foundational to much Western epistemology. This particular form of physicality has tended to impart a sense of primordiality, permanence and objectivity (Barad, 2007). As a research and literature chronotope, we can say that it has also tended to promote spatialised and contained models of complex practices such as writing which lend themselves to enabling certain sequential and logical possibilities, but less well to representing others such as dynamism, contingent materialisation,
incorporation of both material and intangible practices, iterativity, or co-constitution.

On the other hand, as I suggested earlier, postmodernist fiction often deploys chronotopes which subvert consensus reality by performing ontological speculations in the form of spatio-temporal questioning (McHale, 2004). It asks: How is a world constituted in space and in time? How might alternative space and time constitute an alternative world? What happens when one passes from one form of spacetime to another?

But the potential of the concept of the chronotope is that it need not assume any particular ontological landscape; that is it does not privilege either realism, or postmodernism, or anything else. For example, while some argue that pluralism is both the ontological landscape of postmodernist fiction, and the ontological model of contemporary reality (for example, McHale, 2004), I suggest that ontological pluralism and multiplicity are useful constructions, but that we need not assume these are objective truth any more than we need to assume scientific realism. If we begin to privilege and emphasise pluralism or multiplicity as an inarguable and therefore determinable quality of existence, we are again hampered in our capacity to conceive of alternative possible ontological realities, for example non-dual, parallel, interwoven, recursive, iterative, rhizomatic, centrally organised, liminal or intra-acting ontologies.

**Novelistic discourse, intra-textuality and chronotopes in the writing apparatus**

The thesis as an experimental apparatus (Barad, 2007) focuses attention on texts as experimental data, and on the possibilities and aliveness of texts, in relationships. This draws powerfully on Bakhtin’s (1981) understanding of language as a simultaneously fixed but inherently interactive system via which possibility is perpetuated. Language gives us the illusion of unity of meaning though its codification, yet constantly and unstoppably expresses infinite
meanings as it is essentially enacted as dialogue, which is always unpredictable and open-ended. Language is then alive.

According to Bakhtin, because of their deliberate exploitation of this heteroglossia – multiple discourses without authorial preference – novels are the most alive of the writing genres. The novel ‘faces outward away from itself’ (Bakhtin, 1981, Chapter 4, location 3669) in that intrinsic to its indeterminate meaning and polysemy is an expectation of interaction with the world and readers: an anticipation of possible reactions to itself, an encounter, a relationship. Novels are also young (Bakhtin, 1981) in the sense that their possibilities are yet unseen.

Genres other than the novel can undergo processes of ‘novelisation’ by becoming more free and flexible, incorporating more heteroglossia, becoming dialogized, permeated with irony and indeterminacy, ‘a certain semantic openendedness, a living contact with the unfinished, still-evolving contemporary reality’ (Bakhtin, 1981, Chapter 2, location 338). This research writing apparatus is ‘novelistic’, that is, it draws on these qualities of open-endedness, indeterminacy, the orientation to dialogue and the seeking of relationship with the world in its ongoing co-creation.

The process of intra-textuality, rather than intertextuality, is used in this novelistic experiment, and is drawn from Bakhtin (1981), and Barad (2007). The distinction between intra-textuality and intertextuality is developed from the distinction that Barad (2007) makes between intra-action and inter-action. While inter-actions involve a relation between two or more already existing
entities, intra-action signifies that entities do not pre-exist their relations with each other, but rather only come into being through relations. Thus, my idea of intra-textuality is drawn from Bakhtin’s (1981) idea of text in open and ongoing responsiveness with other texts, and with the world, but, rather than assuming texts are pre-existing entities, it sees texts as co-emerging entities which come into being through these relationships.

A further distinction is that Bakhtin’s concept of intertextuality involves a dialogic process between text and the social world, which is inconsistent with a new materialist and agential realist position, as it privileges the human social world as the primary agent alongside text. Instead I understand intra-textuality to involve relations from which texts co-emerge, alongside other entities in the social, and material and immaterial world. For example, an aspect of the future orientation of texts is seen as their potential to ‘interrogate the normative status quo’ (Mariela, 2007, p. 417) by presenting alternative voices and discourses. But this interrogation of the status quo is most commonly considered in a poststructural sense which emphasises relevance to discussions about the dynamic and transformative relationship between texts and human culture, society and politics, for example in research constitutions of social pluralism, marginalised voices and social struggles. Instead, I see this interrogative potential in a broader sense, not restricted to the social world. I suggest that the dynamic relationships of text involve entanglements with and co-emergence of textual, social, material and other ontic phenomena in the world.

This experiment is interested in how texts can and might intra-act with other texts to produce agentic patterns forming realities. For example, the material and intra-textual entanglements which co-constituted the patterns of terra nullius, mentioned previously, included the presentation of the extermination of Indigenous peoples as a natural part of the evolutionary process, by Darwin in The Descent of Man (1871). This text showed this not as a crime but an inevitable outcome and ‘precondition for continued progress’ (Lindqvist, 2007, p. 36). Elsewhere (for example, Beer, 2009; Richardson, 1990) Darwin’s writing has been discussed as an example of how theory is made by fictions to
craft a narrative saleable to a particular audience. Whether or not he intended them this way, Darwin’s theories are entangled in many of the normative constitutions of modern chronotopes and Western ontology, including the assumption of hierarchy in the organisation of species and the constitution of existence as competition for survival. *Terra nullius* and *The Descent of Man* (Darwin, 1871) were fictions emerging through intra-actions with other fictions, which in other entanglements including the massive geographic land mass of Australia, and an audience requiring resettlement, with guns, and who were willing consumers of the narrative of progress and hierarchy, manifested patterns and effects now entrenched and irreversible in the world.

This understanding of the essentially intra-acting, relational quality of language resonates with Barad’s agential realism (2007). Both express the notion of discursive elements co-emerging in relations with other elements in the world, a process which is alive, creative and mutually constitutive. The world shapes language and language (as one aspect of entanglements) shapes the world. In this thesis I use the term ‘intra-textuality’ where I refer to that which pertains to my methodological process and research apparatus. However I still employ the term ‘intertextuality’ at times, in contexts pertaining to others’ use of this term, and to the Bakhtinian (1981) or poststructural understanding of the dialogic relationships of texts and world.

The concept of the chronotope itself embodies Barad’s intra-action (2007) in that it enables attention to the complex entanglement and emergence of language-space-time-phenomena. It is thus is a democratic meeting space between selves, texts, worlds, meanings and possibilities. The chronotope concept is a becoming space (Kristeva, 2002); a spacetime of the threshold.

In this experiment I am interested in this threshold capacity of the chronotope, as embodied, democratic meeting space for intra-actions. Each unique chronotope embodies a particular kind of becoming space, which creates particular kinds of possibilities and limitations of what can become in space and time, and for people and phenomena, and in the narrative or discourse.
The ethical experiment

Barad (2007) argues that we should not just collapse categories and assume that a theoretical treatment of physics can also explain every other kind of phenomena. Rather than a reductive approach in which physics and physics laws are found to be at the foundation of everything, she argues that it is more important that we attend to the epistemological and ontological issues that quantum physics forces us to confront. Primarily she argues for recognition of the inseparability of epistemological and ontological, and thus, ethical considerations in research.

In Baradian terms, an experiment is part of the ‘open process of mattering through which mattering itself acquires meaning and form through the realization of different agential possibilities’ (2007, p. 141). An experiment is an effort to simultaneously create and determine phenomena, a complex practice. As research writers we have an ethical responsibility to examine the possibilities for people and the planet that we help to create and enact in our writing experiments, and those possibilities we shut down or help to disable. Diffraction in this experiment entails taking into account such performative engagements as the practices through which interventions (rather than representations) are produced, and the marks they leave, the difference they make in the world that matter. Therefore diffraction is not about difference per se, or about differences alone, but about the ‘entangled nature of differences’ (Barad, 2007, p. 36) which make a difference.

Next in this chapter I attend to some contingent material-discursive image-forms which constitute a process for diffractive analysis (Barad, 2007) of chronotopes (Bakhtin, 1981) in texts. I use image-forms, or ‘figurations’ (Braidotti, 2013, p. 75) to guide the methodology and give form/s to the apparatus, because the use of these is a means to attend to writing and methodology as embodied and material, as well as discursive. Braidotti argues that in contrast to the representational function of ‘metaphors’, figurations are ‘vehicles to imaginatively ground our powers of understanding within the
shifting landscapes of the present’ (2013, p. 75). Figurations bring to life writing as entanglements of ideas, as materially embodied black and white two dimensional marks on a screen or page, as metaphor congealed into substance, as affective and ontic phenomena in the world. The use of figurations is also a means to avoid the concretising of the methodological process, to help it to remain malleable, as images do not have stable meaning. These main methodological guiding image-forms are: maggot, data glow, chronotope and ice floe. These can be summarised briefly as follows:

First, the maggot: This is the lava of the research apparatus. It is the early material-discursive form the research takes in the mind, a kind of maggot, which attaches itself to the nebulous potential of the research ideas giving them plastic form which can be worked with, enabling both structure and metamorphosis. Second, the glow of data (MacLure, 2013a) describes the sense of frisson and possibility emitted by certain data and acknowledges the entangled and mutually relational nature of research data selection. Third, chronotopes. These are the intended particular subjects/enactments of the research; that which it seeks. This apparatus sets up textual enactments of the research in order to examine emerging diffraction patterns and particular chronotope differences, and to explore how these influence research writing possibilities differently. Fourth, the ice floe. This image maintains significance throughout the experiment and has much ironic potential. The ice floe is a metamorphosing central figuration with specific significance for attending to the differences that matter in research and worldly conceptualisations. As I will discuss later in this chapter, the apparatus draws on the qualities of ice floes for procedural, creative, investigative and ethical means; for imaging, imagining, representing, and attending to dynamic writing constitutions and the differences they make, that matter in the world.
Maggot in the apparatus: The emergent research figuration

The first material discursive image developed in the methodology is the maggot. In the preface to his postmodern novel: *A Maggot*, this is how John Fowles describes it:

> A maggot is the larval stage of a winged creature; as is the written text, at least in the writer’s hope. But an older though now obsolete sense of the word is that of a whim or quirk. This fictional maggot was written for very much the same reason as those old musical ones of the period in which it is set; out of obsession with a theme. For some years before its writing a small group of travellers, faceless, without apparent motive, went in my mind towards an event. Evidently in some past, since they rode horses, and in a deserted landscape; but beyond this very primitive image, nothing. I do not know where it came from, or why it kept obstinately rising from my unconscious. The riders never progressed to any destination. They simply rode along a skyline, like a sequence of looped film in a movie projector; or like a single line of verse, the last remnant of a lost myth.

(From the Preface to 'A Maggot', Fowles, 1985, p. 5)

The maggot, as Fowles (1985) suggests above, is the emergent larva before metamorphosis in writing entanglements, or the early, noticed, glow of potential from which the writing/research develops. It is not the beginning, as there is no beginning to the process in terms of an originating image, idea or point from which the research develops. The maggot is an entanglement of phenomena which is already there. But the maggot is important because it provides a nebulous shape to

It would be great if the entire film came all at once. But it comes, for me, in fragments. The first fragment is like the Rosetta Stone. It’s the piece of the puzzle that indicates the rest. It’s a hopeful puzzle piece. In *Blue Velvet*, it was red lips, green lawns, and the song - Bobby Vinton’s version of “Blue Velvet”. The next thing was an ear lying in a field. And that was it.

(Lynch, 2007, p. 23)
which, once noticed, can be attached the affective urge to write and create, which is otherwise in potential and lacking a form which can be attended to.

The maggot has agency. As Fowles (1985) says, the combination of this recurring image or shape and the affective urge to write can grip the author in the form of an obsession. Like Lynch’s (2007) first hopeful fragment, the song *Blue Velvet*, the maggot arrives and lingers, signifying a first piece of a puzzle; an aesthetic and affective loop of resonance and hope.

The particular shape of the maggot in this project appear in the prologue to this thesis: An expanse of grey ice, an ice well, a figure. This began as a compelling and recurring image and developed to seem generative and appropriate for attention to chronotopes and to ‘differences that matter’ (Barad, 2007, p. 369). An aspect of the agency of the figure on the ice is the personal constitution of this doctoral research writing project as slippery, lonely, absurd, self-indulgent, uncertain, un-navigable, dangerous and hopeful. That is, a kind of over-grandiose trek in a freezing, impervious landscape, where the ice is indistinguishable from the sky.

I discuss some of the patterns and implications of this constitution of the figure on the ice floe as a chronotope in Chapter Four: *Terra authentica, the heroic path chronotope in social science writing as research*. Following Barad (2007), this is understood as more than using the technique of metaphor to help bring creative potential to the research. It is instead to attend closely to the relationship of text-image-mind-body-knowledge-epistemology-ontology, to notice the nature of this relationship and what emerges from it.

The image of the ice floe appears and reappears through the thesis in flexible forms, enacting different experimental versions of itself. The ice floe is simultaneously already there, an unnamed remnant, and a signal toward what might be; a glimmer of agency and of potential.
Data glow in the apparatus: Texts, agential cuts and an epistemology of wonder

The second material-discursive image guiding this methodological process is the glow of data. As an aspect of her discussions about the wonder of research method, MacLure (2013) writes about the glow of data. She says:

...we are obliged to acknowledge that data have their ways of making themselves intelligible to us...On those occasions, agency feels distributed and undecidable, as we have chosen something that has chosen us...Some detail – a fieldnote fragment or video image – starts to glimmer, gathering our attention...

(MacLure, 2013a, pp. 660, 661)

I exploit the glow of data to make choices about text fragments to use in the project and to acknowledge their agency, the glow they make in relations with me and my writing and with each other, as integral and essential in the research apparatus. Knowing is a direct material engagement, and is dependent upon cuts made in entanglements, which enable the conditions and manifestations of possibility (Barad, in Dolphijn & van der Tuin, 2012). An experiment must make choices about which cuts to make, designed to help focus on specific features (Barad, 2007). An important form of agential cuts in this project is its choice of texts. The data sources worked with in this project are particular fiction and social science writing-as-research texts. The data themselves are text fragments from these texts – quotations and written images. The texts and text fragments are chosen to enable new attention to the possibilities enabled by different kinds of chronotopes and their ontic co-constitutions.
The chosen genres, texts and text fragments, glow (MacLure, 2013a); they have agency in bringing themselves to my attention as glimmers of provocation in relationship with other texts and texts fragments. This is recognised by the anticipatory emotional tenor emitted. Barthes’s idea of the pleasure of the text assists me in recognizing the glow of text fragments:

...the text: it produces, in me, the best pleasure if it manages to make itself heard indirectly; if, reading it, I am led to look up often, to listen to something else. I am not necessarily captivated by the text of pleasure; it can be an act that is slight, complex, tenuous, almost scatterbrained: a sudden movement of the head like a bird who understands nothing of what we hear, who hears what we do not understand

(Barthes, 1974, pp. 24, 25)

The figuration ‘data glow’ embodies wonder as an affective epistemology in the apparatus. MacLure’s concept of wonder (MacLure, 2006, 2013b; Pearce & MacLure, 2009) as I discuss later in the thesis, is a concept of the threshold and packed with possibilities of meaning. Wonder involves more than imaginative musing or speculation, but is a description of the ambiguously material/immaterial possibilities which spring from relationships. Wonder in the experimental apparatus aims not to identify and justify the patterns articulated. It aims to notice new patterns and to let them flourish: to enable their agency and materiality, their possibilities and their ‘inventive provocations’ (Barad, in Dolphijn & van der Tuin, 2012, p. 50).

This glimpse of possibility with its nuanced affective qualities and indeterminate subject of attention is one of the most generative and motivating experiences in my own research process and occurs in both reading and writing of both fiction and non-fiction. Text cannot exist as an independent entity, it emerges through intra-action (Barad, 2007). So, the glow of texts also emerges through intra-action, though association with other text and other phenomena. The texts and text fragments reach toward me and my writing and toward one another with a tenuous and indeterminate significance and through these relationships they co-emerge in particular kinds of patterns and entities.
In this apparatus the glow of data guides the selection of texts and text fragments, the positioning of fragments on the page and in relationship, and the writing patterns which emerge from these relationships, as I discuss next.

**The glow, genre, intra-action and agency**

*It is difficult to see the diffraction patterns – the patterns of difference that make a difference – when the cordonning off of concerns into separate domains elides the resonances and dissonances that make up diffraction patterns that make the entanglements visible.*

(Barad, in Dolphijn & van der Tuin, 2012, p. 50)

The principle of the glow of data, and the diffractive methodology in this project mean that the textual data is not chosen to illuminate or critique a particular perspective, existing domain of knowledge or developing theoretical conversation, but because *intra-actions between the data resonate or inventively provoke to co-constitute something in spacetime*. This epistemology is not about explaining/arguing something, but is about making something that resonates, and exploring why it matters.

Both the Baradian (2007) and the Bakhtinian (1981) approaches legitimise this. Writing entanglements transcend genre and are not restricted to conversations within, or about genre boundaries (Lodge, 1990). Instead they aim to see how texts and world enact diffraction patterns. This is not a license to do anything at all. The challenge in the project is to enact this process, while also producing something that the reader finds resonant and credible, like the production and intentions of a novel. However, the more clear and explicit requirement also for *‘respectful, detailed, ethical engagements’* (Barad, in Dolphijn & van der Tuin, 2012, p. 50) arguably perhaps, sets research writing apart from novel writing. My data selection method is therefore to begin with the provocative genres I identify below, and to exploit the often tenuous glow that fragments of text from within these genres throw out *with respect to spacetime possibilities.*
Each chapter in the thesis deals with a selection of three or more texts which have been grouped together for their tenuous reach toward one another and opportunities for entanglement and attention to diffraction of particular spacetime constitutions. This method rationalises the selection of text fragments as data, while fully acknowledging that in research we choose data because it also chooses us.

**Fictional genres – Their definitions and their glow**

Because of its capacity for ontological shifts and questioning, fiction is a means to read, write and think in often more fundamentally profound and radical ways about the way the universe is, or might be constituted, than are provided by our traditional writing structures in social science research. The fictional texts I use in this thesis are often ambiguous in genre, but despite this, identifying genre influence is important as these open-ended categories offer differentiated kinds of chronotopes. A summary of the ways I use genre terms and a rationale for their glow in terms of spacetime provocations and subsequent use in this thesis follows.

I refer to realist fiction as that which presents a chronotope in which spacetime is constructed according to empirical rules and thus is largely stable and unproblematised (Morris, 2003). Realist fiction aims to present the particular and the specific and by this method provides a ‘common-sense’ view of the world, in the detail of the domestic, social and political lives of characters. In this way realist chronotopes can enable complex relationships between these social features of the world and their influence on characters and lives.

Following McHale (2004), I refer to modernist fiction as fiction which emphasises subjective experience and epistemological forms of questioning. Modernist fiction enables experiments in temporal representations, for example stream of consciousness as a writing technique may present time as fluid, as disjointed, or as slowed down. These temporal techniques in general demonstrate the subjectivity of time experience, rather than explore and pose
alternatives to the common sense understanding of the linear nature of time, which exists objectively outside of human experience. The world is largely ‘an unproblematic backdrop against which the movements of the characters minds may be displayed’ (McHale, 2004, p. 234). Like realist fiction, this genre also enables chronotopes in which spacetime is largely stable, but here epistemologies of the human self are also allowed much play, enabling creations of identity, self-knowledge, and subjective experience.

Humanist fiction is a term I employ to indicate fiction in which the journey of the self is prominent. This fiction often draws on realist and modernist genres, and in these cases again constitutes a largely unproblematic backdrop of space and time. Fiction exploring the journey of the self can be highly compassionate, and enables nuanced explorations of diverse human experience. Humanist fiction also tends toward the anthropocentric, in that not only are narratives about people, they tend to take an instrumental view of space and time as having significance and meaning largely to the extent that they enable or constrain the aspirations and endeavours of people. Humanist-modernist fiction asks: How can we know the self and understand experience? Humanist-realist fiction asks: How can we understand the individual in the social and political world? Here I also argue that humanist fiction may also include fantasy texts in which the journey of the self is dominant over the reconceptualization of worlds. Humanist-fantasy asks: How can placing the individual in an alternative world work as a parable to help us to understand human life in this world?

McHale (2004) also discusses his distinction between modernist and postmodernist fiction. As I have suggested above, the modernist novel is concerned with problems of the individual and knowing, and elusive struggles to make sense in a largely realist, stable, unproblematised reality: the universe. In contrast, postmodernist fiction is concerned less with human perceptions and experiences of reality and attempts to know it, and more with the possibility of an ontologically plural (a large group) or multiple (numerously folded and differentiated) (Laplantine, 2015) universe, involving questions such as: What is a world or a universe? How do different worlds or universes
differ? What are other ways of conceptualising worlds and universes? What if reality is not what we think it is? That is, involving ontological questions.

I am conscious that any totalising or reductive definition of fictional genres is controversial, and I adopt these views not so much as a way of explaining the genres themselves, about which I am no expert, but as a way of illuminating and describing certain aspects of certain kinds of novels which interest me here. So for example, while others (for example, Currie, 2011), may employ the term postmodernist fiction to connote writing reliant on high levels of intertextuality, deconstruction and reflexivity, McHale’s conceptualisation useful to me here, is that these techniques may contribute to but do not ultimately describe the essence of the genre, which is ontological questioning. When I discuss postmodernist fiction I tend to mean fiction which presents no stable world behind the consciousness of the characters, ‘but only a flux of discourse in which fragments of different incompatible realities flicker into existence and out of existence again’ (McHale, 2004, p. 234). The fiction I am concerned with does so via a range of destabilising techniques including an intention to draw attention to textual surfaces, to transgress genre rules and to question material and immaterial boundaries between worlds, truths and realities. Postmodernist fiction glows as it enables radical conceptions of spacetime and the image and role of humanity in the universe, and other ontic constitutions.

By this view, fantasy can also constitute a form of postmodernist fiction and glows with the same opportunities. Fantastic literature is a confrontation between the supposedly possible; the real and the normal, and the supposedly impossible; the paranormal (Jackson, 2001). Mendlesohn’s (2008) concept of liminal fantasy has a particular glow. This is a fantasy subgenre in which there is not so much a confrontation and interrogation of the boundaries of the possible, as a re-imagining which blurs the boundary between consensus reality and fantasy or in which that boundary comes close to non-existent. The concept of liminal fantasy is developed and adapted from Todorov’s (1975) structure of the fantastic, but refers not merely to a work which hesitates between rational and irrational explanation, but which in addition uses a range
of techniques to fully develop the ironic potential generated by this hesitation. In this thesis I also discuss SF – an ambiguous term inclusive of liminal fantasy but with broader scope, used to indicate science fiction, speculative fiction, science fantasy, speculative fabulation, and fantasy (Le Guin, 1979). Again, these fantasy genres glow in this project, in the way they exploit ambiguity and irony to question and pose alternatives to worldly constructions and assumptions.

Gothic fiction techniques are also discussed here to a lesser extent, as those which draw on a sense of unease and the uncanny, involving an acknowledgement of the non-rational in the world, events, and in the depths of human beings and utilising such conventions as supernatural themes, ambiguous events and entities, inner and outer conflicts of self (Kosofsky Sedgwick, 1986). Gothic fiction draws heavily on techniques of ambiguity, working to enable the questioning of binaries: real and unreal, natural and supernatural, depth and surface, inner and outer, dead and undead. These means are also useful to enable intertextual or intra-textual work which looks again at common sense assumptions about dualisms in the world.

**The glow in social science genres**

The social science writing genres with a substantial glow here are those which constitute writing-as-research; that is, critique and/or representation of the role, aims and process of writing as a constitutive, rather than representational research method, in the academic social science context. They tend to have come from the discourses of poststructuralism, feminist poststructuralism and arts-based research. A rationale for the glow and use of social science genres and the ways I use these terms follows.

Feminist and poststructural discourses glow as they have for several decades challenged and shone sustained light on the limitations of the neo-positive context of research writing as a specific, determinate and supposedly objective model of thought, its lack of depth or richness, its lack of means to cope with complexity and messy realities, its pretentious impersonalities, artificialities,
and arrogance (for example, Lather, 2006; Latour & Woolgar, 1986; Law, 2004; Richardson, 1997; St. Pierre, 2000). In response to this, feminist and poststructural methodologies have groped toward re-constructions of research writing and its relationship with the world with conscious attention to humility, subjectivity, lack of pretence, vagueness, aesthetics, indeterminacy and ambiguity (for example, Britzman, 2000; Davies, 2001; Lather, 2000; MacLure, 2006; St. Pierre, 1997a). These constructions suggest intriguing alternative spacetime possibilities.

The arts-based, practice as research and research-creation movements draw on poststructural and feminist positions and themes, emphasising the roles of the imagination, creativity, aesthetic dimensions, experimentation and arts process in research (for example, Barone & Eisner, 2012; Barrett & Bolt, 2007; Dixon & Senior, 2009; Leavy, 2009). Research, like art, is seen as a process of coming back again to re-experience phenomena, of scrutinising the world. It assumes that learning and knowledge are experiential, taking place through action and reflection on that action (Barrett, 2010). These approaches utilise emergent methodologies. The process of reflexivity, which demands that the same kinds of questions asked of the object of enquiry are also asked of the researcher, necessitates methodologies which emerge from these reflexivities and are subject to the adjustment and refinements they demand (Barrett, 2010). The processes or methods of practice-led research writing involve attention directed at these subjectivities and reflexivities, for example researching characters, observing their lives and settings, involvement in dialogue and conversations with them, and artistic shaping and crafting to make meaning, for example, the crafting of a case study or of images into narrative, the shaping of observations into poetry or fiction.

A prominent characteristic of the challenge these intertwined discourses make to conventional social science scholarship is the argument for epistemological aims other than the quest for certainty. This critique of certainty has centrally involved ethical challenges to conventional research writing practices and assumptions, including the supposed objectivity of the scientific method, the supposed transparency of academic writing and the assumption of binaries.
between art and science, imagination and research, fiction and research, and subjectivity and objectivity (for example, Banks & Banks, 1998; Mills, 1973; Richardson, 1990). The discourses argue, like Barad (2007), for a more sophisticated understanding of the constructions of writing and research as co-constituting rather than transparent and unproblematic. They argue that this is essential in our own accountability in co-constituting writing.

Poststructural, feminist poststructural and arts-based research aim to enhance perspectives, to seek new ways of viewing or recreating experience rather than a quest for certainty, and to discover new questions which might be asked. These approaches, like the fictional genres previously discussed, emit the glow of experimental, future and possibility oriented ways of understanding the potential of writing in research.

Having selected the texts themselves, much of my reading for this project has been done with Kindle software, which means I make agential cuts by the electronic highlights I make when the glow of data presents itself as I read. I do not make a survey of uses of particular words or phrases across texts, but am able to make further cuts by using the search function to extend the reach of text that glows, for example, by looking for further text fragments containing a particular phrase, such as ‘torture machine’, ‘concrete reality’, or ‘corporeal’ or ‘ice’.
The third material-discursive image guiding this methodology is the chronotope, the ‘*intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature*’ (Bakhtin, 1981, Chapter 3, location 1304). The quote above of Barad’s on apparatuses might also describe the chronotope. The apparatus and its chronotope shape what can and does happen in the research. The chronotope designates particular phenomena, enfolded in the apparatus itself and in the world. Chronotopes; spacetime constitutions as material-discursive phenomena in this thesis are the focus of the experiment; both subject and enactment. This experiment aims to enable intra-actions (Barad, 2007) between text fragments in order to attend to and produce patterns of textual-spacetime.

A series of chronotopes emerge from the diffractive process and chapter sequence described next in this chapter. I have chosen to write separate chapters drawing from fiction and social science texts. I do this not to reconstitute distinctions between the genres, but to set up the experiment in a
particular way. Each iteration of the chronotope begins with its emergence through fiction rather than social science texts because I am interested in the innovative generativity of a project which is ‘about’ social science writing, but which begins with the more fluid and less constrictive nature of fictional figurations and moves from there toward looking at social science writing through these figurations. In fact of course, this process is not linear, these genres and images already have a long history of intra-action, and my own process is recursive. Nonetheless, the sequence and organising form in which I present here, adds something to the co-constitution of ideas which foregrounds, enables and attends to new possibility and fluidity.

The chronotopes, as a chapter sequence are:

Chapter Three: Terra incognita: A heroic path chronotope and fiction writing possibility

Chapter Four: Terra authentica: A heroic path chronotope and social science writing possibility

Chapter Five: Rhizome city: A rhizomatic chronotope and fiction writing possibility

Chapter Six: Faltering machine: A rhizomatic chronotope and social science writing possibility

Chapter Seven: Coral reef: A liminal chronotope and fiction and social science writing possibility

The chronotopes and their readings produced here are not considered the only and ‘true’ possibilities for chronotopes enabled by these texts, but instead are those produced by the particular apparatus and the particular agential cuts made here. The chronotopes discussed here do not try to represent a reality that we might all agree upon. They show a particular set of possibilities, and hopefully show these in such a way as to be somehow resonant with the reader’s worlds of experience and also to be actively creative in the world.
Ice floes in the apparatus: Differences that matter

The ice-floe as maggot

The fourth material-discursive image guiding the methodology is the ice floe. Ice floes in this project emerge with particular iterative, ironic significance. The ice floe pattern first, as I said earlier in this chapter, emerged early in the project as a maggot-image; that of an ice well and figure struggling across a great expanse of ice. This image has co-constructed certain patterns in the research writing which I return to in the following chapters, and which might also be said to intensify the patterning of some of the ghosts of my past research training and prior fascinations with research, writing and creativity in general as (in part) a grand, heroic journey.

The New Zealand novelist Janet Frame’s (1961) image above, of the great gap in the ice floe between herself and other people is an example of the glow of a text fragment which has resonated with me over time and intensified these ice patterns in this project. This maggot ice floe image resonates with a humanist notion of PhD research writing and as an aspect of this humanist journey, embodies some of the ‘method anxiety’ (MacLure, 2013a, p. 664) involved in the writing of this thesis. In the larval stage of this thesis, I saw one of the heroic tests of the PhD path as the test of facing the risks of thinking and writing differently. The constitution of the lone figure on the ice embodies the fear of the humility and honesty which seem required to relinquish a sense and tone of authority in research. It also embodies fear of the arrogance demonstrated
in making up and sending out into the world a different and personal account of methodology, and the associated fear of failure and marginalisation in the academic community. The act of writing seems at times a perverse compulsion to come close to and to test these gaps in the ice. This testing of the gaps in the ice has also emerged as an effort to open possibilities, to experiment with a new constitution of the experience of academic writing, perhaps as less lonely and more mutually involved and entangled. As Barad (2007) says, material and discursive practices which have bearing on research are not naturally broken up into different realms of social, scientific, artistic, mental or emotional phenomena. These are equally involved in the entanglements and intra-actions of the research. These particular ghosts of prior training and fascination are equally recognised entanglements in the research apparatus.

*Ice-floes, intra-action and diffractive patterning*

The figure on the ice floe embodies the ghosts of my humanist training, but attention to the geography and materiality of the ice floe itself enables the material-discursive qualities of the consolidating, the transformative and the fluid, which are important in this project. The ice floe helps me to attend to intra-textuality in this apparatus as both fluid, and involving co-emerging material, embodied constitutions. Below, St. Pierre (1997b) helps me to sharpen this image of intra-textuality in her description of the inexplicable and perverse relationships between texts, reading, writing and thinking.

*Writing seems more accidental than intentional and is often produced by unintended juxtapositions: coreadings of texts on entirely different topics, the discovery of a particularly provocative word as I skim the dictionary page for another, or the memory of a dream that displaces some truth to which I have become too attached. I expect that any paper I have written could have been another paper quite easily..... My writing thus reflects no systematic tracing of thought but rather maps ordinary forays into unintelligibility.*

(St. Pierre, 1997b, p. 2).
I use an idea of intra-textuality as a sea of intra-acting materiality, text, reading, writing, thinking and experience, in which diffractive patterns can be read and perpetuated where these phenomena co-emerge and consolidate. In the central chapters of the thesis I use the aesthetics of ice floes to materially embody the textual data, their entangled diffraction patterns and agency and that of the writing possibilities they generate. I use the text-box in Word software named ‘Newsprint sidebar’ to embody text fragments something like ice floes on the page, as is seen in the way I have placed quotations in this chapter. The positioning of data/text/images as sidebars on the page is intended to draw attention to their uneven surfaces, visible and invisible mass and materiality, and to materialise and mobilise their agency and entanglement with one other, their potential for reading through one another.

The primary mode of analysis in this intra-textual process is diffraction rather than critique. As in some kinds of rhizoanalysis (for example, Alverman, 2000), the text fragment is used here not for its meaning, but for what it does; how it intra-acts with other texts. That is, rather than putting text against text, comparing and evaluating alternative readings, the diffraction process floats texts in co-emerging relations with texts, and the analysis attends to reading the texts through one another for the patterns of resonance and dissonance which emerge from the relationship. This means that where, in a conventional thesis, the reader might expect to see alternative theoretical interpretations of texts posed against one another, meaning evaluated and an argument justified, this does not necessarily occur. Instead, the patterns of waves of resonance or dissonance are attended to, possible co-constitutions are explored, and their extensions are surfed. Ice floes form part of the apparatus, and therefore they also form part of what is produced. As Barad says:

In the absence of a given apparatus there is no unambiguous way to differentiate between the object and the agencies of observation; an apparatus must be introduced to resolve the ambiguity, but then the apparatus must be understood as part of what is being described.

(Barad, 2007, p. 118)
Ice floes bring to the forefront the idea that knowledge, worlds and forms in the world are relational, and both substantial and impermanent. They are contingently determinate and entities shaped in relations with other phenomena, always transitioning from and back into indeterminate, non-individualised form. The aesthetics of ice floes as discussed above lend the apparatus a material embodiment of surface and depth. To speculate requires the generativity of ultimately ironic, uninterpretable surfaces, and the ability to slip across these, to think aside. Conjecture requires at the same time the capacity for mass, for re-imaginings with thick description, and for vertical extension, projection depth-ward or skyward. Collectively, ice floes embody a spatio-temporal reality of diffraction: co-emerging, impermanent, glowing, impressive, materially agentic across times, wave-making, circulating, faceted, slippery, subject to swerves, currents, collisions, splits and calms, visible and knowable only in small proportion to their mass potential in spacetime.

*Ice floes, re-patterning, and managing prolepsis*

A further significant material and discursive set of practices and ghosts in my past which is entangled in the apparatus, is associated with an upbringing semi-schooled in and respectful of astrology and its ontological implications. This has enabled a wider respect for and acceptance of marginalised and subversive epistemologies, and a broad sense of the universe as manifesting fascinating, mysterious and intricate patterns and agencies rather than cause and effect relationships. This background and my mother’s influence have also enabled the intellectual habits of seeking original connection-making opportunities and of iterative re-patterning. However, watching my mother over decades compile a room full of boxes of notes for a future book embracing astrology, science, myth, number and religion, and my own sifting through of these boxes on her removal into dementia care have also left other marks.
Consistent with a diffractive, iterative process, I have a tendency toward prolepsis, manifesting in continual re-beginnings and constant re-configuring of the boundaries and methodology of this thesis. I have fear of this iterativity and prolepsis and I am mindful that the apparatus must also manage, acknowledge or attend to this pattern which threatens to sabotage the research. Expansive reading, note-taking and writing, obsessive re-configuring of images and connections, an interest in open-endedness and indeterminacy, and much iterative walking, pausing, swerving, sketching, mapping and glimpsing, result in a tendency to highly repetitive and iterative writing, constant expansion, and real problems for the containment and completion of the project. I recognise in both my mother and myself much affinity with Eliot’s Mr Casaubon, of *Middlemarch* (1871/1965):

>…..the vast field of mythological constructions became intelligible, nay, luminous with the reflected light of correspondences. But to gather in this great harvest of truth was no light or speedy work. His notes already made a formidable range of volumes, but the crowning task would be to condense these voluminous still-accumulating results and bring them, like the earlier vintage of Hippocratic books, to fit a little shelf….

*(Eliot, 1871/1965, pp. 46, 47)*

Eliot’s Casaubon (1871/1965) with his text-in-potential ‘*The Key to all Mythologies*’ (p.313), has the same tendency toward prolepsis and the unintelligible foray (St. Pierre, 1997a) towards an idea not yet formed. Casaubon aspires to a life which will extend him beyond his own limits (Uglow, 2008, p. 243), reaching toward a sustained and complex piece of research and struggling to develop his own methodology. As I discuss later in this thesis, ‘*The Key to All Mythologies*’, is his attempt to meet this aspiration, but its impossible construction in his mind as a grand, comprehensive narrative of a unifying and

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*I have been led farther than I had foreseen, and various subjects for annotation have presented themselves which, though I have no direct need of them, I could not pretermit.*

*(Casaubon, in Eliot, 1871/1965, p. 231)*
essential mythology, and the ‘blinkered, private path’ (Uglow, 2008, p. 239) he constructs for himself are crippling, and his book is ‘stillborn’ (Faubert, 2005, p. 48). Here I use the ghost of Casaubon to consider the means with which my own research apparatus might manage of some of this prolepsis.

The initial means by which I attempt to subvert the dangers of prolepsis is via the figuration of ice. This diffractive methodology and this thesis are in a very embodied sense, continuously emerging, iterative and co-constituting with no real beginning and no end. The act of writing is continual glimpsing of possibility and attempting to bring this into being, whilst before this is done the glimpse has made new patterns in relation, and a glimpse of something else, and everything has swerved, bent, dissipated or been reconstituted. Using the ice floe figuration and structuring the thesis around certain chronotopes, I constitute them as temporarily frozen in order that there is a slowing in their emergence, which enables some sustained attention to their forms and diffraction patterns before transitioning to new shapes, or to a liquid and amorphous sea.

Ice floes and differences that matter

A fourth variation in the pattern of the ice floe, significant in this project is that ice floes demonstrate more broadly the principle of entangled ethics in research and knowing. ‘(E)thics ...is not predicated on externality but on entanglement. Diffractive readings bring inventive provocations; they are good to think with. They are respectful, detailed, ethical engagements’ (Barad, in Dolphijn & van der Tuin, 2012, p. 50).

While we cannot determine effects of our research, as no such independently determinate effects exist, we should examine it in detail and with respect for the patterns of intensity and dissonance it manifests in relationship with other phenomena in the world, as the differences in these patterns matter. They matter in that they mean changes to co-constitutions in the world with which we are entangled and they matter in that they co-constitute material matter. Ice floes and their changing forms are entangled co-constitutions with climate.
change, which is one of the most compelling demonstrations of how complex phenomena make differences that matter in the world. The melting of ice floes and of the polar-regions on the planet give us strong cause to try to understand how it is that our apparatuses for knowing are implicated in the production of that which we are trying to understand (Barad, 2007). As discussed in the introduction to this thesis, climate change invokes the imperative for new ways of knowing. Attending to ice floes invokes attention to change in which we are both involved and co-responsible, but yet which cannot be understood in terms of cause and effect.

In each chapter in this thesis following the patterns of the chronotope which emerge, I then explore some patterns in the differences it makes; why it matters in research and ontology. In these sections of the chapters, I bring in further texts in order to attend to and discuss these differences further.

**Apparatus and methodology: Iterative patterns**

*I get some images and I connect one piece to another. That’s the story line. Then I explain the story line to the reader.*

(Murakami, interviewed by Wray, 2004, Summer).

In this chapter I have described some important material-discursive patterns co-constituting the research apparatus, developed from Barad (2007) and Bakhtin (1981). Intra-textuality is a concept stemming from Barad (2007) and Bakhtin (1981) and is understood as co-constituting entanglements from which texts and other worldly forms emerge. Chronotopes (Bakhtin, 1981) are images of spacetime constituted in literature. Diffraction (Barad, 2007) is in this project the process by which the agency and intra-action of texts and chronotopes co-constitute waves and patterns of interference which can be examined. The research apparatus is described in a series of four figurations diffracted through Bakhtin (1981) and Barad’s (2007) texts. These images together engage the material force and entanglements of language and the world (MacLure, 2013a). The four images guide an intra-textual experiment to
diffract text fragments, reading them through one another and attending to and producing patterns of chronotopes. These patterns can be examined for their intensities, resonances, dissonances, calms and bends.

*Reality as we have it in the novel is only one of many possible realities; it is not inevitable, not arbitrary, it bears within itself other possibilities.*

(Bakhtin, 1981, Chapter 1, location 748)

This thesis is novelistic in that I attempt to establish connection with the reader, not always by a carefully drawn logical and critical argument, but by opening up a conversation using some of the means fiction authors use. That is, not by aiming always to elaborate what is, but by aiming to explore something which seems possible, in order for the reader to suspend disbelief to the extent that they can engage with the text. Barad argues that ‘*critique is a tool that keeps getting used out of habit, perhaps, but it is no longer the tool needed for the kinds of situations we now face*’ (Barad, in Dolphijn & van der Tuin, 2012, p. 49). Bakhtin argues that the novel as a genre is present and future oriented, rather than oriented toward the authority of ‘the past’. The novel ‘*faces outward away from itself*’ (Bakhtin, 1981, Chapter 3, location 3669) in that intrinsic to its polysemy is an expectation of intra-action with readers and the world. In this process the thesis must have points of resonance with the reader’s known world, but must also open new connections and resonances, to invite new kinds of response. The epistemology does not enlarge critique of particular theoretical conversations, but attends to co-constituting intensities and dissonances, and enables other, and inventive intensities and dissonances, through which to view research writing. This involves a more fluid and experimental kind of involvement in theoretical conversations.

I attempt, as Bakhtin (1981) advocates, some degree of artistic consistency of images which lends the writing narrative shape and possibilities. I have attempted to explain here my initial methodological approach as already existing entanglements and diffractions of text, thought, emotion, experience
and worldly phenomena, and to show in the thesis in its entirely some of the ambiguity, iterativity and diffraction of this research writing process.

The experimental research methodology and apparatus are summed up as follows:

The ice floe is worked with as the maggot-image which is the lava of the research potential in the project. This image gives form to the early ideas in the project about research as an embodied, slippery and lonely experience, and gives ironic and metamorphosing shape to the apparatus.

Experimental cuts are enacted in the data selection, apparatus and methodology by drawing on the glow of data. This glow is used to select particular textual genres which extend possibilities about research writing and spacetime, and to select texts and text fragments from these genres which glow in relationship with one another.

Chronotopes are the intended particular subject, focus and enactment of the research. This apparatus sets up textual data in relations in order to examine and create particular chronotopes and to explore how their patterns influence research writing possibilities differently.

Returning again to the ice floe, this figuration is significant and iterative in this apparatus and continues to emerge with ironic potential. The apparatus draws on the material and fluid qualities of ice floes for procedural, creative, investigative and ethical means; for imaging, imagining, representing, and attending to dynamic writing constitutions and the differences they make, that matter in the world. The ice floe enables a more conscious, explicit, detailed and respectful means to consider the material and discursive effects of the writing practices, images and chronotopes we construct in writing, which at the same time, acknowledges and enables the agency and creative potential of this writing.
3. Terra incognita: Fiction writing and possibility on the heroic path

Spacetime and texts of terra incognita

In the previous chapter I outlined a provisional methodology and apparatus involving four images used to guide an intra-textual experiment to explore the diffractive patterns co-emerging with chronotopes. In this chapter I begin to apply this diffractive approach to fiction writing. I use an understanding of texts, text fragments and images from the literature as data. I use an aesthetic approach to this data as hopeful fragments (Lynch, 2007) which are slippery and impermanent, anticipatory, potentially risky; something like ice floes. This data glows (MacLure, 2013a): It brings itself to my attention with emotional frisson, it has agency of its own in its combined interactions. I use the materiality and aesthetics of ice floes to consider chronotopes – artistic constructions of spacetime in the texts – and to create, consider, discuss, extend and attend to agency in the data and the possibilities of writing the chronotopes generate.

The chronotope of the heroic path into terra incognita emerges as a strong pattern in the fiction used in this chapter. The road or the path in a more general sense is one of the most ubiquitous chronotopes in literature (Bakhtin, 1981). The path chronotope is also conspicuous as an image of research: The ‘research journey’ is a common construction of the path, as I discuss in the next chapter. While most novels contain some variation of the road or path chronotope (Bakhtin, 1981), in this chapter I look at novels in which I perceive
the path as an image of space, time and existence as dominant over other chronotope shapes.

In this chapter I focus on four novels which express different versions of the heroic path chronotope, and attend to different diffractive patterns of relevance to the act and constitution of writing. These texts are: *The Lord of the Rings* (Tolkien, 1955/2005), an expression of the heroic path in fantasy; *The Body in the Library* (Christie, 1942/2014), the heroic path chronotope in detective fiction; *Middlemarch* (Eliot, 1871/1965), the path chronotope in realist fiction; and *Faces in the Water* (Frame, 1961), an expression of the heroic path in modernist fiction. In the introduction to this thesis I defined my use of these genre terms, explaining some of their differences in epistemology and ontology. In this chapter I direct specific attention to patterns in the ways spacetime and epistemology are constituted in each of these chronotope versions, and the resulting patterns of possibility in writing constitutions. As I have stated in the previous chapter, this diffractive process is distinct from a Baradian analysis. In this chapter I put to work texts and chronotopes from literary modernist and realist traditions to see what emerges via their intra-action. A particular humanist, modernist, realist figuration – the heroic path, emerges. This is explored for its affordances and exclusions in epistemology and spacetime. Rather than to give these texts a New Materialist reading, the intention is that this writing experiment makes the process of mattering via our traditional literary forms somewhat more visible, while simultaneously also exploiting the novelistic, diffractive process which keeps texts open to new dialogue with the world.

The initial part of this chapter discusses the ways that the chronotopes in these texts constitute patterns of ontic phenomena organised around journeys of the self. They enable an image of humanity as individualised heroes whose primary task is to struggle to understand the experience of the self in the world. They co-constitute a binary between this subjective experience and a separate, unified and objective ontic world. The narrative aim is to give voice and constitution to these single or multiple subjective perspectives. In this discussion a pattern of threshold spacetime emerges and I discuss the
variations and intensities of this threshold pattern among the texts and chronotopes. A number of further diffraction patterns in terms of the possibilities and limitations of these chronotopes for epistemology and writing are then discussed. The chronotope assumes that mastery of self-knowledge yields the most significant form of understanding, and this understanding yields control. As the great explorers of the freezing Antarctic went into terra incognita in order to master it, so does the fictional hero in this chronotope venture into the terra incognita of the powerful and dangerous latent capacities of the human mind, aspiration, creative and intellectual expression, service and connection to others, in order to understand how to develop and bring these into being.

The path into terra incognita is a treacherous one; an ordeal and a test of heroism. But the path does not stand for the all of the unexplainable mysteries of the ontic universe. Supposedly separate material and physical features of the universe serve as enablers and tests of successful mastery of human potential. The true mystery of the universe is in the surfaces, depths, cracks and shifting, slippery, latent power and potential of humanity, to which the outer landscape and ontology play a supporting and ultimately unambiguous role. While forms of threshold, indeterminate spacetime are important epistemological enablers, the spacetime of the path is in general perceived as a journey toward the particular and definable moral goal of human self-understanding or expression.
The heroic path spacetime

...what could be sadder than so much ardent labour all in vain?"

...Indeed I am wrong altogether. Failure after long perseverance is much grander than never to have a striving good enough to be called a failure.

(Eliot, 1871/1965, pp. 254, 255)

But still she was there, who was there before Sauron, and before the first stone of Barad-ur and she served none but herself, drinking the blood of Elves and Men bloated and grown fat with endless brooding on her feasts, weaving webs of shadow; for all living things were her food, and her vomit darkness.

(Tolkien, 1955/2005, p. 723)

Miss Marple understood then just what her friend had meant when she said the body wasn’t real. The library was a room very typical of its owners. It was large and shabby and untidy. It had big sagging arm-chairs, and pipes and books and estate papers laid out on the big table. There were one or two good old family portraits on the walls, and some bad Victorian water-colours, and some would-be-funny hunting scenes. There was big vase of Michaelmas daisies in the corner. The whole room was dim and mellow and casual....And across the old bearskin hearthrug there was sprawled something new and crude and melodramatic.

(Christie, 1942/2014, pp. 10-11)

I was put in hospital because a great gap opened in the ice floe between myself and the other people whom I watched, with their world, drifting away through a violet-coloured sea where hammerhead sharks in tropical ease swam side by side with the seals and the polar bears.

I was alone on the ice.

(Frame, 1961, pp. 3,4)
Next I outline and describe some general aspects of the heroic path chronotope, before I go on to discuss some more specific patterns of its features, emerging through the diffractive patterns of the four key texts. The heroic path narrative is about protagonists on a journey of metaphorical and physical dimensions. Its versions are multiple. In reading the textual choices made here through one another, emerge the road trip, the moral quest, and the voyage and return, as in *The Lord of the Rings* (Tolkien, 1955/2005), the path toward attaining personal, social, intellectual and spiritual aspirations, as in *Middlemarch* (Eliot, 1871/1965); the path to understanding the dark side of human nature and solving the crime, as in *The Body in the Library* (Christie, 1942/2014); the path to assertion and creation of fractured identity/ies, as in *Faces in the Water* (Frame, 1961).

The more general patterns of the heroic path chronotope manifest in these texts also correspond to those of the road chronotope (Bakhtin, 1981). The narrative forms a traditional story shape: a (usually) linear, if meandering, path between points, on which the narrative events are (usually) plotted as causal in terms of progress or hindrance to the protagonists movements on the journey. The road and heroic path narratives revolve around a struggle toward a goal or destination which is dependent on some kind of metamorphosis of the protagonists into beings of greater self-knowledge. This makes possible the notion of narrative in particular and change in general conceived as causal in this movement toward self-knowledge, marked by points in the road where events and meetings occur, enabling tests, adventure, courage, logic, decisions or faith. Existence is often depicted as moments of crisis, ‘for showing how an individual becomes other than what he was’ (Bakhtin, 1981, Chapter 3, location 1701). Space and time are typically regarded as significant to the extent that they furnish places and events for the development of this experience.

In the texts discussed here the heroic path emerges as primarily a humanist chronotope. While the extent and forms of agency given to individuals in the different forms of the chronotope vary, the human engaged in metamorphosis on the path nonetheless tends to be actively engaged in shaping his/her own existence, has initiative, and is individually responsible for his or her
responses and own becoming. Thus the path chronotope co-constitutes the
notion of existence as opportunity for individual human metamorphosis, and
shapes an image of humanity as a transformational species, whose work is to
discover and manifest his/her own inner potential.

However, humanism alone does not adequately delineate the possibilities of
the path chronotope. The diffractions in this chapter show both humanist
journeys involving the ideals of a coherent, ultimately unified and authentic
self, and post-humanist or modernist journeys, to the extent that they involve
fractured, multiple and contingent selves. The distinctions between these
journeys of the self are suggestive of possibility. At the same time both
humanist and post-humanist journeys present patterns restrictive in similar
ways, as I will discuss. Attention to the chronotope: the image of spacetime,
illuminates such differences and repetitions of the image of humanity, while
enabling a wider perspective than this focus alone would reveal.

Tolkien’s threshold: The pass of the spider

But still she was there, who was there before
Sauron, and before the first stone of Barad-ur
and she served none but herself, drinking the
blood of Elves and Men bloated and grown fat
with endless brooding on her feasts, weaving
webs of shadow; for all living things were her
food, and her vomit darkness.

(Tolkien, 1955/2005, p. 723)

The Lord of the Rings (Tolkien, 1955/2005) is one of the most well-known
mythic journeys of humanity and provides something of an iconic example of
the ‘hero’s journey’ narrative. This text and others like it are often described
with reference to Campbell’s (1993) structural elements of the hero’s journey
(for example, in Campbell, 2015; Purtill, 2009). Beginning with a sense of
constriction or limitation in the present world, the hero then departs, leaving
his or her familiar ordinary social and material world due to a call to adventure
or someone in need. In this early phase he/she experiences a sense of
expansion, as life is enlarged. At the initiation stage, he or she experiences the first major test and thus crosses the first threshold. Following this the hero enters into a strange, threshold, liminal and alien world or dream-like landscape, full of ambiguous entities, and potentially sinister forces. This threshold is often described as a narrative phase in which spacetime is disturbed and destabilised, normality and reality are challenged and social and physical phenomena are upset (Campbell & Moyers, 1991).

The threshold or liminal spacetime is an epistemological opportunity in Campbell’s hero’s journey (1993) and in the heroic path chronotope as it emerges here. In *The Lord of the Rings*, on the journey to Mordor, Samwise and Frodo find themselves alone together as they must negotiate the threshold space and testing ground of the pass of the spider, the region in which the giant spider Shelob makes her lair. Shelob is an immense and primordial guardian of the threshold, ‘*there before Sauron and before the first stone of Barad-ur*’ (Tolkien, 1955/2005, p. 723), an ancient embodiment of evil. Frodo and Sam are led by Gollum, unaware, into her sticky, cobwebby lair. Frodo uses various gifts and boons to fight her off but at the point at which they think they have escaped, Gollum intervenes and Frodo is stung and paralysed. Here the humble Samwise, in an abyss of despair, draws on his anger and his loyalty for Frodo, using bravery, cunning, his master’s sword and the Phial of Galadriel to defeat and temporarily blind Shelob. In the already intense, fantastic landscapes of Middle Earth and Mordor, the pass of the spider is a zone of magnified power, signifying heightened danger, the deepest abyss of darkest unknown, where ‘*webs of shadow*’ (Tolkien, 1955/2005, p. 723) await to entrap passers-by.

The liminal space in the spider’s pass is a zone of rebirth, where life itself is recycled as the sustenance and vomit of the spider and in which the spiritual death of the protagonists is also an essential feature. Frodo and Sam are doubled characters, illuminating different sides of the self (Le Guin, 1979). Campbell and Moyers’ (1991) interpretation is that the threshold trials are opportunity to give the self to a higher end. To stop thinking about ourselves and our own self-preservation brings transformation of consciousness. Sam takes up the challenge of the encounter, fights the spider and in doing so
undergoes a metamorphosis emerging as more autonomous, courageous and initiating. But in order for this to happen, Frodo, the self that has until this time taken initiative and responsibility for the Ring, must undergo a temporary death by paralysis. In an abyss of despair and thinking his master dead, Sam summons the courage to take the Ring in order to continue the journey, showing a willingness born of loyalty rather than arrogance to becoming initiating and responsible for completion of the task. The pass enables transformation by discovery of inner strength and resources. It involves death and rebirth, and this must involve selflessness.

Fantasy, with its accommodation of the irrational, and its mythic and poetic language (Le Guin, 1979) assists in constructing the abyss of strange, disturbed, threshold, liminal spacetime with heightened intensity, and also assists in constructing the human individual as mythic figure, enabling the possibility of access of potential via profound encounters, and a safe return home in a new, higher form.

*Christie’s threshold: The crime scene*

> Miss Marple understood then just what her friend had meant when she said the body wasn’t real. The library was a room very typical of its owners. It was large and shabby and untidy. It had big sagging arm-chairs, and pipes and books and estate papers laid out on the big table. There were one or two good old family portraits on the walls, and some bad Victorian water-colours, and some would-be-funny hunting scenes. There was big vase of Michaelmas daisies in the corner. The whole room was dim and mellow and casual…

> And across the old bearskin hearth rug there was sprawled something new and crude and melodramatic.

(Christie, 1942/2014, pp. 10-11)

Christie’s *The Body in the Library* (1942/2014) also constitutes threshold spacetime, but here, rather than a short period enabling transformation of
identity the threshold constructs a more sustained destabilisation and disorganisation of identity and narrative. In Christie's detective fiction, the path is constituted as the path to understanding human nature and the true sequence of events which together effect the solving of the crime. Spacetime is constituted as a crime-scene; an unsettling puzzle in which all is not as it seems on the surface. The journey of the self is the confrontation with the dark side of humanity and the questioning of surfaces and depths of self and world which are necessary to see the crime-scene with a wider view.

In *The Body in the Library* (Christie, 1942/2014) the threshold spacetime constitutes the spacetime of the majority of the narrative. The period in which danger, tests and personal resources are intensified, is the time between the discovery of the body, and the solving of the crime (Klapcsik, 2012). In *The Body in the Library*, a girl’s body is discovered on page two, after only one potentially significant narrative event. The journey, consisting of a destabilised, shocking reality in which murder intrudes in the village, and of interviews, hunches, decisions, actions, re-constructions of events and conversations, constituted as potential clues to the identity of the murderer, coincides entirely with the threshold spacetime in which out-of-the-ordinary danger is manifest and order is destabilised up until the last when the final, stabilisation of the narrative is ostensibly made coherent.

One of the key ways this threshold emerges in Christie’s writing is through the technique of defamiliarisation. Defamiliarisation here is created by giving heightened attention to something familiar and ordinary in order to represent it in a way that deviates from conventional, habitual descriptions, so we can perceive it in an original form (Lodge, 1992). In detective fiction, defamiliarisation is used throughout the threshold phase between the discovery of the crime and the solving of the crime. This period is unsettling and unusual for all, as lives are turned upside down. The familiar is seen in a new light, preceding events take on new and disturbing significance and everyone is suddenly under suspicion (Klapcsik, 2012). Defamiliarisation and destabilisation of reality are intensified in detective novels such as *The Body in the Library* by juxtaposing the shocking presence of the corpse with a familiar,
conventional and safe setting such as the library, snugly containing ‘one or two good old family portraits on the walls, and some bad Victorian water-colours’ (Christie, 1942/2014, p. 11), a room itself within the conventional and mundane village of St. Mary Mead. Christie makes the body itself an even more disconcertingly improbable and sensational one in this context, clothed in a dress of poor quality glittery satin that is ‘all wrong’ (Christie, 1942/2014, p. 158).

The uneasiness of this destabilisation, the sense that unreal events can occur at any time and at random and that the universe seems poised to reveal itself further as sinister, unknowable and unpredictable is familiar to anyone who has experienced a major life-shock. Highly unsettling crises in which we must question what we thought we knew are framed as the conditions for new knowledge. On the solving of the crime, this threshold, defamiliarised view of the world is ostensibly removed.

In this novel, having negotiated the threshold space, the protagonist detective returns home relatively unchanged. In fact it is mark of Christie’s detective series’ that the detective does not age or transform, throughout multiple texts (Klapcsik, 2012). The liminal space is the opportunity to see life differently, and experience the puzzle of being able to work out the different values and lives of the inhabitants. The characters may establish independence of identity, confidence, or in Miss Marple’s case a re-affirmation of herself as a clever detective and ‘not what she seems’, but remain relatively unchanged within. In Booker’s (2005) humanistic analysis this is representative of an unchanged state of ego-centeredness and spiritual immaturity. These tests might be read as those surface, physical tests that come first in life: of venture, independence, challenge and establishment in the external social, physical and material world. These come before the more profound tests of identity and the spirit undergone by the mature individual (Booker, 2005).

However, the threshold space itself is in this case the sustained chronotope of the narrative, and Christie’s defamiliarisation in this spacetime enables problematisation of this humanistic narrative and of binary relationships
such as those between surface meaning and deep truth. Appearances are deceptive and doubled. What is shown at the surface may or may not be revealing, depending on how this is read. The physical crime scene and the chronological events leading to the murder must always be reconstructed to reveal the chain of events. But, more disturbingly, the nature of humanity is never what it seems and cannot be similarly reconstructed to reveal the truth. The disturbed reality after the murder is discovered creates new alienation and suspicion of the apparently normal characters. As in a nightmare, doubt and mistrust become pervasive (Klapcsik, 2012). The narrative leads us as readers toward questions about who we are really, what we are capable of and how to recognise evil.

However, we are soon led away from these dark notions as empirical, rational questions about who did it and how become ostensibly more important. The narrative return to the status quo upon the solving of the crime soothes us with the idea that we can be rid of darkness through rational action and is satisfying due to our desire for closure, order and certainty. But dissonance between the neat resolution and the glimpse of the dark underside of humanity lingers. The chronotope may leave the reader with the uneasy memory of that pervasive hidden darkness. The narrative is rationally, but not spiritually resolved.

Christie creates this chronotope by a sustained defamiliarised, threshold spacetime which shapes an epistemological system subversively problematizing the binary opposition (Klapcsik, 2012) of the worlds of the empirical, physical, rational and true and that of human nature and experience. She allows us the option of being satisfied with a rationally explained narrative of cause and effect if that is what we choose, but to do so we must block and ignore the other option she also enables, which is to ask ourselves questions about such comforting notions and what they might obscure. She enables the possibility of reading and writing as puzzles to engage us in the consideration of surface and depth, selves and truth, and to hone our skills in scepticism.
Eliot’s Middlemarch (1871/1965) is a realist novel, and thus, like detective fiction, constructs spacetime in accordance with empirical rules (Morris, 2003). ‘Reality’ is unproblematised, time is linear, objects are concrete, determinable and stable and epistemology tends toward the rational. Within these realist boundaries, she constitutes a prismatic, kaleidoscopic (Uglow, 2008) spacetime of social, philosophical and political concerns densely entangled with diverse provincial, domestic and subjective threads of experience. The effect is to enable insights in ambiguous, shifting and abstract larger social, psychological, historical and political patterns. Eliot’s chronotope does not present a highly disturbed and defamiliarised spacetime, but one poised on multiple thresholds of individual, social and political change.

Eliot’s characters strive earnestly toward fulfilling aspiration and becoming, and are dragged back by social banalities and domestic limitations. The provincial town and intimate and socially stratified spaces of dining and drawing rooms, the dialogues which occur there, the passions and metamorphic aspirations of characters are entangled with wider transforming social, political, philosophical and historical spaces (Uglow, 2008). As aspects of its several heroic journeys the novel explores themes of political reform, medical science, intellectual passion, marriage, religion, education and the status, choices, unutilised potential and roles of women. Eliot draws shifting patterns by temporal cusps and social positioning. A significant cusp the novel is entangled in is the point in time just before the Reform Bill of 1832, designed to enhance the democratic process and increase the rights of the populace to
participate in it. In this temporal positioning Eliot enables shifting perspectives of democracy, emancipation, liberty, the past shaping the present. She invests in her characters individual and collective potential to shape the future and chart their own destinies.

This threshold positioning of kaleidoscopic interests enables complex, unpredictable and therefore often blundering and inadequate dialogic relationships between characters’ aspirations and their personal and social limitations. The novel’s three central sets of characters and narratives demonstrate journeys of idealism, and the quest for intellectual, spiritual, social and political liberation. Dorothea is presented as a ‘later-born’ Saint Theresa, ‘helped by no coherent social faith and order which could perform the function of knowledge for an ardently willing soul’ (Eliot, 1871/1965, p. 25). Dorothea powerfully senses the possibilities of becoming but her ardour to realise these, to give, and to achieve value and meaning, cannot find a form inside the dull ‘brown pond’ (p.26) of the provincial and gendered world in which she finds herself. Eliot’s depictions of the aspirations, possibilities and limits of the roles available to women of the time are always given complexity by such poise on thresholds of personal, social and historical possibility.

Another example of the frustration of matching personal resources with shifting social and temporal contexts is Casaubon, who is implicated as impotent on his own journey of researching ‘The Key to all Mythologies’, (Eliot, 1871/1965, p. 313) for example by his antiquated methods including his inability to read German; a capacity which is conceived by his nephew Will Ladislaw as essential according to the modern scholarship of the day. Later in this chapter I discuss further Casaubon’s own chronotope which I name the blinkered private path. This chronotope is constituted as a pattern in entanglement and in disturbance with the larger, kaleidoscopic chronotope of Middlemarch.

Threshold positioning in spacetime and this shifting and linking of the understandings of the central characters constitute significant aspects of the chronotope of the novel. ‘(T)he total combination is like a kaleidoscope which
Dorothea had by this time had looked deep into the ungauged reservoir of Mr. Casaubon’s mind...and had understood from him the scope of his great work, also of attractively labyrinthine extent...he told her how he had undertaken to show (what indeed had been attempted before, but not with that thoroughness, justice of comparison, and effectiveness of arrangement at which Mr. Casaubon aimed) that all the mythical systems or erratic mythical fragments in the world were corruptions of a tradition originally revealed. Having once mastered the true position and taken a firm footing there, the vast field of mythological constructions became intelligible, nay, luminous with the reflected light of correspondences. But to gather in this great harvest of truth was no light or speedy work. His notes already made a formidable range of volumes, but the crowning task would be to condense these voluminous still-accumulating results and bring them, like the earlier vintage of Hippocratic books, to fit a little shelf...

Dorothea was altogether captivated by the wide embrace of this conception.

(Eliot, 1871/1965, pp. 46, 47)

falls into different shapes depending on which organising pattern we choose’ (Uglow, 2008, p. 246). This is Eliot’s own brand of heteroglossia (Bakhtin, 1981); representation of multiple and shifting discourses without authorial preference. As Uglow (2008) comments, one of the pleasures and the distinctions of Middlemarch is that it abolishes categories of theme and character so that one thread of the story cannot be separated from the rest. Separate and complex lives are intertwined, and different points of view influence each other. In this way Eliot avoids the sometimes chaotic chronotope of other Victorian novelists such as Dickens, who also revel in detail and abundance of life (Harvey, 1965). She develops instead a chronotope in which the shifting parts and small detail are brought to bear on each other and make the dynamic, satisfyingly complex, yet aesthetic pattern of the whole. I return to a discussion of the possibilities of kaleidoscopic heteroglossia in threshold spacetime in Eliot’s chronotope later in this chapter.
Frame’s modernist text, *Faces in the Water* (1961), constitutes a journey and world entirely on the threshold. The entire narrative is a destabilised, dangerous, inner/outer journey. The novel might be said to be about the character Istina’s journey into mental illness and her experience of institutionalisation. Events in the narrative include her diagnosis, her scheduling for lobotomy, her sudden discharge a day later. But unlike the other texts discussed in this chapter there is no sense of plot in the traditional sense. There is no defined or emerging external quest and there are no causal reasons provided for many of the events, for example, Istina’s internment, or her diagnosis, or sudden discharge. There is no real resolution to either the external events or the inner conflict. Its lack of tidy narrative is characteristic of modernist fiction, and is pronounced in this novel due to Frame’s metaphorically dense (Robinson & Wattie, 1998), highly unique, poetic, and alternately fluid, halting and confronting style and the subject matter of mental illness.

However, there is a narrative and a spacetime shape recognisable as a path toward knowledge of the self. This knowledge-path is through the assertion and expression of irreconcilable, threshold experience. Istina’s path is not one she sets off on by autonomous choice but one she has been plunged into, and is an experience totally of the threshold. The liminal world of her subjective

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*Frame’s threshold: The gaps in the ice floe*

I was put in hospital because a great gap opened in the ice floe between myself and the other people whom I watched, with their world, drifting away through a violet-coloured sea where hammerhead sharks in tropical ease swam side by side with the seals and the polar bears.

I was alone on the ice.

(Frame, 1961, pp. 3,4)
experience of the institution is a fantastic world of liquidity, instability, uncertainty, fragmentation, swinging between and hostility and indifference. Modernist fiction emphasises a chronotope of the inner, psychic world over the external world. In its rendering of the world of subjective inner experience, modernist fiction employs multiple and juxtaposed perspectives, disjointed chronology, and the imagery of the interior landscape and stream of consciousness (Smyth, 1991). Istina’s descent into illness is an inner experience embodied in imagery of profound loss of self and of existence on the verge of sanity and sanity: ‘A great gap opened in the ice floe between myself and the other people whom I watched’ (Frame, 1961, pp. 3,4).

Frame’s use of defamiliarisation enables confrontation of and demonstration of the limits and gaps of dominant discourses about human experience, especially that which is commonly called mental illness (Gambaudo, 2012). In the permanently defamiliarised threshold spacetime of *Faces in the Water*, constitutions of madness are imposed on the reader’s comfortable, safe concept of normal reality without a narrative which explains these and thereby embeds them within any larger, more ‘normal’ chronotope. The defamiliarisation, like the experience of mental illness itself, manifests both in the interior world of inner experience and the exterior world of the institution. Rather than a narrative which constructs a traditional path to ‘recovery’, the lack of return to any safe, normal experience enables the possibility of questioning the existence of such normal experience (Gambaudo, 2012). The reader is not led back home, but is left in the defamiliarised world of irreconcilabilities, to make of it what they will.

This defamiliarised, threshold space co-constitutes extreme alienation. Istina is alone on the ice, all others are outsiders who constitute her difference by their misunderstanding and non-validation of herself and her different ways of coping with previous loss (Gambaudo, 2012). The central chronotope of *Faces in the Water* constructs this spacetime of the inner mental-emotional landscape as dangerous, fractured and marginalised and the journey as a struggle to create a sense of self.
However, the chronotope of the novel is not adequately represented as a trapped space of helpless victimisation. At the heart of Istina's alienated path is the irreconcilable. Istina's conflict is how to honour, feel and experience her grief for what is absent from the social structures she is surrounded by in the institution. At the same time she is desperate to integrate these same grief-filled structures into herself, as this is the only way to demonstrate her sanity by external standards. For Istina, loss of humanness is the price she would pay for sanity (Gambaudo, 2012). Her attempts to hold on to and preserve her authentic self and experience constitute her madness and so they are both her abyss and her means to save herself.

To sum up so far, the threshold spacetime pattern in the heroic path disturbs realities and positions them on a liminal cusp between one thing and another: past and future, strange and familiar, resolved and unresolved, sanity and madness. This liminal state enables us to draw on our profound human potential in transformative new ways. The threshold spacetime may be created via the intensified and mythic language and tropes of fantasy, by the unnerving defamiliarisation of normal, safe and consensus social reality, by positioning in spacetime on the cusp of social change and liberty, and also by the artistic expression of irreconcilabilities of feeling/meaning. In these texts, the threshold spacetime is used to interrogate mostly humanistic epistemological questions relating to understanding of the meaning of human lives, aspirations, creative and intellectual expression, and service and connection to others. The extent to which the threshold is sustained through the narrative has implications for the possibilities it enables in epistemology and writing, as I discuss next.
Patterns of humanity, epistemology and writing on the heroic path

Here and there a cygnet is reared uneasily among the ducklings in the brown pond, and never finds the living stream in fellowship with its own oary-footed kind.

(Eliot, 1871/1965, p. 26)

People say what we’re all seeking is the meaning for life. I don’t think that’s what we’re really seeking. I think that what we’re seeking is an experience of being alive, so that our life experiences on the purely physical plane will have resonances within our own innermost being and reality, so that we actually feel the rapture of being alive.

(Campbell & Moyers, 1991, p. 1)

Campbell and Moyers’ text fragment above resonates with the most intense pattern of the heroic path as I have discussed it so far. This chronotope manifests a pattern of spacetime as a means to experience/express in various ways what it is to be alive as a human individual. It constitutes a central epistemology of working toward resonance between the physical plane of existence in the world and our innermost reality. In this way it focuses on this binary between human interior and exterior; both problematising it and reinforcing it. Having described some of the range of manifestations and patterns of this physical space and time in each of the four texts, in particular patterns of threshold spacetime, I next discuss the diffracting implications of these on epistemology and writing.

The ardently willing soul: Writing terra incognita in the entangled inner/outer journey

The heroic path chronotope, whether fantasy, realist or modernist, in these textual patterns co-constitutes two entangled worlds: a world of external, public life and experience, and one of private, interior life and experience.
Knowing is here to do with the ardent desire to access resonance between outer and inner journeys. The act of writing the heroic path enables us to constitute our existence as a myth or poem (Campbell & Moyers, 1991) and ourselves as heroes, participating in this transcendent life genre. Campbell writes from the assumption that there exists ‘a constant requirement in the human psyche for centring in terms of deep principles’ (Campbell, 1993, p. xvi). Writing the realist or modernist heroic path effects the manifestation of such deep principles in the form of intense resonances between the external and the every-day with our inner self.

Le Guin (1979) believes that fantasy writing is important in the expression of these deep principles. Fantasy is a bridge between the conscious and the unconscious, the collective and the deeply individual. Fantasy with its accommodation of the irrational, is required to express the symbolic language of this deeper psyche. *The Lord of the Rings* (1955/2005), takes advantage of the power of the fantastic, heroic, mythic and poetic on the path to Mordor. Fantasy and the mythic enable the intensification of the threshold experience in Tolkien’s writing and the full elaboration and extension of this heroism.

A second pattern, intensified across the texts, is that the values of this chronotope are love and truth, wherein love is assumed to be selfless and truth is assumed to mean the capacity to ‘see whole’ (Booker, 2005, p. 618) to know the cohesion, connections and sympathies that exist. To achieve this state of selflessness and cohesion of vision requires a combination of supposedly opposed qualities: rationality, strength and discipline; and love, empathy, selflessness and intuitive connection with the subconscious. For example, although witness to the temptations of the power of the Ring, Sam is less susceptible to the dreams of infinite power it holds for others due to his pure heart and love for Frodo, representations of his self, unified with the higher Self. The Ring is power without love, the power of the ego unconnected with others (Booker, 2005). Christie’s (1942/2014) Miss Marple’s method of deduction similarly always involves rationality, logic, empathy and relationship insights. Eliot constructs the abyss of Casaubon’s intellectual downfall as his lack of connection to others, as I discuss later in this chapter.
Therefore, the necessity for dialogue on the heroic path is suggested. Dialogue might be seen as that which the protagonists on the heroic path imperfectly strive for, perhaps between rationality and empathy, inner and outer, surface and depth, self and Self. Booker (2005) describes this common humanistic interpretation in terms of the path back from the ‘fall’: the divide of Adam and Eve from nature by their consciousness of morality and intellect. Since the fall, humanity’s new capacity to bend the powers of nature to the will and advantage of the ego leads to advances, but every advance comes at a cost. Each time consciousness is expanded, so at the same time does it become in another way more limited. The way back is the transcendence of the ego through a new, elusive form of dialogue: A remembrance of unification involving dialogue between the self and the Self (Booker, 2005).

Rather than simple dialogue, Eliot’s chronotope opens up a more complex and indeterminable agency enabled by a kaleidoscopic vision taking in a wider range of agents. While Smethurst (2000) comments that Middlemarch (Eliot, 1871/1965) constitutes a shift in the Victorian chronotope; from the documentation of a rich socio-historical reality, to a specifically individualised (and specifically female) richly subjective experience of that reality, I instead see her chronotope as the shifting, kaleidoscopic entanglement of these. Eliot’s inner and outer journeys show us the unpredictably agentic relationships between inner and outer real-world constraint and inner and outer real-world possibility. Outer real-world phenomena are constructed as such things as social and historical position, provinciality, and mediocrity and mundane domesticity. Inner world phenomena are nebulous and indeterminate passions, vanity, the intellect, ambition, and altruism. These all are the ambiguous conditions of both constraint and possibility.

Significantly for this project, one of the intensifications noted in Eliot’s chronotope is powerful and complex depiction of passions for intellectual principles, ideas (Uglow, 2008) and research. In Middlemarch, the inner and outer journeys depict passions for intellectual knowledge and social and political transformation with the same kinds of resonance, suspense, anticipation, and longings as we are accustomed to reading about in relation
to romantic love. The chronotope enables possibilities for understanding the affective aspects of learning, study, and, in the character of Casaubon, of the research process. The ‘ardently willing soul’ (Eliot, 1871/1965, p. 25) longs not just for love, but for a form in which to express and constitute his or her social, intellectual and spiritual potential.

Intellectual growth in Eliot’s work is inseparably entangled with social and emotional growth; the development of sympathy and feeling for others. By this chronotope, epistemology becomes the empathic diffraction of meaning through different characters and settings. Knowing becomes noticing with sympathy the fine networks of contrasts, parallels and influences of life and selves in all their variety.

In the Middlemarch characters, this sympathetic perspective is a painful struggle to break free from the path of the ego (Harvey, 1965). But Eliot creates the possibilities for sympathetic perspective via the technique of deftly switching the reader’s attention between sets of characters, and sets of social conditions. For example the character of Casaubon personifies one example of ardent desire for transcendence. In contrast with the multiple, sympathetic epistemology of the novel Casaubon’s particular knowledge quest for a single, unifying ‘Key to all Mythologies’ (Eliot, 1871/1965, p. 313) is illuminated the more sharply as a blinkered journey, far-reaching and impressive in his imagination, but in fact nebulous and narrowly lit.

Finally, Frame’s version of the ‘ardently willing soul’ (Eliot, 1871/1965, p. 25) on an entangled inner/outer journey in Faces in the Water (1961) enables an epistemology of challenges to socially predetermined meaning, unique self-expression and resistant self-assertion. The text enables the creation of small agency in the highly disempowering and often hostile universe of a 20th century mental health institution. Writing is to bring forth knowing by expression of unique and irreconcilable experience.
To this end, Frame uses writing which is metaphorically dense (Robinson & Wattie, 1998), constituting individual experience as highly unique, often bizarre or poetic. Gambaudo (2012) discusses the way *Faces in the Water* also constructs its strong alternative discourse by lack of reference to certain external ontic norms such as conceptualisations of logical cause and effect, and consensus markers of the passing of time. It also achieves this by its lack of reference to the dominant language of psychiatric categories. While madness is Istina’s struggle, it is still constituted on Istina’s terms. Istina’s diagnosis is not revealed. Madness is constructed by Istina’s affective experiences and observations, inner and outer, in the asylum. It also achieves this resistance to dominant discourse by the constitution of Istina as an indeterminate, uncategorisable entity. She is both mad and commentator on social constructions of madness. The text fragment above- ‘circular calico tents’ and ‘merchandise of peril’ (p.4) – is one of many examples of her highly critical and eloquent expression of her treatment, which simultaneously demonstrates characteristics likely to be classified as disorganised speech, symptomatic of thought disorder. She has a foot in both camps and as such has an indeterminate identity and experience, which as Gambaudo (2012) says, can be seen as a post-humanist critique of the idea of the unified subject and experience, and which I suggest is put to use here to enable a landscape of fractures and irreconcilabilities and risky, subversive and alternative personal/social meaning.

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A blizzard came and I wanted to lie down and sleep and would have done so had not the strangers arrived with scissors and cloth bags filled with lice and red-labelled bottles of poison and other dangers which I had not realised before – mirrors, cloaks, corridors, furniture, square inches, bolted length of silence – plain and patterns, free samples of voices. And the strangers, without speaking, put up circular calico tents, and camped with me, surrounding me with their merchandise of peril.

(Frame, 1961, p. 4)
Resisting the safe return: Writing terra incognita in ambiguity and irony

Earlier in the chapter I discussed the threshold spacetime as significant to transformational opportunity on the heroic path, in all four texts. When the fantastic, the unexpected, the bizarre and the evil enter The Lord of the Rings (Tolkien, 1955/2005) narrative, the threshold space is the more alarming because it is contrasted so explicitly with the cosy hobbit world of the Shire, making home and home comforts shine with nostalgia and preciousness. This comparison between safe home and dangerous fantasy world enables this defamiliarisation of home to see it anew, and as I have said previously, helps to manifest an intense contrasting world and testing ground which enables the possibility of profound change.

However, reading Tolkien through Eliot, Christie and Frame suggests that the opening of possibility on the path is also dependent on irony, and one of the means to achieve irony is to resist returning the characters to home and safety. Opportunities for transformation are restricted by meaning which is suggested too clearly and explicitly, such as a strong contrast between danger and home and the construction of the return home as a successful journey. The wide success of myth and novels in terms of resonance, longevity, access to insight and new possibility, depends on a balance between widely shared resonance, and subjective and ambiguous meaning; on their construction to enable multiple interpretations. The creative heroic path needs to present such ambiguity and mobilise such irony.

Writing a fantasy chronotope often requires a balance between much specificity and detail, which draws the reader into the fiction world in the manner of reading anthropological material about a different kind of existence, and indeterminacy which enables irony. In general terms fantasies such as The Lord of the Rings (Tolkien, 1955/2005) rely heavily on elaborate, anthropological-type description for their drawing power. But as the author makes the world real and believable for the reader by detailed description, the risk is that the reader is then tied to and dependent upon the
protagonist/narrator for explanation and interpretation of what occurs in this world (Mendlesohn, 2008). Ironic possibility can be disabled.

When the fantasy narrative draws on the heroic path involving a dangerous journey and safe return, particular ontic ironies are undermined. In Mendlesohn’s (2008) taxonomy of fantasy types, the portal-quest, of which *The Lord Of the Rings* and *The Lion, the Witch and the Wardrobe* (Lewis, 1950) are examples, is a type in which reality is constituted as socially and materially ‘normal’, safe and secure. Adventures occur outside of this zone in a much more fantastic realm, before returning home to normality for example, from Mordor back to the Shire, or Narnia to England. The fantasy phase is constituted as temporary, and the authorial interpretation of this is that it is clearly distinct from ‘normal’ safe reality.

An attempt at consensus is constructed: between reader, author and characters about which world is normal, and what is real (Mendlesohn, 2008). Spacetime is divided neatly into distinct realms: destabilised fantasy, and stable home. New worlds, forms of test and resources are discovered and human transformation is possible. But in the end, the chronotope excludes more radical possibilities of ontological reimagining by a temporary phase of defamiliarisation bookended by a representation of safe and/or consensus reality.

To interpret the meaning of the heroic path too closely is to impose authority on the reader and deny the writing its ironic play, which is an important component of its liminal power. Tolkien’s writing demonstrates the ways the path chronotope both extends and limits multiple ironies. Tolkien exhibits a penchant for certain moral themes which are difficult to dispute. One example is the positioning of nostalgic, rural, pre-industrial life (as in home, safety and the Shire) as ‘good’ and of industry and progress (as in the unfamiliar, dangerous Mordor) as ‘evil’ (Mendlesohn, 2008). This narrative about conflicts arising in connection with man’s use of technology has ancient archetypes (Campbell & Moyers, 1991), for example in the myths of Daedalus and of Mephistopheles. Where the telling of these stories makes explicit the intention
to bring home a particular moral lesson, their potency is diluted. The reader is told what to think about morality, rather than enabled in an experience of life, with moral aspects and possibilities. The determination of good and evil, the destination, the meaning and the reward of the story may be seen as transparent, received truths (Mendlesohn, 2008). As Mendlesohn (2008) suggests, the perspective of Gandalf on these matters is written as straightforward wisdom and inarguable history, as in Bakhtin’s epic chronotope (1981).

However, Tolkien saves his fantasy from simple interpretation by writing worlds which model ours in complexity of selves, history and mythology. As Le Guin (1979) has suggested, the fantasy genre is highly ironic in that it enables a complex expression of the ethics of the journey, the self and the unconscious. Fantasy archetypes are inexhaustible in their meanings and can accommodate this ambiguity. Selves are problematised by the technique of doubling many of the characters (Le Guin, 1979): Gollum/Smeagol, Frodo/Sam, Frodo/Gollum, Aragorn/Boromir. The range of self-manifestations and the range of threshold crossings they embark on throughout the trilogy enable multiple interpretations of transformation. Places, contextualising geography and histories such as that of the Pass of the Spider are detailed and complex. Shelob, its guardian has a complex and detailed history, status, relationships with other key figures and mythology. Tolkien therefore enables irony, while constituting some authorial moral interpretation. Where the telling of a narrative is nuanced and polysemic in this way, it takes on the significance of a legend, which can be reinterpreted at each reading.

_Middlemarch_ (Eliot, 1871/1965) manifests a similar pattern of morality, specificity, complexity and irony, but without a safe return home. On the one hand, as discussed, Eliot crafts a narrative which in its simultaneously microscopic and kaleidoscopic vision (Uglow, 2008), contains contradiction and ambiguity reflective of the minds and societies she writes of. On the other hand, she has been accused of allowing her philosophical and moral consciousness to drive her concretisation of characters and events, resulting
times in exemplification of a theme, rather than a vision of the texture of life. In Harvey’s (1965) introduction to my copy of *Middlemarch*, Eliot (like Tolkien) is described as escaping this accusation by embodying the themes within several different characters, enabling herself and the reader to consider a spectrum of possibilities on the theme.

Learning and speculation are enabled by the observation of the myriad of men and women not quite living up to Eliot’s moral principles in a plethora of ways. None really achieve the safe return home, leaving the reader to consider the multiple ironies of their lives.

Eliot’s writing also mobilises the agency of diverse social phenomena to enact these ironies. Birth, rank, class, money, gender, locality, religion, politics and profession, are agentic phenomena. They exert their force uniquely in their intra-actions within different characters who exert their own force back. Writing ironically is bringing forth these patterns of effect and agency. In this way she resists the closure of social determinism (Harvey, 1965). She alternatively constitutes existence as a complex and agentic human-social system, where characters intra-act with the time and society of the novel.

In Christie’s *The Body in the Library* (1942/2014), as I have discussed in this chapter, the narrative subversively leaves us with unanswered questions. The chronotope effects a safe return on rational, empirical levels in the solving of the crime, but on human or spiritual levels no such safe return exists. As Christie describes in the text fragment below, the nature of humanity in general is opened up to doubt. Constructing spacetime as a heroic path but resisting the safe return enables deep questioning about the assumption of ourselves as heroes.

>You ask yourself questions and you begin to doubt. You feel that somebody you love and know well might be – a stranger...

That’s what happens in a nightmare. You’re somewhere in the middle of friends and then you suddenly look at their faces and they’re not your friends any longer – they’re different people – just pretending. Perhaps you can’t trust anybody – perhaps everybody’s a stranger.

(Christie, cited in Klapcsik, 2012, Chapter 1, location 554)
This pattern of resisting determinism and the safe return in the chronotope has implications for the writing of social research, including the writing of conclusions. While the path as a chronotope of the journey of the self does lend itself to certain kinds of closed, authorial interpretation of moral values and goals, writing ambiguities, multiple perspectives and irony, and inconclusive, unsafe endings give the reader the opportunity to enlarge their understanding of fictional and real worlds. They enable open-ended insights into the condition and tasks of humanity, they present shifting viewpoints and enable opportunities to review and revise judgments. They enable narratives which can be returned to for repeated readings and alternative insights.

*The abyss and the gaps in the ice floe: Writing terra incognita in alienation*

The pattern of the abyss of despair and alienation in the chronotope is noteworthy for enabling the conditions for the realisation of latent potential. In Tolkien’s and Eliot’s texts this realisation must involve struggles to accept the darker sides of the self. It also ultimately aims for the loss of ego and the knowledge of inseparability of the self from others. In Sam and Frodo’s experience in Shelob’s lair, the journey is spiritual death. The ego must die in order for the latent potential of the higher self to be released. Shelob is not killed, but blinded, and left to remain in her lair, her existence ambiguous in meaning but, notably, eternal. Thus, to fight the monster does not mean to enter the abyss in order to conquer and vanquish it, but instead to confront, and also to accept, the dark and feared sides of one’s own identity and humanity (Campbell, 1993). Gollum, who by his deceit and desire has been instrumental in Frodo’s paralysis, is yet another doubled version of Frodo/Sam, manifesting the deceit and desire Frodo struggles against in himself. The threshold pattern enables and engages us in epistemological questions about how we can authentically know the dark side of ourselves and humanity, how we can authentically know our own latent potential and hidden resources, and how to accept and to bring these aspects of the self together.
Casaubon’s chronotope, the blinkered private path constitutes the abyss as failing to meet the challenge of authentically knowing and accepting the self, failing to develop the sympathy required for a wider vision, and consequently constructing an abyss of alienation from others. In contrast with Eliot’s larger prismatic chronotope, Casaubon is myopic, narrow, self-obsessed, claustrophobic, and blinkered. Mr Casaubon’s intellectual involvement in his project, ‘The Key to All Mythologies’, (Eliot, 1871/1965, p. 313) (p. 313) is thus all-consuming and flawed by hubris. On his solitary walks lit only by his inadequate ‘taper’, Casaubon suffers from both generalised and specific paranoia, the disturbing sense that he and his work are mysteriously greatly undervalued, and an inability to see himself or his project from any but his own perspective. Research writing is thus constituted by Casaubon as a search for a unified and transcendent explanation of existence which must be defended from the hostility and threats of others’ judgements with rigorous persistence and single-minded self-belief. Casaubon writes himself into the private hell of an impossible, unfinishable task with which no-one is

That was the way with Mr. Casaubon's intellectual labours. Their most characteristic result was not the 'Key to all Mythologies', but a morbid consciousness that others did not give him the place which he had not demonstrably merited - a perpetual suspicious conjecture that the views entertained of him were not to his advantage - a melancholy absence of passion in his efforts at achievement, and a passionate resistance to the confession that he had achieved nothing. ...The tenacity with which he strove to hide this inward drama made it the more vivid for him; as we hear with the more keenness what we wish others not to hear.

(Eliot, 1871/1965, pp. 455,456)

In Mr. Casaubon's ear, Dorothea's voice gave loud emphatic iteration to those muffled suggestions of consciousness which it was possible to explain as mere fancy, the illusion of exaggerated sensitiveness; always when such suggestions are unmistakably repeated from without, they are resisted as cruel and unjust.

(Eliot, 1871/1965, p. 232)
sympathetic. His chronotope of the blinkered private path means that the ‘Key to all Mythologies’ (p.313) is stillborn (Faubert, 2005, p. 48).

The chronotope here assumes the possible, but elusive existence of an ‘authentic self’, known through giving up the individualised ego and seeing the inseparability of the self with others. This pattern has resonance and implications for any writing which tends toward the construction of the lone ‘hero’ whose work it is to discover his or her own inner resources and which assumes a notion of the authentic self as a writing aim, such as many poststructural accounts of writing as inquiry, as I discuss in the following chapter.

Casaubon’s image illuminates the dangers of the heroic path, the construction of the lone, individualised ‘hero’, and its innate potential for alienation. Sympathy, or the recognition of an equivalent centre of self (Eliot, 1871/1965, p. 15) in others, is represented as central to epistemology, but in Middlemarch this is a doomed enterprise, because each ardently willing soul struggles alone to find the form for their own expression. The constitution of essential individualism prevents all of the Middlemarch characters from truly confronting the death of self-image/acceptance of self which is necessary for transformation.

A disturbance to this pattern emerges in In Faces in the Water (Frame, 1961) where writing can constitute/express these kinds of personal and social irreconcilabilities and limited, fractured, individualised and irreconcilable experience is not something to be overcome by sympathetic vision, but is instead an inherent part of existence. The constitution in writing of individualistic alienation, paradoxically enables self-assertion, agency and healing. It is therapeutic and cathartic. Writing is risky because the expression of the abyss means confrontation of this fundamental alienation. But this is a creative confrontation when irreconcilabilities are expressed.

Frame’s threshold constructions enable creative reconstitution of binaries such as insight/insane, true/false health/illness. Both madness and sanity are constituted as choices which each inevitably restrict possibilities and induce
loss. The texts asks: How can she both include and exclude? How can she own her disgust of madness and show loyalty to her own suffering and the suffering of other inmates? (Gambaudo, 2012).

Frame’s pattern of irreconcilable thresholds in the crisis of the self demonstrates possibilities for any writing which aims to give voice to marginalised people and/or to enable healing. Writing irreconcilabilities constitutes a form of empowerment in the writing of mental difference (Gambaudo, 2012). Language and writing are simultaneously healing and deceitful. They are means of agency and yet ultimately inadequate to the task of giving form to experience. Fiction here is a medium by which that which is un-narratable in conventional and academic epistemologies, such as trauma, might be narrated (Gambaudo, 2012). Frame’s chronotope enabling the constitution of alternative experience involves intra-acting irreconcilable discourses of the inner and outer world.

The liminal detective: Writing terra incognita in threshold, marginalised knowledge

If in the first act you have hung a pistol on the wall, then in the following one it should be fired. Otherwise don’t put it there.

(Chekhov, cited in Gurlyand, 1904, p. 521)

Patterns of threshold, marginalised and/or non-rational ways of knowing in the heroic path chronotope include hunches, intuitions and attention to a wide range of rational and irrational phenomena (as in Christie, 1942/2014; Tolkien, 1955/2005), irrational relationships, irreconcilable, subversive and non-consensus expressions and explanations (for example, Christie, 1942/2014; Frame, 1961), artistic and metaphorical causality and logic, and open-ended epiphany (as in Eliot, 1871/1965; Frame, 1961; Tolkien, 1955/2005). These are patterns which suggest possibilities for all writing of
the heroic path, for the opportunities they offer to constitutions of narrative and epistemology.

Destabilised character roles and hierarchies create patterns co-constituting some of these new, threshold, marginalised writing possibilities. In Christie’s detective fiction, in the defamiliarised phase after the murder is discovered, the characters are forced to adopt a limbo-like status. Everyone is seen in a new light, all are equally under suspicion, everyone regardless of role or status must be available for questioning. The gentle, eccentric old Miss Marple becomes a person of power, to whom others look in order to lead them from chaos. The entrance of the archetypal detective character of the sub-genres – the often unmarried or socially marginalised maverick; the hardboiled; or the fussy, eccentric detective – constitutes an entrance of a liminal figure existing outside of the normal hierarchies (Klapcsik, 2012). As in Turner’s construction of the liminal phase in the rite of passage (1967), social exclusion constitutes a freedom from established behavioural norms, and preconceptions about others. On entering the narrative, the detective maintains this distance from what they observe in order to gain a wider perspective of events than is possible for those inside the hierarchy. This marginalisation from the group is important because it allows the liminal detective to engage in different methods of knowledge production.

The principle of Chekhov’s gun (above) is a general convention of realist and some modernist narrative which embodies a rationalist understanding of knowledge production. If a gun is depicted hanging on the wall in the first chapter, it must be fired sometime later in the narrative. The gun that must be fired represents foreshadowing; a narrative insistence on rationalised, unified and selective depictions; a requirement for coherence and closure and cause and effect; and ultimately, a default to a recognisable, stable, explainable world (McHale, 2004). This assumption of rationality and cause and effect can also be observed in much social science writing. This writing directs attention to particular foreshadows, pre-determined categories and assumed relationships in order to help to understand the rational narrative of existence.
As Klapcsik (2012) explains, while detective fiction is widely interpreted to emphasise rationalistic processes and conventions, in fact it also demonstrates non-rational epistemological processes. The detective ostensibly works by a logical process of analysis, towards the single valid and unified interpretation of events and characters, and the irrational or fantastic seem to have no place. Detective fiction then is sometimes seen to be analogous with rationalistic ‘normal science’, which sees puzzle solving as its main task in order to add to the scope or precision of a paradigm, rather than to challenge or liberate from it (Klapcsik, 2012).

However, in detective fiction, if a gun hangs on the wall on page two, it will not be the same gun as the one that is eventually fired. Similarly, the mystery of the body that is found in the library is eventually revealed to hang on the fact that it is not the body of the girl who has initially gone missing (Christie, 1942/2014). In Christie’s fiction, the process of rational deduction is revealed as resting on assumptions that are always inadequate for the solving of the crime.

Christie’s chronotope acknowledges the selectivity of our knowledge constructions. The detective story illustrates the way our rational process is developed from selective inclusions, rather than, as we think, from the context in its entirety. Miss Marple’s idiosyncratic and threshold process uses not only logic but also hypotheses drawn from wider perception and conjecture, coincidences and comparisons with the villagers of St Mary Mead. These are seen as eccentric and counter to the traditional methods of the police (Klapcsik, 2012). In *The Body in the Library* a hunch that the situation was ‘altogether too like a book to be true’ (Christie, 1942/2014, p. 211) as Miss Marple’s first conjecture, is a suspicion about the simple, rational explanation. Epistemology is in this chronotope a process of attention to that which is supposed not to be significant. If everyone looks to certain things in order to know then the marginalised detectives among us look deliberately not at these things, but elsewhere. This suggests a more widely inclusive epistemology, paradoxically seen from the perspective of rationality as more subversive and controversial.
Our sense that we are logical beings can function as blinkers on our ability to see with a wide perspective and to recognise our exclusion processes.

Fiction typically uses threshold methods involving artistic as well as logical and rational forms of coherence and causality. *Middlemarch* (Eliot, 1871/1965) can be seen as creating a comparatively complex form of causality, which draws on an artistic coherence and sense of unification of narrative and existence. For example, the first introduction the reader is given to Dorothea provides some ambiguous yet suggestive foreshadowing of her journey to come as she is seen deliberating guiltily over the course, material pleasure of wearing her mother’s jewels. Dorothea’s own sensibilities value abstract, higher principles, rather than base material ones, and this is part of her attraction to the abstract-minded Casaubon. This foreshadowing enables an artistic rather than a logically argued suggestion of the epistemological problem of the separation of knowledge and high aspirations from materiality.

Part of the satisfaction of *Middlemarch* (Eliot, 1871/1965) is in its sophisticated representation of causal relations as subtle, far-reaching and myriad patterning. The modernist *Faces in the Water* (Frame, 1961) also presents a subtle model of causality, embracing the indefinable uniqueness of human experience, incoherence, and the absence of things (the sense of loss) as well as their presence. It does not constitute a rational causality of experience as one entity impressing an effect upon another, or a causality of intricate patterns. It rather tends to constitute a metaphorically suggestive but indeterminate causality. This writing can constitute new and individualised forms of poetic logic; not to solve experience as explainable and coherent for all, but to re-constitute it on one’s own inner, paradoxical, metaphorical, artistic terms.

Modernist fiction also uses the epiphany for making a non-logical form of sense. An epiphany is a commonplace event instilled with an intensity of experience and materialisation of a sudden consciousness or deep realisation (Campbell & Moyers, 1991). By indeterminately linking the minutiae of life and ordinary experience with profound, wondrous affect, fictional epiphany
suggests insights which are not transcending, final, totalising narratives, but glimpses of possibility.

*We all see faces in the water. We smother our memory of them, even our belief in their reality, and become calm people of the world; or we can neither forget nor help them. Sometimes by a trick of circumstances or dream or a hostile neighbourhood of light we see our own faces.*

(Frame, 1961, p. 131)

In this quote referencing the title of her book, Frame (1961, p. 131) indicates a lack of cohesion and an irreconcilability in epiphany due to its shifting forms. She suggests that we do not always welcome these revelations of possibility. Epiphany acknowledges the human desire to have resonance between inner and outer worlds, but is more successful when it creates ambiguity and the possibility of questioning such resonance, and such a desire.

**Iterative patterns and further disturbances**

*We all see faces in the water. We smother our memory of them, even our belief in their reality, and become calm people of the world; or we can neither forget nor help them. Sometimes by a trick of circumstances or dream or a hostile neighbourhood of light we see our own faces.*

(Frame, 1961, p. 131)

In the diffractive patterns of the heroic path chronotope humans emerge as those special beings who experience existence as a perilous journey through the mysteries and dangers of self-knowledge, self-potential, and the place and power of the self in the universe. Knowing is making sense of such aspects of the self through resonance and dialogue between inner and outer worlds.
While the goal of this journey may be of combined personal or social significance, in the examples considered here the journey itself is in general a highly individualised one. The chronotope has an appeal because of its constitution of ourselves as heroes in our own unique, individual mythic journey. The path enables questions tending towards the humanist, modernist and the epistemological, rather than the ontological: How am I to make sense of the world, of myself and of others in the world? What resources do I have for doing so? How should I act morally in relation to others and to myself? How can I remove myself from chaos and crisis and how might this assist me in meeting my aspirations?

The writing possibilities of the heroic path are always achieved through a struggle, for example, between ego and truth; empathy and selfishness; light and dark; the individual and the outside, or society. One of the most fundamental of these struggles is that with our own alienation. The capacity for the chronotope to generate the dialogue between the inner and outer journeys which we interpret as self-knowledge or opportunity for transformation is limited, because this constitution of the personal journey tends to construct humans as always and only individual entities. Our transcendence of individualism is desirable but unattainable.

A sustained pattern is that of indeterminacy and liminality, which emerges in various forms as enabler of possibility in the heroic path chronotope. A threshold or liminal destabilised space and time allows for defamiliarisation, different roles and hierarchies, new perspectives and ways of seeing, and intensified tests and struggles in which high stakes and crises bring forth previously latent potential. In the kaleidoscopic chronotope of Middlemarch (Eliot, 1871/1965) ambiguous shifting patterns poised on thresholds of change enable subtle and entangled epistemology and causality. In the modernist chronotope Faces in the Water (Frame, 1961) irreconcilabilities of inner and external world are constituted in a unique highly individualised discourse. Its possibilities for new knowledge lie in its resistance to normalised categorisations of experience, instead approaching artistic, unique expression of experience as unnameable and incoherent. The patterns of
resonance and experience in these two texts do not manifest as totalising, cohesive or stable. They are the more successful by their constitution on ambiguous thresholds enabling space for authorial and reader interpretation, and for creative possibilities through dialogue with the world beyond the text.

Reading *the kaleidoscopic drawing room* chronotope through the other texts sharpens the sense that *Middlemarch* (Eliot, 1871/1965) especially enables new possibilities of knowing through the extension of sympathy to others involving suspensions of judgement. Different discourses and life trajectories have diffractive influence over one another and Eliot gives each of them equal sympathy; each life and discourse is individually, historically and culturally enmeshed. Her suspension of judgement of lives allows greater scope to the possibilities they yield. Writing illuminations are through contrasts, shifts and changing light from each source thrown upon the others, not through a singular moral lens. Sympathy is the requirement for attuning the self to the fine web of relationships between phenomena and people. Without this liminal suspension of judgement and sympathetic attention, the idealism and aspiration of the research journey are constituted as a blinkered, private path. Here hubris, abstract obsessions and lack of capacity to notice the diffractive patterns of the self, other lives and intellectual theories result in paranoia, alienation and an impossible, unfinishable research task.

*The Body in the Library* (Christie, 1942/2014) constitutes liminal roles and processes as significant in writing and epistemology. Through destabilisation of hierarchy and marginalisation from the group, we enable the use of both rational and non-rational knowledge, and can see how our logical process and our sense of the world as cohesive are highly selective. We widen our attention to/in the world. If we view life as a form of cohesive story, we will assume that that gun that hangs on the wall of the library is the murder weapon. We need to see what others exclude from significance, and to do this requires us to defamiliarise ourselves from the context. Through these liminal means Christie’s chronotope manifests and accommodates that which others exclude and constructs a world in which truths, surfaces and explanations are ultimately problematised and questionable.
**Disturbances and exclusions of possibility for agency and human relationship**

The patterns of spacetime in the examples of the heroic path discussed here intensify the construction of humanity as essentially individualised, with some limiting consequences. However, between the texts they manifest somewhat differing constitutions of identity, power, agency and social relations.

Reading *The Lord of the Rings* (Tolkien, 1955/2005) through the other texts, the possibility of an ultimately unconflicted, autonomous human individual, emerges. The journey is ultimately not really taken for the self, but for the higher purpose of the protection of the model of a good society which is agreed upon. The stability of morality and of the expected linear narrative sequence allow Frodo and Sam to focus on their idealistic purpose with reasonable consistency. They are not so much searching for their unique form of self, as they are progressively developing the powers of agency which exist unquestioned within each of us, if we make the decision to take up the heroic path. Human connection is interpreted as a shared and unambiguous sense of good and evil, right and wrong, the meaning of the heroic path and the good society.

By the use of these heroic capacities agency is exercised over spacetime and material ontic phenomena – to beat back the monsters, and to enter the abyss and return safely home. This heightened agency means that of the chronotopes of the path discussed here, this is the only form of the journey of self which ultimately manifests the ‘safe return’ and a fulfilled project.

The possibility of the unconflicted, autonomous self is dependent on moral consensus, which is profoundly enabling. The world is constituted as containing unambiguously dangerous, evil, and good, safe places, which all experience as such. *The Lord of the Rings* type heroic path reassures us of the goodness and latent potential of humanity, and of the likelihood of the safe return home. Writing makes our lives and our personal challenges feel potent and profoundly meaningful. The opportunity to ‘write ourselves’; to bring
these qualities together in a cohesive expression further reinforces their value and advances their potency and meaning. Writing the liminal phase, such as the pass of the spider, enables reassurance of the value of such typically undesirable life and writing challenges as instability, risk, isolation, fear, doubt and uncertainty: they are worth undergoing because of the potential for self-knowledge and/or transformation they offer. The writing journey is a test of the self in which an abyss or crisis of the self is an opportunity for a death and rebirth to earn the right to access new knowledge, hidden potential and essential goodness, and to give back to humanity.

Christie’s *The Body in the Library* (1942/2014) patterns a less reassuring image of humanity, agency, home and epistemology. The world is constituted as not what it seems to humanity. This path operates on at least two levels: That governed by the empirical and the rational in the journey toward the solving of the crime; and that governed by impulsiveness, deviance, fear or selfishness, on which the crime has taken place. These paths are ostensibly married upon the revealing of the murderer, however, the chronotope holds more than a suggestion of the naivety of the assumption that this is the end of the path or the story. The repeated writing of such crimes manifests a society in which there exist unknown numbers of apparently otherwise ordinary humans lacking consensus morality and rational control over their own agency. The writing creates dissonance manifested by rational but not spiritual resolution, which hints at the limits of human logic and selective attention. The sense of doubt about humanity lingers. While the individual crime may be solved, nothing has been done to counter the forces of immorality and irrationality at large in society. The reassuringly rational and familiar have an underside, but the chronotope evades direct confrontation of this, it only hints at possibilities about misplaced trust in rationality, and in others, and even in ourselves. While detective fiction is generally considered to belong to the realist genre, this unresolved sense of unease approaches a modernist and un-unified representation of self. Perhaps the higher Self is nothing but a myth. The writing enables a singular, divided form of human agency. Miss Marple stands as an individual outside social systems in order to
gain the wide view needed to solve the crime. This must be done alone, and with deep scepticism about assumed logic and about human goodness.

The patterning of agency manifest by reading Eliot’s (1871/1965) *kaleidoscopic drawing room* through the other texts is a distributed one. The world is constituted as an entangled social one. Writing can constitute agency as distributed far and wide between humans and aspects of human systems. The ideal values of the general chronotope are love and truth, wherein love is selfless and truth is the capacity to ‘see whole’ (Booker, 2005, p. 618) to see the cohesion, connections and sympathies between humanity. However, in the *kaleidoscopic drawing room* true agency toward this aim is impossible as characters cannot escape the subjective and individualised experience which constitutes an essential alienation from one another.

The path to agency in *Faces in the Water* (Frame, 1961) is less idealised, but equally problematised. Spacetime is constituted as fractured, episodic and contingent rather than determinable, continuous and progressive. Agency is a battle to express contingent individualisation and affirm existence on the verge of the gap in the ice. The writing constitutes alienation and individualisation as sureties of existence. The individual exists alone on her thresholds of fractured ice with the vast indeterminate depths beneath. To exercise such unstable agency requires an extreme exertion of will. Istina must strenuously resist and remove herself from social systems in order to constitute her own marginalised, fragmented identity. Due to isolation and an existence entirely taken up with the effort of this self-assertion, the individual is constructed as pre-occupied with the self-referential and her creativity is absorbed in this exercise. The social and material world are constituted as hostile to non-consensus and unstable representations of identity. Writing is simultaneously healing and cathartic, and risky and subversive.
Disturbances and exclusions of possibility for agency in universal relationships

The heroic path constructing spacetime as subjective experience also illuminates exclusions of alternative ontic relationships, in particular those between human and non-human. The construct of the human self may be problematised in terms of human experience of their world, but not in terms of the distinctions between human and world, or other ontic fundamentals. Characters share a common reality of largely concrete space and continuous progressive time. This ‘realist’ spacetime is manifest even in the fantasy work of Tolkien, in that in the path to Mordor and back to the Shire, he imposes an authorial endorsement of the unambiguous existence of fantastic reality and safe, known reality. He also leans on the epic construction of the distant past as sacred in its truths and values (Bakhtin, 1981). In this way, his construction of the path distinguishes a clear line between what is fantastic and disturbed and what, by consensus, is good, normal, familiar, safe, and also ‘real’. This closed interpretation restricts the capacity for the chronotope to enable a sustained vision of radical new forms of reality, closing off possibilities to re-think consensus distinctions between real and unreal, rational and irrational.

Terra incognita then refers to the unmapped territories of human experience. By this subjective and anthropocentric construction the chronotope places limits on the kinds of relations possible between humans and their spacetime and universe. ‘Selves’ are always human or standing for human, are always privileged as special beings with latent potentials, and are always separate entities apart from nature. Even the most broadly dynamic of the chronotopes, that constituted in Middlemarch (Eliot, 1871/1965), is restricted to concerns with humans, human agency, and human social and historical systems. Dorothea’s and Casaubon’s psychic distance from the physical realm is constituted as an epistemological problem; an obstacle in their capacity to see human experience whole and appreciate life fully, rather than an ontological problem, for example, as an incapacity to see the material world as agentic.

The path chronotope is also strong in discourses about the doctoral research process and social science writing, as I discuss in the following chapter. There
I observe diffractions between the path chronotopes in fiction, and images of academic approaches to writing methodology and I discuss the intensities and opportunities indicated by these diffractions.
4. Terra authentica: Social science writing and possibility on the heroic path

Spacetime and texts of terra authentica

Constitutions of writing as heroic path also emerge in social science as well as in fiction. Midgely and Trimmer (2013) offer a good example of an explicit construction of the mythic heroic path in their education research textbook.

This chapter draws on a model of the unicursal labyrinth, a design known since the Bronze Age in Europe, Asia and the Americas in which there is only one path which leads to the centre. The design is used in some traditions as a tool for personal reflection, self-discovery and spiritual renewal; adherents ‘walk the labyrinth knowing that it will lead them on a winding path that takes them at times very near to, and at times very far from, the centre they seek.

(Midgley & Trimmer, 2013, p. 1)

The text fragment here indicates a learner on a single path, leading eventually and inevitably towards the centre. They argue that the mythic labyrinth is a metaphor for personal commitment and engagement as it requires the individual to make the choice to walk the path. The purpose of walking the path in the labyrinth is to make space for personal reflection and one of the characteristics of the labyrinth is its construction in ‘infinite regression in cycles of reflection’ (p.4). That is, the authors argue, rather than a lamenting of the lack of definitive conclusions the construction of the labyrinth allows for continued development and learning and profound transformation. As Le Guin (1979) has commented, and as is shown in the Lord of the Rings (Tolkien,
reference to the mythic through the images and language of fantasy language can accommodate the irrational, stimulate irony, and access the profoundly resonant aspects of human experience. In many of the texts I discuss here, these can assist to construct the doctoral path and/or social science research path as a profound, significant and spiritual challenge.

This chapter attends to the particular intensities and disturbances between patterns of the heroic path in social science writing-as-research and the patterns of the heroic path in fiction noted in the previous chapter.

In this chapter I integrate a range of social science writing-as-research texts into the apparatus. As discussed in Chapter Two, the social science texts chosen demonstrate writing-as-research as a dominant subject; that is, critique and representation of the role, aims and process of writing as a constitutive, rather than representational research method. The texts chosen for this chapter glow with resonance with the story of research writing conceived as a heroic journey and with the chronotope of the heroic path, and with the texts of the precious chapter. I make a distinction between this discourse in which a humanist chronotope representing plural subjectivities (heroic paths) is dominant; and other poststructural discourses in which the aim of research writing shows subjectivities as a part of a larger field of dynamic forces of creation and re/co-construction, represented in postmodernist and non-linear chronotopes.

In this chapter I most prominently draw on texts about social science doctoral writing methodology and about social science research methodology drawing on narrative inquiry, ethnography, autoethnography and fiction-as-research. The discourses these texts might be associated with are the intertwined poststructural, feminist-poststructural and arts-based or arts practice as research discourse positions. In the apparatus and methodology chapter I gave a brief overview of these discourses and their contributions to new discourses of writing-as-research and subsequent glow for this project.
Research writing patterns in this chapter both intensify and complicate the patterns of a journey of self-knowledge, discovery of latent self-potential and identity constitution which emerged in the previous chapter. The development of this chronotope in social science writing with its supporting images of human voice, agency and story has historically enabled re-imagined theoretical constitutions and enactments of the role and processes of research writing away from a supposedly neutral and objective and toward a more human and subjective image of research. Richardson (1985, 1990, 1997; Richardson & St. Pierre, 2000) has been significant in co-constituting these ground-breaking and on-going discussions of alternatives to the conventional view, framing writing as that which gives shape, form and qualities to the research inquiry in itself, and foregrounding subjective and constructivist notions of knowledge creation:

*Writing is a method of discovery, a way of finding out about yourself and your world. When we view writing as a method we experience ‘language in use’, how we ‘word’ the world into existence...And then we ‘reword’ the world.....This ‘worded world’ never accurately, precisely, completely captures the studied world, yet we persist in trying. Writing as a method of inquiry honours and encourages the trying, recognising it as emblematic of the significance of language.*

(Richardson & St. Pierre, 2000, p. 35)

The diffractive patterns noticed in this chapter enable further consideration of the opportunities and limitations of the heroic path as a chronotope of individualised, human identity and agency. In this chapter I explore two particular patterns of intensity between social science chronotopes and the fictional ones of the previous chapter. First, I attend to a version of the chronotope of writing as heroic path which is notable especially in discourse about the writing of doctoral theses. Second, I attend to the pattern of writing and identity formation as fractured ice floe, wherein I briefly note many intensities between fiction and research writing, as well as attend to a pattern of disturbance introduced through the critiques of Sennet (1993) and Bauman...
These discussions enable ways of noticing the limitations of the chronotope with regard to humanism and individualised concepts of the self.

Terra incognita and terra authentica: Diffractive patterns of the heroic path in fiction and in writing-as-research

Doctoral writing as heroic path

The heroic path chronotope is especially prominent in discourses of the doctoral research process. In the texts about doctoral writing drawn on in this chapter, the heroic path enables candidates to see themselves as the hero in a myth or poem and the research writing as a form of ultimate heroic challenge and profound and arduous path to the centre of the self and/or to an identity transformation. Undertaking a PhD is often constituted as a journey of the self (for example, in Deegan & Hill, 1991; Gonzalez, 2012; Norsworthy, 2005; Roberts, 2004), a hero’s journey (for example, in Heinrich, 2000; Jones, 2013; Midgley & Trimmer, 2013), or rite of passage (Clark, 2007; Kamler & Thomson, 2006; Kiley, 2009; Maniss, 1997; Noy, 2003; Swales & Feak, 2008). Uncertainty and challenge on the path are constituted as necessary for the processes of learning and knowledge construction and therefore advancement toward the goal. A key doctoral test is persistence in the face of these uncertainties, and the use of the mythic construct and of the language of fantasy (‘hero’s journey’, ‘rites of passage’, ‘labyrinth’), is a significant enabler of persistence and courage, providing the doctoral student with a sense of the journey as profoundly meaningful and larger than life, containing substantial moral and personal value.

Path to the academy

Doctoral writing conceived as rite of passage is common in doctoral writing textbooks and

...understanding the writing process for what it is: your entrance into a conversation with the scholarly community that will determine your success or failure.

(Clark, 2007, jacket blurb)
guide books (for example, Clark, 2007; Kamler & Thomson, 2006; Swales & Feak, 2008). These often enable challenge to discourses of reduction and simplification in research writing, by constructing the PhD as ‘identity work’ to make meaning (Kamler & Thomson, 2006, p. 19) unique to the individual, and constructing writing as a challenging and arduous journey of knowledge creation and as integral to all parts and phases of the PhD journey, rather than relegated to any transparent ‘writing-up’ phase (Clark, 2007; Kamler & Thomson, 2006; Swales & Feak, 2008).

The rite of passage in doctoral writing textbooks is often constructed as an initiation into the academy. It is an ‘entrance into a conversation with the scholarly community that will determine your success or failure’ (Clark, 2007, book cover), to help ‘students position themselves as junior scholars in their academic communities’ (Swales & Feak, 2008, book cover). The doctoral heroic path constructed as initiation into the academy reflects a commonplace contemporary tension in university writing; that between writing for intellectual exploration, experimentation or social transformation, and writing for a marketable career and institutional success. It is valuable to examine the patterns of this experiment, to consider how this effects the forms of writing transformation enabled.

In the previous chapter, the threshold or liminal phase emerged as a pattern of intensity on the heroic path. This pattern was characterised by temporarily defamiliarised space and/or time and de-constructed hierarchy, for the purpose of enabling transformation of identity and transition from one state of self to another, and enhanced self-knowledge. Turner’s (1967) anthropological construct of the rite of passage and Campbell’s (1993) hero’s journey both theorise the threshold and Turner (1967) builds on the discussions of Van Gennep (1960), to more specifically theorise the threshold as rite of passage. The threshold is a betwixt and between spacetime, a realm in which normal roles and boundaries are temporarily dissolved. The threshold allows opportunity for new knowledge, transformation and change. Here, young individuals are separated from the community they live in, in order to gain autonomy and strength. Like the PhD student in the doctoral
textbook, via rituals and challenges, these individuals prove they have achieved enough autonomy and maturity and deserve their integration into another stage of life.

In Turner’s (1967) segregated space, the individuals undergo a period of social transition characterised by ambiguity and liminality of roles which amounts to a sort of social limbo. This physical and social marginalisation is also manifest in the previous chapter in Frodo and Sam’s journey (Tolkien, 1955/2005), in Dorothea’s (Eliot, 1871/1965), in Miss Marple’s (Christie, 1942/2014), and in Istina’s (Frame, 1961). The threshold pattern in which the PhD student lacks identity and status and is ‘between’ child-state and mature scholar is also apparent in the doctoral journey. However, Turner (1967) elaborated that the hierarchical invisibility of the ‘betwixt and between’ phase should also be liberating, that is, roles and hierarchies such as those between student and scholar or supervisor, can be temporarily and creatively subverted in order to provide means for more profound transformation.

However, doctoral writing textbooks such as Kamler and Thompson’s (2006) do not advocate liberation from hierarchy. Instead they represent mastery and replication of established academic conventions as a mark of maturity. They aim to teach students how to transition from ‘naïve’ (Kamler & Thomson, 2006, p. 61) ‘childish’ (Kamler & Thomson, 2006, p. 108) writing forms to those with more ‘maturity’ (Kamler & Thomson, 2006, p. 109) and authority, with more similarity to the established conventions which will gain them acceptance by other scholars.

In the doctoral writing texts read here, writing for the co-creation of knowledge and the self are constituted as useful to the extent that they shape the student for the academy and the knowledge economy. In spite of drawing on the chronotope of the path, the neo-liberal construction of candidate as knowledge worker is a disturbance in the pattern of the doctoral researcher as becoming hero. This version of the chronotope does not intertwine the inner and outer paths, but rather keeps these at arms-length. In the neo-liberal education context, the knower is separate from what is known (Barnacle,
The disturbance of the roles of scholar or supervisor and student are not required. Knowledge and research process are instrumental and largely reproductive of ‘mature’ understandings. An adventure into terra incognita to discover latent unique potential is not necessary to the outcome.

By Booker’s (2005) humanist analysis the doctoral rite of passage as an induction into the academy corresponds to the more spiritually immature developmental phase of the first stage in life, where independence and adult/professional identity are established. In the previous chapter this was constructed as a path with a safe return home (Mendlesohn, 2008). If the heroic path concludes with a safe return ‘home’ in a transformed state (for example, an induction into the academy), and where interpretations of the moral meaning and the reward of ‘home’ are undisputed (for example, the discovery of ‘a key’, or answer, or the establishment of professional identity and advancement of career), alternative possibilities of the path, transformation and writing are closed to the imagination of the candidate, their writing, and their readers. Booker (2005) says this journey is an opportunity to see life differently, to experience the puzzle of being able to work out the different values of the other world. The candidate may establish independence of identity and confidence and an adult role in the institution, but may remain relatively unchanged within.

The second stage in life in Booker’s (2005) humanist interpretation is conceived as a rite of passage of a more profound nature, which involves looking inward, toward the ‘authentic’ self. A Bakhtinian (1981) analysis of doctoral rite of passage conceived as an induction into the academy constitutes this as stagnant writing and reality. As discussed in the previous chapter, a methodology of heteroglossia (Bakhtin, 1981) – multiple discourses without authorial preference – and of irony, is important to the resonance and power of the myth. A profound experience of the liminal phase and the facilitation of irony are important to more profound transformation, which are absent or under-emphasised within textbook discourses of doctoral writing as rite of passage into the academy.
Liminality on the path to the doctorate

However other texts about doctoral writing are more resonant with the heroic paths of the previous chapter, and where this occurs it is largely due to the construction of a form of liminal spacetime in the chronotope. Some studies constitute the PhD as an entirely liminal journey characterized by ambiguity, uncertainty, & crisis, in which candidates experience ambiguity of role, status and power in an extended phase of transition of professional identity (Araujo, 2005; Deegan & Hill, 1991). This role disturbance enables, among other things, questioning and attention to the ambiguities of researcher/learner/teacher roles. Roberts (2004) emphasises a liminal form of researcher/learner identity transition. In the doctoral process he describes there is a complex process of extended and ambiguous ‘in-between-ness’ of roles. By attention to the liminal construct he enables the noticing of otherwise imperceptible processes of play, performance and ordeal in this role disturbance, and the creative potential of these processes.

Turner (1967) also emphasised the significance of play in the liminal phase, connecting this to social innovation, social reversals, loosened or undermined hierarchical structures, and eccentric behaviour. These same patterns of innovation and eccentricity are allowed expression in the ‘play’ of fiction writing, as seen in Miss Marple’s (Christie, 1942/2014) subversive and marginalised knowledge creation methods, and in Istina’s (Frame, 1961) refusal of dominant social categories and hierarchies and expression of her own irreconcilable ones. Turner describes the way that under certain culturally determined conditions, this loosened hierarchy allows tribal subjects to introduce elements of novelty into the socially inherited set of customs. Liminality; the seclusion period, is a phase peculiarly conducive to such playful, spontaneous invention and Turner argues that this is a marker distinguishing industrial from agrarian societies. Modern society and the traditional academy draw a clear line between play and work. That play and loosened hierarchy can introduce innovation and enable transformation is sometimes recognised in the academy with respect to doctoral writing practice, but is not taken very seriously. Play and liminality in fiction writing
and the tolerance for and extension and elaboration of different, eccentric epistemologies which are modelled in fiction, are significant enablers in this journey. The doctoral student experiences the enabling conditions of marginalised status, and often, comparative isolation. The potential of these for play, loosened hierarchies and innovation might be facilitated if we understood more about the function of these in the epistemological process. Bakhtin (1981) has noted 'The road is a particularly good place for random encounters' (Chapter, 3 location 3485), however, if doctoral students are not encouraged to deviate from their predetermined goals through play and chance opportunities, their opportunities for random encounters and for ventures into terra incognita are much restricted.

Turner later argued for the additional component of transformational possibilities of identity in the liminal state, as one in which individuals can experiment with new ways of being (Bettis & Mills, 2006), as was seen in Frodo and Sam's (Tolkien, 1955/2005) and in Istina's case (Frame, 1961). It is useful to remember that Le Guin (1979) believes that fantasy writing with its accommodation of the irrational, is required to express the symbolic language of the deeper psyche and is expressive of the state of liminality which assists in the constitution of knowing as resonance between inner and outer worlds. Authors such as Midgley and Trimmer (2013) who utilise mythic metaphors such as the labyrinth in social science writing understand some of this power in mythic language. But it is worthwhile conjecturing on this pattern. How else might the language of fantasy be drawn on in constitutions of research writing? For example entwined inner and outer paths are also constituted and represented in the poststructural notion of reflexivity – are fantasy epistemologies of wider creative significance here?

Kiley's (2009) conception of the liminal phase enables attention to converging affective, social and epistemological patterns, experienced as a disturbing 'stuck' phase. The candidate enters a stuck, liminal state on encountering a 'threshold concept' (Meyer & Land, 2005, 2012), one which signifies a crucial form of learning required before the learner can move from one stage of understanding to the next. Being 'stuck' at the threshold can co-manifest
depression, a sense of hopelessness, 'going round in circles' and so on. Kiley's (2009) discussion emphasises the importance of sharing the journey, that is, the significance of the learner community and research culture in assisting candidates to recognise this 'stuckness' and to help them to move on with a new understanding of themselves. This necessitates a shared understanding of the doctoral heroic path and its challenges within the research culture. Because 'stuckness' and transformation occur through explorations in ambiguity and uncertainty, they are unique to the learner and the project, rather than pertaining to a pre-defined stage in a technical process. The solutions to moving through 'stuckness' and transforming are then accessed by support and mutually dependent relationships, and are also unique to the learner and the project. The growth of the self as learner pertains partly to their initiation to the academy, but is in many ways undefined, unique, and also social.

Reading Kiley's (2009) liminality and 'stuckness' through the kaleidoscopic view of Eliot (1871/1965) in the previous chapter, suggests that a wider field of attention to social, political, historical, environmental and personal aspirational, mutually influencing shifts, is productive. Kiley's liminal phase involves 'stuckness' at threshold intellectual phases, involving despondent affective experience and requiring social support to move through. Casaubon’s (Eliot, 1871/1965) 'stuckness' and his kaleidoscope of ambiguous thresholds are equally relevant to doctoral candidates today. These include thresholds of social and relationship transitions, of transitions of empathy in the research,
cusps of access to personal meaning, between historical academic expectations in knowledge and skills and future innovations in these. Eliot’s (1871/1965) chronotope integrates and explores the affective experience of intellectual aspiration and its conditions of constraint and possibility with an attention and insight lacking in many accounts of research methodology. Writing and research might be understood better by such attention to cusps of transformation, intricate and shifting agency and ambiguous conditions of constraint and possibility.

**Doctoral writing and narrative selections**

By Booker’s (2005) analysis discussed in the previous chapter, on the hero’s journey each time consciousness is expanded, so at the same time does it become in another way more limited. Christie’s crime scene chronotope problematising logic and humanity, constitutes possibilities for attending to some of the limitations as well as the expansions. Christie’s detective novels show the pattern of our ignorance of the highly selective nature of our supposed logical arguments. They also show our willingness to use rationality to clothe and bury our own darker sides and motivations. The universe is a multitude of clues, and consists of a surface side, in which we live, act and notice and an underside, of which we are not much aware until temporarily confronted, but which contains all phenomena, including the darker side of humanity’s nature.

Miss Marple’s (Christie, 1942/2014) path to knowledge is ethnographic; her detailed observations of life in St Mary Mead provide her with the theoretical basis from which to extrapolate and conjecture about human behaviour in order to solve mysteries (Gough, 2003). But the chronotope produces false stories, which perversely, are not to be cast aside but are the means to the truth. Miss Marple’s process is to problematise these false stories as surfaces. Non-rational capacities, often represented as idiosyncratic or eccentric in opposition to official, traditional police methods, such as hunches and intuitions, noticing gaps, silences and nagging doubts are pursued in Miss
Marple’s process. She deliberately looks not at what everyone else assumes to be important, but elsewhere. That is, she uses the common-sense story as perverse indicator of what is not true.

By this chronotope, research writing might be co-constituted as an imperative to explore and map the obscure detail: phenomena which no one else thinks are important, including that which appears to be illogical in the common sense narrative. Research writings, like detective and other fictions, are ‘distillations of the sprawling, messy, impenetrable mysteries that surround us’ (Oates, 2013, p. 491). We do not need to understand their constitutions of the world as singular truths, but we can access greater possibility of understanding by expanding our awareness of our exclusions. The crime scene chronotope used in research enables the questions: What are the constitutions of our knowledge and what are the costs of our supposed rationality and logic? Which data do we ignore and how might it reveal other understandings? What is the common-sense story map and how might we construct and map other cause and effect stories from the data at hand?

Miss Marple (Christie, 1942/2014) shows us that to achieve this expansion of phenomena for inclusion it is also important to question the nature of humanity; that is, to understand us all as potentially ‘guilty’ in a remapping of causes and effects which implicates all roles but each time can select only a few with which to tell ‘the story’. The notion of the ‘guilty party’ is creative in research writing to the extent that it can help problematise rationalised actions and events, inequities, desires and rewards, deceits and manipulations in both the subjects and the processes of research. Everything on the map is doubled (Gough, 2003, p. 65), signifying the ostensive narrative (the lure and red herrings laid for the reader), and at the same time, clues to another story underlying. A chronotope with similar qualities to that of the ‘crime scene’ has been used by Thompson (1998) to reconstruct the guilty party by in ‘Ned Ludd was framed’, mapping an alternative to the narrative of ‘Luddites’ problematising this as a story of binaries, as a narrative of those who are for and against technological change perceived as ‘progress’.
To re-iterate the patterns of these chronotopes so far, patterns of doctoral writing as heroic path are manifest in certain doctoral writing text books, as the path to the academy. The patterns here intensify the notion of the rite of passage, and make reference to heroic path aspects such as tests, challenges, persistence, and personal rewards. When irony, heteroglossia or play are not involved in the methodology, and the path and the reward are narrowly determined as initiation into the academy, this may close down opportunities for the random encounters and liminal phases which are otherwise characteristic of learning opportunities on the path.

In other texts, doctoral writing is constructed as a heroic path in which a spacetime of liminality is more prominent and this enables a wider range of forms of transformation and learning and potentially more access to terra incognita – the unknown potential of the self. The heroic path chronotope has at its disposal fantasy-mythic methodologies and epistemologies which construct research writing as an ironic and profoundly resonant heroic test. The researcher writer is a hero participating in this transcendent life genre by co-constituting her own mythic existence. There is a beginning to the path and a reassuring end, in which some sense of closure, reward and meaning are achieved in terms of enhanced status, and/or profound personal awareness or identity. This mythic constitution offers considerable inducement to take up and persist with the quite significant uncertainty and challenges of the research process, by the constitution of the idea that there are profound and morally significant reasons for doing so. These conditions enable a heroic sense of individualised purpose and meaning to the act of writing, a reason for courage and a means of reassurance when it is uncertain and challenging.

The social science notions of thresholds and ‘stuckness’ in research writing, read through the *kaleidoscopic drawing room* patterns of the previous chapter also bring to light nuanced and intricate understandings of ‘thresholds’ in the research process. Methodology and epistemology understood as attention to shifting social, domestic, political, environmental, intellectual and affective thresholds or cusps enables a form of subtle, empathic, relational and intricate examination of their co-influence. In Eliot’s work, terra incognita, and research
itself are constructed as the finding of a form for the aspiration to transcend the self; of necessity a shifting, nebulous and ambiguous place and process, embracing many facets.

Reading research writing through the patterns of the crime scene chronotope of the previous chapter can enable research to be constituted as process for problematising narrative selections. This allows for play and subversity in methodology and for idiosyncrasy in the researcher. By implication it allows for mystery in the universe and ontology, as it is acknowledged that logic is partial and limits the possibilities of knowledge. The image of the doctoral candidate is here that of the idiosyncratic, marginalised investigator, who in their isolation and with their liminal status and identity has the conditions to enable the pursuit of these eccentric methods and alternative selections.

Patterns of disturbance between the texts illustrate the effects of differing use of the liminal zone and irony, and the resulting opportunities for segregation, play, marginalised and subversive knowledge methods and destabilisation of hierarchy which might enable innovation, new selections for constructing our narratives, and transformation.

Terra authentica: The ice floe. The slippery, fractured path to the authentic self

When I thought about those writing instructions I realised that they cohered with mechanistic scientism and quantitative research… Foisting those instructions on qualitative researchers created serious problems: they undercut the role of writing as dynamic, creative process, they undermined the confidence of beginning researchers because their experience was inconsistent with the writing model, and they contributed to the flotilla of qualitative writing that was simply not interesting to read.

(Richardson & St. Pierre, 2000, p. 959)
Next I attend to patterns of the heroic path chronotope as they manifest in methodological theory and practice of writing-as-research more widely, such as those in the works of Richardson (Richardson, 1985, 1997; Richardson & St. Pierre, 2000), Leavy (2009), Frank (2000) and Perry (2010). The heroic path in doctoral writing methodology and that in the wider field of social-science writing as research have considerable resonance, but there are also interesting differences in the patterns they co-constitute. In the doctoral writing texts just discussed, entanglements with the theory of humanism, interpretivism, myth, fantasy and anthropology (such as the texts of Tolkien, Campbell and Turner) are discernible. The hero’s journey is fairly explicit, and mythic elements such as the solitary path, the liminal zone, and the reward and return tend to be emphasised. In the writing-as-research discourse of established academics and methodologists discussed next, the theoretical entanglements also involve the humanist and the interpretivist, but feminist poststructural, and modernist constitutions tend to be a little more prominent than fantasy and mythic. However these next discourses also manifest similar patterns of research as individualised, subjective journey to self-understanding. And the chronotopes co-constituted here intensify one set of patterns of the path in particular: the path into terra authentica, the territory of the authentic self.

The chronotopes of writing-as-research methodologies in social science are largely modernist in that they construct the universe as that which is experienced through time and memory, through the intertwined conscious and unconscious (Smyth, 1991), and through writing. Plural individualised paths to subjective self-knowledge exist inside this universe of consciousnesses and against a backdrop of unproblematised, largely concrete and determinable space and time. The paths to self-knowledge themselves are constituted as arrangements of events and experiences in order to express an artistically or structurally cohesive, but not closed or totalising form. These paths bring the writer and reader closer to ‘truth’ and ‘authenticity’ because narrativised, open-ended, arrangements and expressions of personal experience and consciousness recognise that knowledge is always and only personal and partial.
The entanglements of modernist, humanist, interpretive and feminist-poststructural discourse positions in this chronotope give vigour to subjectivity and reflexivity as essential components of the heroic path to self-knowledge, and research aims of high priority and integrity. Concepts of identity, identity politics, individual and plural subjectivities, voice, agency, and self-expression are established as epistemologically credible and personally, ethically and politically transformative within academia. Reality can now be examined and understood from subjective philosophical standpoints. Ethnography and auto-ethnography have been key methodological sites of the development of these discourses (Leavy, 2009), as methodologies aiming to retell 'lived experience'.

Heroic path writing to constitute identity and personal, political and social empowerment uses experimental and intuitive methods to bring forth unique voice and consciousness. Richardson (1997, p. 94) argues for increased allowance of flexibility of writing forms because ‘experimentation with point-of-view, tone, metaphor, sequencing and so-on’ help to develop the ‘researcher’s self-knowledge and knowledge of the topic’. Possibilities of raising self-consciousness and of reflexivity are enabled. From the research-creation perspective, Chapman and Sawchuk (2012) present the point that it is only via creative and intuitive processes that the researcher can develop and become engaged in research which is right for him or her. A personally and creatively developed methodology is thus presented as the best method for introspection beneficial to both the researcher and the research.

Methodological tools to represent or construct ‘lived experience’ and ‘embodied experience’ are important on the path, as the goal is to create voices and storied accounts which ‘ring true’ and engender an empathic experience in the reader, representing multiple, subjective and marginalised voices, and creating critical awareness and raising consciousness of these marginalised positions (for example, Barone, 2000; Lather & Smithies, 1997; Richardson, 1985, 1997; Richardson & St. Pierre, 2000).
Story or narrative is often posed as the essential human methodological tool for making sense of life. Richardson’s writing methods work has substantially helped to carve a path for this discourse. She acknowledges the metaphor ‘theory is story’ in her work (2000). Richardson tends to understand the argument for subjective voice as equating to an argument for narrative: ‘narrative is a condition of temporal experience’ (Richardson, 1997, p. 29); ‘narrative...provides the individual with the opportunity to make existential sense of mortality’ (p.31). Richardson chooses to use a liberation narrative, premised on the idea that a central and historically neglected aim of social science research (not only ethnography) is to make sense of lives, to see from other’s perspectives, to illuminate aspects of the world and people which are little understood, to give voice to the marginalised, and to do these things in ways which engage and foster empathy in the reader. See, for example, The New Other Woman (1985), and Fields of Play (1997).

The authentic self, truth and reflexivity on the heroic path

Now, I bring a critical sociological gaze to my own work and my life. I write critical ethnographies of the self. I do unto self as I have done unto others.

We are always present in our texts, no matter how we try to suppress ourselves.

How then do we write ourselves into our texts with intellectual and spiritual integrity?

(Richardson, 1997, p. 2)

The tropes of authenticity, subjectivity, story and ethics are emphasised and entangled in this chronotope. In the text fragment above from Richardson, subjectivity is a position of integrity, its denial is pretence, and therefore subjectivity is an ethical imperative in research writing. In the wider discourse
it is also argued that that the supposedly objective voice in traditional research writing is misleading and dishonest, manipulative and disempowering. For instance, in 1973 Mills represented the objective voice evocatively as ‘prose manufactured by machines’. Those who write this way consider themselves an 'agent of some impersonal sound'; who speak 'for some record kept by no one; ...an autonomous sound in a great empty hall..... as in a Kafka novel' (Mills, 1973, p. 243). Mills’ chronotope of a Kafkaesque universe composed of a great empty hall and an autonomous sound and record, co-manifests a pattern of objectivity as obsessive bureaucracy, pomposity and sinister absurdity. The implications for the writer are the potentially corrupting power of such imagined anonymous omnipotence. The implications for the reader are personal disengagement, potential manipulation and disempowerment. Human voice in this great hall is constituted as having no place and existing nowhere; as denied rather than suppressed.

Authentic, subjective voice and story then are connected with an ethical argument about the importance of the research writer presenting an authentic self; being up-front and accountable about unavoidable and inherent subjectivity of experience and research. Visibility to the reader of this author authenticity is important. Reflexivity; visibility of voice and process, help to reveal the layers of construction in the text and thus to demystify writing (Kamler & Thomson, 2006; Richardson, 1997). Although often prefaced by discussions of the poststructural position of scepticism about truth, this deconstruction is nonetheless often described as significant to moving closer to truth. Because a major pretension of science is the image of the single objective voice, it follows that reflexivity about author voice and multiple subjectivity bring us closer to truth. Truth or truths are always subjective and always partial, so can be approached more closely via reflexivity than via supposed objectivity.

Fictional techniques, and fiction itself in research are often advocated for enabling this authenticity, because they have ‘the potential to render lived experience with more verisimilitude’ than conventional research texts (Diversi, 1998, p. 132). This sense of verisimilitude is enabled because fiction
constitutes an unquestionably subjective interpretation that remains open and unfinished – like our experience of meaning in existence. For example, for Banks and Banks, who write social research as fiction, subjectivity is an ethical matter because ‘facts don’t always tell the truth...the truth in a good story – its resonance with our felt experience...sometimes must use imaginary facts’ (Banks & Banks, 1998, p. 11). Thus, part of the heroic path can be to fictionalise subjectivity, which if authentically written, is closer to ‘truth’.

**Authentic writing as faceted paths**

Research participants are simultaneously telling and re-telling their stories as they are living them....In this way, participants are engaged in the unfolding stories they share – stories that restory or replot through their own reflective process and with the passing of time

(Leavy, 2009, p. 27)

Specifically, poststructuralism suggests two important ideas to qualitative writers. First it directs us to understand ourselves reflexively as persons writing from particular positions at specific times. Second it frees us from trying to write a single text in which everything is said at once to everyone.

(Richardson & St. Pierre, 2000, p. 929)

I choose to consider the distinction between humanist and postmodernist notions of selfhood as less significant in this chronotope than the feature they have in common which is the over-riding problem of human identity. Multiple and faceted stories co-constitute the postmodernist self as de-centred and multiple and the heroic path as an unstable and branched road to self-knowledge.

Faceted stories telling of shifting and partial experiences are patterns in poststructural research discourse, as in the text fragments from Richardson
(2000) and from Leavy (2009) above. These often draw upon the methods of modernist fiction, such as multiple focalisation, juxtaposed perspectives and interior monologue to draw the reader into engagement with an epistemological problem (McHale, 2004). Conclusions are left open to interpretation, as in Richardson's *Fields of Play* (1997), which uses these methods to manifest epistemological doubt and textual indefiniteness.

Fiction methods and the faceted path chronotope can also be used to see research findings in a new context, to refine, elaborate and problem-solve. Leavy (2009), for example used fiction to help her to place, and re-place her research within existing theoretical frameworks, flesh out loose associations and eventually re-conceptualise her content analysis about media representation of selected historical events such as the sinking of the *Titanic*.

In addition to the methods of multiple perspective and interior monologue described above, these faceted texts depend on situatedness. Richardson's crystal metaphor (1997) constructs knowledge as subjective, and subjectivity as situated; knowledge is that which is seen from a particular place and time. This situatedness enables an enriched concept of the heroic path as one which can be seen from many different places and times. As Richardson suggests, this enables a new kind of coherence, a prismatic form.

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*I propose that the central imaginary for ‘validity’ for postmodernist texts is not the triangle....Rather (it) is the crystal, which combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multidimensionalities, and angles of approach. Crystals grow, change, alter, but are not amorphous.*

*Crystals are prisms that reflect externalities and refract within themselves...What we see depends on our angle of repose...*

*Crystallization provides us with a deepened, complex, thoroughly partial understanding of the topic. Paradoxically, we know more and doubt what we know.*

(Richardson, 1997, p. 92)
In the previous chapter, these facets and shifting perspectives were notable in the kaleidoscopic *Middlemarch* (Eliot, 1871/1965) chronotope, and the chronotope of fractured ice floes constituted by *Faces in the Water* (Frame, 1961). One of the ways this faceted pattern has agency is in the mobilisation of resistance, as I discuss next.

*How do trauma survivors deal with the problem of constructing a coherent life story and how does the content and form of the story change over time? Do these changes reflect normal developmental processes of trauma recovery? What initiates the restorying of a survivor’s narrative and does this have a reparative effect, helping to repair the distorting impact of sexual abuse on normal identity development?...How do our expectations...for a coherent story interfere with our being able to hear what survivors are trying to tell us?*

( Harvey et al, 2000, p. 292)

**Authentic writing as fractured, resistant paths**

One of the effects of re-storied, shifting, faceted writing is that its surfaces can manifest fractures between dominant stories and individual experience. In social science, as in Istina’s story in the novel *Faces in the Water* (Frame, 1961) the heroic path is often constituted as writing to address or confront trauma, loss, grief, stigma, oppression and marginalisation (Leavy, 2009). For the writer these enable validation of feelings and experience, alternative, resistant and personal constitutions of illness and of the health and illness dichotomy, and offer means of expression of profound feelings and experiences which are otherwise inexpressible and irreconcilable. For the reader, these forms of writing enable a broadening of understanding of such experience, engagement and cathartic release (Leavy, 2009).

These shifting, faceted and fractured capacities of fiction are not merely important to the generation of more and more diversity of perspectives, to counter dominant discourse and to promote the general understanding of
plurality in existence. The capacity of fiction to constitute shifting facets and fractures in understanding is important in the constitution of originality and invention. The creation of something new is dependent upon the recognition of the ambiguity of appearances. Something new is created or enabled when something which conventionally means one thing, discloses other possibilities (Carter, 2010). A double movement occurs consisting of decontextualisation in which the elements are defamiliarised, and recontextualisation in which new families of association and structures of meaning are established. Carter (2010) argues that these are the features of any conceptual advance. Heroic paths in faceted, fractured subjective spacetime, enable inventions in subjective understandings.

Fractured temporality is a method used to constitute the irreconcilable. For example, Harvey, Mishler, Koenen and Harney’s (2001) study of sex trauma survivors discusses the ways that experience is not necessarily coherent or chronological. For some extreme trauma survivors, the event ‘stands outside of time’, constituting a temporality of its own. Re-plotting or re-storying stories differently over time is a common and normal phenomena, for example, by women who have killed their partners as a result of battered women’s syndrome. Stories are narrativised through the interplay between cultural frames available and individual meaning, which both change over time (Harvey et al., 2001). Trauma narratives, because of their incomprehensibility and sustained impact, seem to have the potential to enable this temporal re-constitution, and this enables some of the writing/storying/healing experience and path to greater self-understanding.

Fractures with dominant stories also mobilise resistance to binaries and innovative new

When Serena writes her story of murderous anger, she has a sense of emerging strength and power within herself. As Marian’s life fills the pages of the journal, Serena feels stronger. This empowerment may be referred to as healing, but not the kind that sweeps things under carpets: rather the kind that is about living with hard scenarios.

(Perry, 2010, p. 39)
constructions. Perry (2010) writes of her resistance to describing her writing as healing. She suggests rather that writing is a means to reach out to ‘touch a fleshly body, the body of real-life events’ (Perry, 2010, p. 39). In this she constitutes writing as a form to embody experience, including pain, in order that she might touch it, live with it, not sweep it away as though healed and closed. Here, writing enables the possibility of making consciousness into something material, solid, flesh, sensory, something painful but less opaque, which can be lived with, or alongside of.

Perry (2010) resisted the expectation to write a ‘healing story’. Frame (1961) also resisted reference to the dominant medical terminology for her condition, and used modernist fiction techniques to constitute a highly unique, irrational experience: living with madness, and healing, as simultaneously necessary and also irreconcilable experiences. The pattern of Frame and Perry is the co-constitution of existence on one’s own terms. This is the more powerful because it expresses the irreconcilability of experience, an authentic experience. This authenticity is also made powerful by its constitution as bodily and material, patterns also manifest in *Faces in the Water* (Frame, 1961). The physical experience of the asylum; of panic, restraints, smells, eating, the bodily experience following electro-convulsive shock therapy, were strongly evident.

The originality generated in faceted, fractured heroic path stories often enables moral innovation too. Both questions and original understandings of power, oppression and healing are provoked in Perry and in Frame’s work.

*My own experiences as both a sex worker and as an ethnographer of sex workers and their customers suggest that sex work involves moments of empowerment, intimacy, and gratification alongside moments of degradation, alienation or disenchantment – it is this amalgamation of power and pleasure that I explore in my fiction. There is a possibility of portraying a complexity of lived experience in fiction that might not always come across in a theoretical explication, even one that is concerned with elucidating the complexity of power relations and human interactions.*

(Frank, 2000, p. 483)
Other works innovate ideas of good and bad, right and wrong in human and human researcher relations. Richardson’s (1985) *The New Other Woman*, presenting the voices of women in relationships with married men, de Freitas’ *The Wrong Shoe* (2013) and *Bad Intentions* (2008) exploring the intentions of research educators, and Frank’s (2000) *The Management of Hunger*, a fictionalised account of her participant research as a sex-worker are examples.

Frank’s writing intensifies the patterns of resistance to dominant discourse and expression of the irreconcilabilities and paradoxes of experience. This has enabled her to manifest something new and ambiguous in terms of constitutions of power and pleasure. Rather than the one dimensional conceptualisations which she found common in the literature, such as ‘false consciousness’, or empowered ‘freedom fighters’ (Frank, 2000, p. 483), she innovated by defamiliarising conventional understanding, and drawing on her own, unique terms of experience, resulting in original power/pleasure constructions.

These heroic path stories of faceted, fractured subjective experience manifest a chronotope of many partial worlds of subjective consciousness. These faceted heroic path stories problematise, and enable innovation and complexity in ethical and moral understandings with respect to human life and relations. They are, as I discuss next, restricted to new understandings of subjectivity within worlds in which the individual consciousness exists separately from its ontological surroundings.
Concrete world

Incorporating highly concrete observation, these poems exemplify a degree of concreteness and detail that has potential of enriching both the accuracy and power of traditional field notes as qualitative researchers strive to evoke the worlds they represent.


...a kind of honesty achieved through a heightened empiricism, a determined scrutiny of the world around us. Like all good art, honest stories are powerfully observed, carefully detailed. They must generate in the reader awareness of the locations of (actual or fictitious) character’s thoughts, beliefs, desires, and habits, in the web of contingencies that constitute their life-worlds.

(Barone, 1992, p. 143)

In the text fragments above, Sullivan and Barone make a good case for the validation of the realist fiction techniques of an empirical, investigative journalistic style in research writing. This style has precursors such as *Hard Times* (Dickens, 1854/1989) and *The Jungle* (Sinclair, 1906). In these historical novels, these methods showed us the undersides and implications of human nature by helping us to see how social practices which we have taken for granted have made us cruel (Rorty, 1989), negligent or oppressive and the ways this has impacted on the paths and potentials of others. In these early novels the chronotope tended to reinforce social determinism, belonging to an era which saw social categories such as family, class and gender as fixed in their influence (Smethurst, 2000). In poststructural social science writing the idea of authentic writing as using ‘concrete’ and realist techniques enables this intensified vision of new perspectives on our own familiar world, with the more contemporary flavours of social flux, indeterminacy and agency.

Barone (1992) and Sullivan’s (2012) association of concrete, empirical detail with truth suggest a realism both philosophical and literary; the
unproblematised, representational nature of writing matter in the world. This pattern of realism is common in constitutions of the path of the self in social science. Constituting the authentic with verisimilitude also means constituting the credible and the possible according to already existing, common-sense constitutions of ontology. Life experiences have enormous diversity, but spacetime is a backdrop to such experience which is largely known, stable and unproblematic. In order to engender reader engagement, a credulous world needs to be crafted, and this is constituted as a concrete world. For example, Barone and Eisner (2012), explain the success of arts based research examples in terms which emphasise concrete worldly detail and credibility based on consensus notions of the ontologically possible. Of Sullivan’s (2012) sequence of poems Notes from a Marine Biologist’s Daughter: The Art and Science of Attention, they say: ‘the chosen details were recast into an aesthetic form in order to entice readers into a virtual world, one that is a semblance of reality’ (p. 21). ‘For readers to be willing and able to enter into an arts based text, the virtual world must be sufficiently believable, credible enough for the reader to recognise it as possible, if not actual’ (p.21). The replication of normative empirical realist ontological chronotopes is required for the writing to work as an engaging research text.

The discourses of poststructural ethnography point toward ontological questioning in that they are concerned with representing competing regimes of truth, and with disturbing narratives of cohesion and stability. However, the questioning of ontic phenomena – that is critiques and alternative conceptualisations and possibilities of reality, being, space and time, cause and effect – seem mostly to be considered outside of the scope and aims of methodologies such as ethnography or narrative inquiry. While there exists a strong thread of discourse about disruption within arts based research emphasising the power of arts including narrative to produce disequilibrium in the reader, to call into question previously held perceptions of a phenomena (see for example, Leavy’s (2009) poetic and unusual take on the Titanic, Frank’s (2000) narrative of sex work and Barone’s (2012) commentary on his education research text ‘Ways of Being at Risk: The Case of Billy Charles
Barnett’), in the heroic path chronotope these disruptions are aimed at destabilising readers’ and authors’ sense of identity, subjectivity and interpretations of what it means to live in the world. The world itself is not called into question.

In Middlemarch (Eliot, 1871/1965) Casaubon’s misery is not only constituted by his infinite regressions in note taking and collating, but also by his own separation of himself from his ultimate knowledge goal, the ‘Key to All Mythologies’ (p. 313), which he sees as objective, pre-existing knowledge. He feels himself at the threshold of this magnificent understanding, and his belief is that he will achieve it by amassing all possibly relevant data. But his ‘stuckness’ (Kiley, 2009) on this threshold is because he does not understand that knowledge is shifting, is in potential, ready to be created. ‘Stuckness’ on the research writing path can become crippling when the knowledge goals at the end of it are conceived as separate from the knower.

**Iterative patterns and further disturbances**

In this section I reiterate some of the ideas of this chapter, while aiming to sustain the entanglements, the interference and the extension of these patterns of possibility. Rather than concluding I continue to deploy the diffractive process (Barad, 2007) and Bakhtin’s idea of ‘novelistic discourse’ (1981): the quality in the novel which is relational, which seeks entanglement and thereby keeps the text alive with possibility.

Many of the heroic path patterns of the previous chapter are intensified read through the social science texts discussed here. In the heroic path in social science spacetime is localised around the self, and the self in response to other human selves. Spacetime thickens around the possibilities of finding form for the expression of the self and for more subtle, humble, questioning and complex ethical understanding in relation to human relationships. The qualities of the material and the physical external to humans constitute a flat
two-dimensional path, like a backdrop of stage scenery, in front of which the three-dimensional faceted shape of the self can act. This spacetime enables the researcher-self constituted as the hero in a myth or poem and research and doctoral writing as a journey; an ultimate and profound path to understanding the centred or de-centred self.

The epistemological methods of a chronotope are invented/entangled in situ, to meet/create the possibilities of the spacetime. In the heroic path, methods enable the research to explore epistemological, humanistic questions: How can I interpret the experience of ‘I’ in the world? These methods include liminal forms of spacetime, language and materiality such as heteroglossia, thresholds, defamiliarisation, paradox, destabilisation of hierarchy, faceted and fractured writing. The methods enable innovations to do with identity creation and its relationship with pain, trauma, loss, doubt, hesitancy, humility, reflexivity, uncertainty, paradoxical experience, and the finding of form for these. Understanding relationships occurs by understanding the self and developing empathy with other humans and their unique struggles. This is a kind of self-analysis, a problematised autopsy, involving opening up, dissecting and disturbing, without conclusive answers. These methods enable histories about the struggles of people to progress, collaborate and evolve.

Next I extend some of these patterns to provocatively disturb this pattern of the concrete, authentic worlds of the social science heroic path, as they are also entangled in my own image of research.

**Disturbing the concrete world**

In spite of its reflexivity, there is a sense in which the heroic path does not lend itself well to deeply questioning its own mode of representation. While the concrete and authentic worlds characteristic of the heroic path chronotope in the social science texts read here mobilise our empathy as readers, as we are absorbed into a world which feels familiar and resonant, the concrete, authentic world assumes the separation of the objective concrete empirical
world and the subjective world. These patterns re-inforce subjective
verisimilitude: authentic-seeming experiences in a recognisable ‘objective’,
concrete world. They reinforce consensus empirical ontological ideas: an
anthropocentric, utilitarian view of the universe, notions of individualised
phenomena and duality of subject and object.

Concreteness also extends to the constitution of the human individual.
Experience is diverse and faceted but individualised humanity is
unproblematised at more profound levels. These ethnographic aims are also
the assumed aims of many examples of alternative writing methods within the
broader field of qualitative research. Ethnography recreates what it is to ‘be
there’. Implicit are the assumptions that we know where or what ‘there’ is, that
that is a there (Britzman, 2000), that there is such a thing as a shared state of
‘being’ and that we know what this state means (generally a path to human
self-knowledge), if not the particular experience of individuals.

A simultaneous and entangled co-constitution of the determination of matter
and spacetime as relatively concrete backdrop in front of which the individual
plays out their experiential drama, is the separation of objectivity and
subjectivity. This binary reinforcement has also tended to work to constitute
the subjective voice as resistant. Subjectivity is defined in poststructuralism
primarily by its resistance to its other – the traditionally more powerful,
dominant, concept of objectivity. Continuous reference to the tensions
between these constitutes the authentic human voice as fixed in the non-
dominant discourse position, where it is not eliminated but must continually
reassert itself in resistance to the dominant discourse. This pattern reinforces
the sense of marginalisation associated with subjectivity.

In this way, discourse and counter discourse tend to recurrently reinforce a
mutually exclusive binary of ‘traditional’ and ‘alternative’ writing methods
which cohabit a space but are made of different matter; the image of the
overarching structure of traditional scholarship, and the resistant, righteous
weeds growing in the brickwork of the tower. Somehow the fact that
subjectivity, assumed objectivity, rationality, simplification, selectivity,
analysis, narrative, creativity and imagination are typically present in research constructions of all kinds is not often addressed. By the labelling of one project as arts based and another as conventional; by defining one by contrasting it with the other; binaries of both the perception and practice of research writing are sustained, and conceptualisations of research as something other than either organic or brick cannot be imagined.

**Disturbing the solitary path**

One of the strong patterns of the previous chapter was that the heroic path enables individual humans to be seen as possessing profound latent qualities, but with these come a high level of personal responsibility for success on the path, and isolation from others. The individual has the responsibility of choosing to answer, or not to answer the call to adventure and the hero’s journey. Learning is a matter of personal agency and responsibility and of commitment, engagement and persistence in the face of adversity. The possibilities or lack thereof of future opportunities are a matter of the effort put in by the lone individual. The labyrinthine path is a space for solitary personal reflection and endeavour; an image of narrow corridors with room for just one abreast. The liminal phase is one of intensified solitary trials. In this respect the spacetime of the fictional hero of the previous chapter and the doctoral candidate and the academic of this chapter are not too dissimilar.

I have discussed Casaubon’s (Eliot, 1871/1965) blinkered private path as epitomising the danger of the solitary path as research endeavour. An isolated, individualised path of infinite cycles of reflection can become an abyss of self-absorption, narcissism, detachment from the world and infinite prolepsis. I have already discussed a means to avoid this blinkered, private path according to Eliot (1871/1965): through the constitution of complex nuances and possibilities brought to attention by the wide and non-judgemental understanding that we are all on a path aspiring to find a kind of meaning
which is both inwardly and socially refractive, and that this will take us beyond mundane existence.

However, Eliot’s kaleidoscopic sympathy is impossible to properly achieve due to the metaphysics of individual determinism (Barad, 2007); the unquestioned constitution of phenomena including humans, as individual and discretely agentic entities. These humanistic constitutions intensify wider social and political patterns which also construct individualisation, free will and agency as existential expectations. An understanding of these chronotopic conditions is enhanced by Sennet (1993) and Bauman’s (2001) critiques of the culture of individualisation and uncertainty in the era of globalisation. The humanistic heroic path shapes us as agents of our own destiny; the same message we get from neoliberalism. But agency and power in the icy, uncertain, deregulated, globalised world are not as simple as making the choice to walk the path and being willing to face its challenges. In the globalised world, power is marked by the ability to move fast, flexibly and at short notice (Bauman, 2001). The chronotope of the connected, globalised world constructs success as a matter of choice to exercise the agency and freedom we all supposedly have, to move and think ahead of others, to up-skill and to become flexible. The requirements for success in this world also include the central aims of the heroic path: self-expression and self-assertion of identity. These are the capacities that will propel the individual forward as one who has made the effort to discover their true inner resources, to act with agility, to make connections and to impress and influence others. But a world of unstable ice floes and networks, in which the metaphysics of individual determinism (Barad, 2007) are unquestioned means everyone must develop alone the capacity for re-formation, self-expression and self-assertion, individualised flexibility, agility, and competition (Bauman, 2007). Globalisation, with its lack of constraint, deregulation and flexibility constitute a world perceived as ‘self-propelling, spontaneous and erratic’ (Bauman, 2001, Chapter 1, location 617), with no one at the helm. To live in this world requires the confidence to live in disorder, the health, resources and energy to constantly be awake to positioning ourselves in contingent networks of possibilities, to be willing to destroy connections.
and move on. Those who cannot are left behind. Being left behind is everyone’s realistic fear and this results in depression, a sense of impotence and inadequacy (Bauman, 2001). The many entanglements intensifying these patterns of individualism and self-dependency in the world erode bonds and security. They co-constitute ever looming fear of inadequacy in the self, fear of the external world, and fear of fellow humans.

**Disturbing the authentic path**

The expression of struggle with these fears is one of the things we respond to when we read authentic, subjective stories. As Schopenhauer (1970) has said, discovering others to be companions in misery is consoling. Such empathy might have the effects of unification and solidarity. In poststructural social science writing, there is an imperative to craft compelling, resonant writing, which will engage the reader’s attention and empathy. For example, Leavy’s (2009, p. 27) narrative inquiry exercises aim to reveal multidimensional meaning ‘and present an authentic and compelling rendering of the data’. Pelias (2004) gives the purpose of autoethnography as resonance, the creation of ‘me too’ moments for readers. Introspection is considered also beneficial to others, when shared, as is expressed by Eisenberg (1998, p. 197): ‘I would like nothing more than for these poems to cause you to reflect on your own depths of experience, revealing both the profound ordinariness and the sacred mysteries that animate all our lives’.

However, Bauman (2001) argues that resonance of the anxiety of inadequacy and suffering serves to intensify the pattern of the solitary existence and that this is in itself not helpful or unifying in any creative way. It hammers home the message that the most important similarity between us all is that we each suffer on our own. We are reassured that struggling with troubles alone is what everyone does daily, but there is no new quality yielded by this reinforcement, which makes the suffering any easier to handle. The wisdom that the modern world is essentially and irrevocably individualised, uncertain
and contingent turns democracy into the imperative that everyone has the ‘right’ to go their own way, and makes collective action unviable. This culture in which there is ‘no long-term’ and everyone has the right to (must) make a success of themselves, corrodes trust, loyalty and commitment (Sennett, 1993).

In fiction, a compelling rendering is a reasonably inarguable reason for being and a means to achieve sales. An appetite for highly personal stories amongst a wide audience is a distinguishing mark of current Western media and society. As Carter (2010) says, what is interesting matters, and a high degree of personal subjectivity is currently very interesting to an audience already schooled to understand existence in terms of human heroes and subjective stories. However, is a compelling subjective rendering an unproblematic reason for use of narrative and other non-traditional writing methods in social science writing? It is often argued that if the research is compellingly written it will ‘reach broader audiences’ (Leavy, 2009, p. 43), implying that a wider reach is valuable for reasons of enhanced usefulness. But is the object of creative research complexity and invention (Carter, 2010), or is it resonance with a wide audience, and to what extent are these aims compatible or counter to one another? Richardson and Lockridge (1998) indicate that both resonance and initiation of some form of change are important in their criteria for evaluating fictionalised research accounts. However resonance and change are not automatically connected to one another. Problematising the ‘compelling rendering’ and attending to its additional co-constitutions is important. For a start, we might in research, try to distinguish where resonance that reaffirms our already existing sense of ourselves as heroes on our own mythic individual journeys might limit rather than create possibilities for invention and transformation.
Because the language of ‘authenticity’ in our culture now is in part based on an erosion of distinctions between public and private (Sennett, 1993), there is also a danger of narcissism in subjective research writing which can negate creative possibilities. Authenticity according to Sennett is ‘the direct exposure to another of a person’s own attempts to feel’ (p. 29). Self-disclosures which may once have been kept private, are now a standard of the true and the authentic. Sennett argues that subjectivity as an end in itself is not creative. The more a person concentrates on expression of intimate feelings, the less creatively expressive he or she can be, because subjectivity and authenticity in themselves do not express anything beyond ‘my attempts to feel’. The conditions for creative engagement with others involve some division between private and public roles, that is, creative public roles necessitate performance, play, disguise, masks and role playing. The laying bare of intimate feelings in the public space leaves no room for the irony of roles, disguise and masks. Again, it is valuable to interrogate heroic path research stories for the value of self-disclosure. We can ask: What is enabled by this? How are resonance and transformation working with or against each other in the narrative?

Narcissism is self-absorption which prevents one from understanding what belongs within the domain of self and self-gratification and what belongs outside it. Thus narcissism is an obsession with "what this person, that event" means to me" This question about the personal relevance of other people and outside acts is posed so repetitively that a clear perception of those persons and events in themselves is obscured.

(Sennett, 1993, p. 8)
As Leavy (2009) notes, subjective and authentic writing carries risks for the researcher. Writing slippery ice floes and treacherous gaps not only manifest the dangers of the subconscious, personal anxieties and fears, but also creates professional dangers, as blurring of the line between public and private experience makes one doubly vulnerable. This not only opens the researcher to more forms of personal criticism, but also requires the artistry to avoid self-absorption and narcissism, which in turn, expose them to further risks.

The constitution of the lone figure on the ice embodies the fear of the humility and honesty which seem required to relinquish a sense and tone of authority in research. It also embodies fear of the arrogance demonstrated in making up and sending out into the world a different and personal account of methodology, and the associated fear of failure and marginalisation in the academic community. The act of writing seems at times a perverse compulsion to come close to and to test these gaps in the ice.

(Chapter Two, myself, pp. 65, 66)

In Chapter Two, as I considered the construction of this research apparatus I wrote the text I have reproduced in the box above about research on the ice. I have identified a number of ways in which the image of the ice floe is entangled in my research apparatus. Reading my text above through the patterns of the previous chapter and this one, it also emerges as an image of the heroic path: of authenticity, subjectivity, and humanism. The chronotope of research writing I began with constitutes myself on an individual journey in freezing, inhospitable terrain and constitutes my subjective, reflexive voice in the research as more ‘honest’, while at the same time more risky.

I consider my own humanist construction of research as the figure on the ice, read through Sennett’s (1993) argument that the discourse of authenticity runs the risk of producing nothing but representation of feeling, which is not in itself a creative, transformative form of expression. Bakhtin (1981) explains how the supposedly objective voice feels closed and non-dialogic. Sennett (1993) explains that expressions of naked, authentic, subjective feeling communicate the same uncomfortable impotency. This reading assists me in articulating my own sense of the risks of the subjective voice; that it can feel
embarrassing and one-dimensional to write naked, reflexive feeling in research. It assists in explaining why expression through fictional means can feel more potent. Lather (2007; Lather & Smithies, 1997) writes of similar issues in her discussions problematising authentic ‘voice’. The risk of romanticising and sentimentalising can at least be partly addressed by the understanding that naked expression of feeling feels impotent for both writer and reader. As Sennett (1993) says, narcissism is not self-love, but the problem of responding to the world as though it can be comprehended through examining the self. That is, subjective research writing moves closer to narcissism when subjectivity is taken as the epistemology closest to truth. This position closes it to transformative relationship. By Barad’s (2007) analysis there is no such thing as a non-intra-acting entity. Things in the world, including writing only come into being in relations. However, the extent to which writing embraces its own openness to relations, like every other co-constitution in research, should be seen as a matter for ethical examination (Barad, 2007).

The patterns of this chapter suggest ways to work more novelistically (Bakhtin, 1981) with authentic and concrete, subjective and objective, connective and individual. These include use of the threshold chronotope, enabling such things as defamiliarisation and paradox. Positioning of voice/s on the threshold is seen in Frank’s (2000) social science writing on the sex industry, and in Richardson’s on ‘other women’ (1985), so that complex and paradoxical interactions between realities and truths which might otherwise be classed as irreconcilable, can be enabled without denying or defining them. While the fictional *Faces in the Water* (Frame, 1961) presents a highly self-referential text, it also presents authenticity in highly innovative ways by problematising verisimilitude, representing instead the real and the truthful in a confusion of voices, often in heightened emotional states which by other standards would be considered abnormal or deviant rather than authentic. The authenticity of reality and truth is constructed as emotionally intense, unstable and disturbed/ing. This deviance and instability of voice allows the relationship between text, writer and reader more opportunities for shifts and
expansions, more moves from consensus authentic experience and more radical possibility for interrogating labelling and ‘the positing of conventional norms which fail to account for the richness of human subjectivity’ (Jones, 1990, p. 192).

Use of a threshold chronotope enables research to shape the human voice as an expression of dialogic or entangled experience, rather than a means to privilege expression of authenticity and subjectivity. Individual, entangled, authentic, improbable, normal and deviant experiences become blurred. This both creates and challenges the ‘authentic’, opening it to new forms. I might consider my research in the light of such questions as: How might authenticity create something other than our individual selves as the hero in narratives of our own existence? What might be other, different expressions of authenticity – in material objects, for example? To what extent is authenticity creative, enabling a glimpse of a new unfamiliar world, enhanced empathy with human and non-human, relationship and action, and to what extent is it restrictive, locking us into the re-confirmation of stagnant or consensus beliefs about human existence, the world and the relationships between these?

The creative opportunities of destabilisation of hierarchy in the fiction of the previous chapter also raise some questions of relevance to ontic constitutions. What might a threshold chronotope enabling destabilisation of hierarchical roles of subject and object in research look like? How might generative confusion or entanglement of status and identity of subject and object be written? Perhaps the marginalised sleuth of the crime scene chronotope might view these with the scepticism and distance necessary to free them from their prescribed roles and tense relationship. Perhaps in a fantasy chronotope, subjective experience and the concrete object might together undergo the intense confrontation with their own darker selves leading to the death and rebirth which is needed to enable them to transform into original forms.
**Disturbing data inclusions and narrative selections: When the gun doesn’t go off**

Heteroglossia means that the writer does not only constitute alternative voices and discourses for the reader to engage with, but also herself enters into dialogue with the writing (Jones, 1990). In research this means a dialogue between researcher and data and between researcher and research narrative. Like the gun hanging on the wall in the first chapter of a novel, parts of the universe tend to be selected for inclusion in the heroic path research story because of the interpretation that they are significant for their role in the transformation or self-assertion of the individual. This selection of elements and their connection and sequencing in a progressive, chronological structure, are what provide the sense of the narrative as a meaningful, coherent, continuous personal journey. But a dialogic relationship with data will keep the possibilities for selection open and enable creative research capable of deviating from established patterns based on consensus notions of what is significant.

It is difficult to break from the habit of identifying the relevance of data based on their support for our already existing, familiar experience, stories and chronotopes. A problem with attempting wide inclusion of data which is probably apparent in this thesis is that for the writer unpractised at making artistic selections, this can bloat the writing. To develop this wider, more inclusive and indefinite approach to data and research, while avoiding the prolepsis and stillborn analysis of Casaubon, the writer needs means at her disposal methods other than those of the coherent, closed narrative. The research writer needs an understanding of how data can make sense together inside narratives in forms other than the logically causal and cohesive.

An understanding of a novelistic epistemological process would be useful for researchers to expand their sense of the range of possible data inclusions. This would resist ascribing meaning to phenomena for the reasons that they foreshadow something on the heroic path such as a causal opportunity or challenge to transformation. The gun hanging on the wall on page two may not
eventually be fired; it may be attended to on a different basis. Casaubon’s (Eliot, 1871/1965) problem illustrates a lack of this dialogic relationship with his data. His research process is widely inclusive, but he does not know how to interact with his data, to select and shape it. He does not understand the role that he himself plays in the entanglements of his research and in their knowledge products.

A novelistic epistemology acknowledges the entanglement of the researcher in the apparatus and its constructions. This enables the noticing of shapes, imagery and patterns in the research and attunement to their potentials. In Frank’s (2000) fictionalised research writing about work in the sex industry wide inclusions enable threshold space for causality, ambiguity of morality, motivation, power, desire, emotion, and human implications, which are not found by logical selection of data to tell a particular story or to craft an argument. In *The Lord of the Rings* (Tolkien, 1955/2005), wide inclusion of rich background and historical detail is not essential to the plot, but, these, alongside the use of fantasy, are essential to the artistic and mythological ironic meaning. *The Lord of the Rings* and Eliot’s *Middlemarch* (1871/1965) use wide inclusions of social, historical and political phenomena to bring forth shifting and diffracting perspectives without specific meaning and closure. In *The Body in the Library* (Christie, 1942/2014) a wide view of data enables Miss Marple to look closely at that which everyone else considers inconsequential, even looking at that which others consider to be fantastic or irrational.

A novelistic rationale for data inclusions then can include the ‘glow’ (MacLure, 2013a) which is perceived through serious attention to affective and incoherent patterns. This legitimises and theorises the inclusion of obsessions, compulsions, repulsions, fantasy, ambiguity, paradox, obscurity, irrationality, irreconcilability, banality, hunches, contradictions, dreams, sensory and material experiences, extreme emotional states, startling contrasts, co-incidences, superimposed and juxtaposed experiences, the supernatural, undefined attractions, recurring themes and ideas, obscure or unfashionable methodologies and theories, the enigmatic and mysterious,
imagery and the sense of suspense or undefined anticipation – where these can be noticed as involved in patterns, entanglements and co-constitutions.

A novelistic heroic path epistemology then is also characterised by sustained suspension of judgement, enabling more dialogic, open-ended relationships between authentic, ‘realistic’, resonant representations of subjectivity and abnormal, ‘unreal’ subjective experience, between relevant, cohesive data inclusions and irrational data inclusions. Where the categories ‘subject’, ‘object’, ‘data’, ‘experience’, ‘human’, and ‘world’, are themselves in dialogue, these movements also approach a more entangled constitution of subjective shifting experience and fixed, ‘real’ objective world. We might ask, what are the data inclusions we might attend to which disturb and enable reconstructions of binaries such as that between subject and object? What might be the data inclusions which enable patterns of affective materiality, juxtaposed or shifting reality, or world-human entanglement?
5. Rhizome city: Fiction writing and possibility in the rhizomatic chronotope

Spacetime and texts of the rhizome city

Chicago: invisible hierarchy of decorticated wops, smell of atrophied gangsters, earthbound ghosts hit you at North and Halstead, Cicero, Lincoln Park, panhandler of dreams, past invading the present, rancid magic of slot machines and roadhouses.

(Burroughs, 1959, p. 24)

If I read a novel, I know what I am going to experience is reality, as expressed and transfigured through art...The shared world, the scene of our mortality.

But reading science-fiction or fantasy, I know that I am going to meet a personal variation on reality; a scene less real than the world around us, a partial view of reality.

But I know also that by that partiality, that independence, that distancing from the shared experience, it will be new: a revelation. It will be a vision, a more or less powerful or haunting dream. A view in, not out.

(Le Guin, 1979, pp. 22, 23)
This chapter attends to patterns of spacetime in several fictional texts in which versions of postmodern city spacetimes are dominant over heroic path spacetimes, and in these forms, they constitute something other than the hero’s journey for self-knowledge. Any description of postmodernism is likely to be contentious. As has been mentioned previously, I use McHale’s (2004) concept of postmodernist fiction to indicate texts in which ontological questions are dominant over epistemological questions. SF – an ambiguous term indicating science fiction, speculative fiction and fantasy (Le Guin, 1979) is indicated by McHale (2004) as the exemplary form of these kinds of ontologically dominant texts. Here, I find SF and postmodernist texts useful for this reason; they foreground and problematise space and time and they co-constitute alternatives. Humanistic epistemologically dominant narrative has trouble examining the forms of illogical paradox and unfathomability evident in wider existence (Gomel, 2010) and human-universe relations, such as human genocide, nuclear weapons, or the metaphysics of indeterminacy and contingency. SF writing deals with a distanced view of humans as a species (Le Guin, 1979) and with ontic possibilities, and in so doing it can to an extent shift human individuals and groups from the narrative core.

In previous chapters, patterns of the humanist and modernist heroic path chronotope constructed largely unproblematic and fixed space and time as backdrop to the subjective journey of an agentic character or narrator. Many commentators (for example, Castells, 2001; Jameson, 2001), draw on cyberspace and the internet as the image of postmodern space and time, seeing this reality as instead characterised by speed, travel, and decentred, branching, multiple, insubstantial and impermanent flows. Postmodern environments are fluid environments, represented always in motion. Because the flows of motion are primary, questions of their control significant. While I do not elaborate on these sources here, it is worth mentioning at this point that like Castells (2001) who argues the same point with regard to the contemporary network society, Deleuze and Guattari (1987) argue that power is based in the capture of flows of all kinds. I draw on some of the writing of Deleuze and Guattari in the following chapter, as data sources which extend a glow toward
the apparatus where it focusses on social science writing-as-research articulating the rhizome chronotope. Flows and their shaping agents are significant in the emerging chronotope patterns in this chapter.

In the postmodernist, SF fiction used in this chapter, these flows emerge as part of a chronotope of dynamism, disorder and multiplicity. The chronotope is in part characterised in McHale’s (2204) description of heterotopia; a disordered dimension of space in which fragments of a large number of possible orders exist. This dynamic heterotopia brings to the fore ontological dynamism, multiplicity and disorder, foregrounded over an epistemological heroic path.

In the fictional texts drawn from this chapter this dynamic heterotopia is written as a form of postmodern city. Distinctions between traditional-mythological, modernist and postmodernist cities are useful to make in order to begin the discussion. From a traditional-mythological perspective such as Booker's (2005), the archetype of the city stands for a model of human functioning built by the masculine principles of power and order and nurtured by the life-giving, feminine principle of care and protection of its citizens. This traditional city spacetime constitutes human functioning as a totality of collective wisdom, hierarchy, and social organisation, in which all of the diversity of humanity is presented, and in which all are enlarged by their membership of the organism as a whole (Booker, 2005). In contrast, the modernist city is described by Bauman (2006) as an engineered utopia. Chaos, confusion, impracticality and spontaneity are banished by standardisation, solidity, permanence, prefabrication, concrete and steel. This kind of modernist city might be the backdrop to the narrative of the humanist, modernist hero in which spacetime is an instrument colonised for the discovery and expression of the self.

In the postmodern city patterns co-constituted in the texts in this chapter, both collective function and concrete materialism and stability are turned on their heads. Like globalisation (Castells, 1996), the postmodern city embodies compression and unification at the same time as diversification. It constitutes
diverse fragments, disorder, dynamism and contingency and is inclusive of insubstantial geographies and alternative mental, imaginative, hallucinogenic, technological (Klapcsik, 2012) and simulated realities. Time is contested and overlapping, as the culture and remnants of earlier eras remain present and are drawn into the new fabric of the society (Mendlesohn, 2008). An all-encompassing discourse to explain events, spaces, characters and relationships, is denied. People live complex, diverse and multiple, iterative, dispossessed, anxious existences.

But in this chapter certain additional patterns emerge through the particular postmodernist novels I attend to. These novels are from the 1950s, 1960s and 1970s, and contain diverse ways of constituting postmodern cities. They are Burroughs’ *Naked Lunch* (1959), Dick’s *Do Androids Dream of Electric Sheep?* (1968/2007), and Calvino’s *Invisible Cities* (1978). Again, I do not claim I read representative truths about these texts or about the world. I choose them as aspects of the ‘*matter (that) makes itself felt*’ (Barad, in Dolphijn & van der Tuin, 2012, p. 59), to me. These early postmodernist texts are well known. For me they play an ongoing part in patterning my understanding of the rhizome and ‘the postmodern world’. Their sensibility is destabilised, paranoid, chaotic, humorous, carnivalesque, imaginative, playful, unpredictable, dispassionate and opportunistic. These additional co-constitutions are significant in patterning the world, as I suggest in this chapter.

This chapter first attends to the patterns of ontic spacetime co-constituted in reading these novels and text fragments from these novels through one another. It then considers and diffracts their possibilities and implications for humanity, epistemology and an apparatus for writing. I also explore these worldly co-constitutions by reading them through theory addressing the paradoxical co-constitutions of the postmodern, globalised and neo-liberal society, in particular Castells’ (1996) network society, Castoriadis’ (2010) heteronymous society, and Bauman’s (2006) globalised, individualised society.
And oscillating, restless dynamism

In vain, great-hearted Kublai, shall I attempt to describe Zaira, city of high bastions. I could tell you how many stairs make up the streets rising like stairways, and the degree of the arcades’ curves, and what kinds of zinc sales cover the roofs; but I already know this would be the same as telling you nothing. The city does not consist of this but of relationships between the measurements of spaces and the events of its past.

(Calvino, 1978, p. 10)

If science fiction has a major gift to offer literature, I think it is just this: the capacity to face an open universe. Physically open, psychically open. No doors shut. What science, from physics and astronomy to history and psychology, has given us is the open universe; a cosmos that is not a simple, fixed hierarchy, but an immensely complex process in time. All the doors stand open....All connections are possible. All alternatives are thinkable.

(Le Guin, 1979, p. 206)

In the fragment from *Naked Lunch* (Burroughs, 1959) above, the city is manifest in restless movement and fleeting strings of sensory perceptions, shifting and moving on. *Invisible Cities* (Calvino, 1978) is a fictional icon of spacetime as rhizomatic organisation in which cities approach and encroach on one another, superimpose, interpolate, branch, intersect or ignore each other through the centuries. Interpolation involves the creation of a new or
alien space within a familiar one or between two familiar spaces where no such
gap or between-space exists. Superimposition involves placing two spaces one
on top of the other, as in a photographic double exposure , creating a third
space (McHale, 2004). Such techniques invoke rhizomatic connections
between sensory, material and immaterial events and places. They also
involve motion: oscillating, tense, roving, and restless. This motion enables as
Calvino says: ‘relationships between the measurements of spaces and the events
of (the city’s) past’ (1978, p. 10).

Rather than an experience and event-driven spacetime as in the heroic path,
the pattern is a contingency driven spacetime, in which events and/or history
are co-constituted by the dynamic, shifting relationships and movements
between things and people in space (Smethurst, 2000). A quality of this
dynamism is that it entwines space and time together. Unlike the heroic path
chronotope in which experience in fleeting and progressive time is prominent
and space is largely stable, in this chronotope space and time are dynamically
entangled and equally significant (Smethurst, 2000) and are brought into
being by flux and contingency. Shifting relationships between language,
narrative, space and time characterise the Empire of Khan, as ‘an endless,
formless ruin’ (p. 5) of cities of memory, desire, names, and images.

The material and the representational are also constituted in restless
relationship (Smethurst, 2000). Marco Polo the explorer and the Emperor
Khan speak different languages, and Marco communicates through ‘gestures,
leaps...animal barkings or hootings, or with objects he
took from his knapsack’ (p.21). Via this extreme
limitation the text foregrounds a dialogue between
the material cities and their representation,
demonstrating the imprecise and co-constitutive
nature of language and the changing manifestations
of the reality of the cities through character/author
choices. Marco’s roving descriptions of the cities, co-
manifest shifts and rearrangements of characters,
time and to constitute new realities. These are

Only in Marco Polo’s accounts was Kublai Khan able to
discern, through the walls and towers
destined to crumble, the tracery of a
pattern so subtle it could escape the
termites gnawing.

(Calvino, 1978, pp. 5,6)
connected and continuous with the previous ones, but at the same time emerge in new and impossible ways. Marco’s serial cities are the rhizomatic narrative materialised, an opportunity to conjecture about the interconnected nature of narrative, character, reality, space and time. Oscillating dynamism; flows, leaps, shifts between and back are the methods which bring the cities and the possibilities of their connected multiplicity and their spaces between into being.

In the rhizome city no place exists by itself. Place is rather defined by flows and relationships. In Kahn’s empire the pattern can only be discerned in Marco Polo’s accounts, in their shifting relations. The meanings, logic, or purpose of places are unexplored, movement and connection are everything and this is explicit in both content and form. *Invisible Cities* (Calvino, 1978) is a book of serial description without plot but dependent on structure. The design itself constitutes a rhizomatous, fluid architecture, in which cities are divided into 11 subsection themes, the list of thematic chapter titles manifests a continuous wave textually on the page, and the theme titles themselves interweave and oscillate back and forth amongst each other. Again, this structure is dependent on movement; the wave, the oscillation indicating connectivity and the between spaces that cannot be represented without this sense of continuity and fluidity. Space and time are inseparable, and movement in space constitutes movement in time.

**And rhizomatic, multiple, impossibilities**

‘I have also thought of a model city from which I deduce all the others,’ Marco answered. ‘It is a city made only of exceptions, exclusions, incongruities, contradictions. If such a city is the most improbable, by reducing the number of abnormal elements, we increase the probability that the city really exists. So I have only to subtract exceptions from my model, and in whatever direction I proceed, I will arrive at one of the cities which always as an exception, exist. But I cannot force my operation beyond a certain limit: I would achieve cities too probable to be real.’

(Calvino, 1978, p. 69)
All three of the texts use the disordered and contingent chronotope to blur the boundaries between real and unreal and to explore multiple and incompatible realities. In traditional and literary realist influenced narratives such as the heroic path a single and particular reality is brought into being and others are excluded, determined by singular choices made by the character/writer. *Invisible Cities* (1978) brings attention to the infinite contingencies and multiple realities in potential which are excluded in such traditional fiction, materialising multiples of these in text and pointing to all in intra-textual implication. The Empire of the Great Khan, co-constituted between the limited and innovative communications of Khan, Marco Polo, memory, space and time, is a city of multiples; an infinite extending space of radical inconsistency and thus radical possibility. For example, Trude, is a city indistinguishable from any other, Penthesilea, a city of continuous suburbs; Cecilia, a city which over the years has swallowed all its surrounding territories. How are these all-absorbing cities independent and distinguishable from each other? They materialise infinite multiples and ambiguous forms of space and objects in space, and they enable conjectures about the possibilities of the accommodation of such impossible multiplicities.

“*For a toad I’d suggest also a perpetually renewing puddle, unless it’s a horned toad, in which case there’s a kit containing sand, multi-coloured pebbles, and bits of organic debris. And if you’re going to be putting it through its feed cycle regularly I suggest you let our service department make a periodic tongue adjustment*”...

“*Fine*, Iran said, “*I want it to work perfectly. My husband is devoted to it.*”

*(Dick, 1968/2007, p. 608)*

*Do Androids Dream* (Dick, 1968/2007) explores the real and the synthetic in Dick’s elaborations of the complex roles of electronic animals and human androids. He draws attention to questions about what ‘real’ and ‘fake’ mean, and why this should be so. He explores the trust and comfort people experience in their belief in the real. Real and fake have shifting and ambiguous meaning for the protagonists, and this enables multiple and in between positions on truth, reality, authenticity, and the value of these.
**And rhizomatic, disordered fragments**

Like Calvino (1978), Burroughs (1959) also uses textual form to manifest his deconstructed and fragmented cityscape (McHale, 2004). *Naked Lunch* is constructed as a series of non-linear, hallucinatory vignettes which might be read in any order. The fragments are discontinuously connected, manifesting an enfolded and shifting ordering of time and place. This discontinuity and fragmentation of form is also apparent in deconstructive descriptions such as the description of Chicago at the top of this section. Burroughs brings *overlapping subjectivities, shared fantasies and nightmares* (McHale, 2004, p. 44) to the rhizomatic and subversive landscapes of Chicago and of the *'Interzone'* (Burroughs, 1959, p. 119) – a cesspool of borderless metropolitan surrealist diversity. These zones are disordered, contingently connected, dirty, dangerous, grotesque and carnivalesque in possibilities. They are boundaryless, paranoid, inner-bodily/outer-spatial co-constitutions.

In addition, fragmentation is developed through Burroughs’ heteroglossia, constituting different and distinct voices manifesting different, fragmented worlds, sometimes in what McHale terms antilanguage, *‘the specialised discourse of deviant social groups’* (McHale, 2004, p. 167). One of Burroughs’ techniques is to ‘translate’ some of this antilanguage vocabulary, for example; *(Note: Grass is English thief slang for inform)* (Burroughs, 1959, p. 17), *(Note: People is New Orleans slang for narcotic fuzz)* (Burroughs, 1959, p. 21)

Burroughs’ juxtaposition of voices is dialogic in the Bakhtinian (1981) sense, as it constructs varieties of oppositions to ‘official’ or ‘standard’ world views. These voices are not only distinct, but embody different ideological positions (McHale, 2004). As McHale (2004) comments, in *Naked Lunch* (159) the effect is aggressive and alienating rather than helpful, drawing attention to the reader’s limited knowledge and their outsider status. The junkie William Lee clearly marks a distinction between his own insider world and others. He is swaggeringly cool, defiantly arrogant and contemptuous and suspicious of outsiders.
And rhizomatic, complex temporal networks

Because of its collective characteristics of multiplicity, fragmentation, dynamism and relationship, the rhizome city co-constitutes a general shape of spatiality and time as networked or branched. As well as the complex spatial relationships of plural spaces, the networked nature of the chronotope also enables complex temporal relationships. In SF it is often used to constitute alternative branches of histories and futures. Dick’s *Do Androids Dream of Electric Sheep? (1968/2007)* like many other SF novels is set in a post-apocalyptic future. Most of the population has left for off world colonies and the remaining few live in a radiation poisoned environment, along with electric animals and androids, depending on ‘*mood organs*’ (p. 435) to manage and tolerate their emotions.

Barad (in Dolphijn & van der Tuin, 2012) argues that time is articulated and re-made by various material practices, certain entanglements which make the marks enacting time. Dick’s novel enables the reader to think about these temporal marks as producing sedimented effects which are always enfolded in plastic possibilities of the present and future. A large number of temporal marks that we may be familiar with, such as global war, the emergence of early forms of artificial intelligence, the increasing social complexities of anxiety regulation and emotional enhancement, of status, consumerism and identity, and of distinguishing the authentic from the fake and determining what this means, are projected into new, imaginative, unpredictable and yet possible-seeming futuristic forms. The reader is given cause to consider the author’s intent. This thought itself works rhizomatically. Given cracks in the comfortable experience of reading ‘reality’, the reader and reading are opened to extending conjectures: About the indeterminate and yet traceable nature of events and history, real and unreal, about alternative history, real and unreal, and about the implications of the consensus and alternative narrative scenarios. The past in its different patterns is enfolded into the present and future in new ways.
This networked form of spacetime in fiction can also therefore enable new historical positions. Limon describes the historical and epistemological positions which are available through literature as relatively limited: The world improves, the world degenerates, nothing essential changes, everything changes, ‘(t)he truth increases, the truth was once available but is no longer available...The truth is always at hand, the truth does not exist.’ (Limon, 1990, p. 18). Network space and time creates multiplicities, simultaneities and between states, amongst these singular positions.

*Invisible Cities* (Calvino, 1978) provides an iconic example of a network chronotope in its branched narratives, cities and histories. It also manifests a pattern of the complex possibilities of new experiences of temporality. As Smethurst (2000) notes, in *Invisible Cities*, Kublai Khan is obsessed with the loss of his Empire, with the inevitability of the ‘infernal city’ to which the ‘the current is drawing us in’ (Calvino, 1978, p. 165). Marco Polo’s stories of the richness and grandeur of the Empire are Kahn’s defence against loss and time. But Marco Polo’s position is that we have two choices regarding this loss and ‘infernal’ manifestation:

> The first is easy for many: accept the inferno and become such a part of it that you can no longer see it. The second is risky and demands constant vigilance and apprehension: seek and learn to recognise who and what, in the midst of the inferno, are not inferno, then make them endure, give them space.

*(Calvino, 1978, p. 165)*

This text fragment draws attention to the capacity for temporal complexity in the chronotope to enable a different understanding of the potential of the present. By understanding temporality, space and attention as entwined, we understand the present as offering a range of possibilities, in which we are implicated. The possibilities that are *not inferno* which might, in their silence be sustaining rather than destructive might then have less chance of being overlooked.
Barad’s advice (in Dolphijn & van der Tuin, 2012) to attend to entanglements of phenomena as markers of a present which will make a difference to the future converges with this. This notion of temporality emphasises the possibilities of the re-configuring of spacetime in the present moment. ‘Past and future are iteratively re-configured’ (Barad, in Dolphijn & van der Tuin, 2012, p. 66). As Smethurst (2000) says, this position offers an alternative to the Darwinian influenced co-construction of survival in which the more destructive elements of society win space, and in which instead the potentials of the silent or non-consensus are given room.

The branchedness of the rhizomatous chronotope is in quantum physics called the multiverse. This is the concept that there is an infinite number of possible universes co-existing in a higher-dimensional continuum and that any intervention in the time stream splits off another universe. The multiverse can be likened to an infinite plane which contains everything that can possibly exist, without beginning (Gomel, 2010). Network spacetime is a non-hierarchical plane, stretching and branching infinitely outward, containing all possibility.

And rhizomatic machine

The three main texts used here were published prior to computer ubiquity, however, in these texts the rhizomatic, dynamic nature of the postmodern city is commonly manifest with reference to technology, machines, and machinic processes and flows. Such technologies may be represented as old and decrepit versions of real world current technologies, as well as futuristic versions, thus constituting continuity as well as change, innovation as well as decay, utilisation as well as challenge and irony of the present and past (Klapcsik, 2012). In Dick’s Do Androids Dream (1968/2007) the future of San Francisco is strewn with dead and broken machines, and ‘mood organs’ (p. 435) are machines for keeping people functioning and movement flowing without emotional prompts to think too much.
The rhizomatic, oscillating, and fragmented nature of the postmodern city collectively embodies a kind of machinic spacetime which is both material and immaterial. One of the immaterial methods of this machinic spacetime is the narrator’s typical position as reporter and describer rather than philosophiser or interpreter. Calvino’s (1978) Marco Polo does not enter the cities of the Empire to interact, but to observe and report. Calvino manifests the flat, superficial tone often said to be characteristic of postmodernist fiction (McHale, 2004), through which the Empire is constituted as an infinite, shifting mechanistic plane.

There is only one thing a writer can write about: what is in front of his senses at the moment of writing... I am a recording instrument... I do not presume to impose “story” “plot” “continuity”... Insofar as I succeed in Direct recording of certain areas of psychic process I may have limited function... I am not an entertainer.

(Burroughs, 1959, p. 174)

In Naked Lunch, (Burroughs, 1959) the narrator describes this neutral stylistic technique in explicitly machinic terms, as seen above. By reporting on the evidence of the senses, Burroughs descriptive style creates the impervious, distant, mechanistic, insular and fragmented world typical of his chronotope. Elsewhere (i.e., in The Soft Machine (1961), The Ticket that Exploded (1962), and The Electronic Revolution (1971)) Burroughs reports further on bodies as machines and language as enacting virus or machine-like function. The narrative, structure and style of Naked Lunch (1959) especially, are manifest like a series of grinding gears, maintaining friction and flow, absent of meaning, greasy, harsh, and impervious. The narrator as fragmented versions of the heroin addict, William Lee, is empty, mechanical function, serving to keep the flows of drugs moving through the body.

In the text fragment below from Naked Lunch Burroughs uses ‘direct recording’ to report a vignette which works to mobilise the discontinuous fragments of torture, thinking and machines together in a rhizomatic mechanism:
Electric drills that can be turned on at any time are clamped against the subject's teeth; and he is instructed to operate an arbitrary switchboard, to put certain connections in certain sockets in response to bells and lights. Every time he makes a mistake the drills are turned on for twenty seconds. The signals are gradually speeded up beyond his reaction time. Half an hour on the Switchboard and the subject breaks down like an overloaded thinking machine.

(Burroughs, 1959, p. 33)

From the thinking machine, Burroughs immediately moves on to connect to further fragments analogising the injection of cocaine with electricity in the brain, like a ‘berserk pinball machine’ (p.33), and to Western man’s externalisation of himself with gadgets. As Burroughs says, the virus-like mechanism of language is part of the virus-like mechanism of humanity itself (Shaviro, 1995). The rhizomatic city continuously brings fragmented elements together in open-ended and contingent forms of connection, further brought into being by mechanised, self-propelling, dispassionate, fluidly attached and detached process.

**And rhizomatic capitalism and opportunism**

**The junk merchant does not sell his product to the consumer, he sells the consumer to the product. He does not improve and simplify his merchandise. He degrades and simplifies the client.**

(Burroughs, 1959, p. 8)

The pyramid of junk, one level eating the level below….right up to the top or tops since there are many junk pyramids feeding on peoples of the world and all are built on basic principles of monopoly:

1. Never give anything away for nothing
2. Never give away more than you have to give (always catch the buyer hungry and always make him wait)
3. Always take everything back if you possibly can.

(Burroughs, 1959, pp. 7, 8)
The fragments above from *Naked Lunch* (1959) typify William Lee’s ruthless and instrumental dealings with people and commerce: ‘*(always catch the buyer hungry and always make him wait)*’ (p. 8).

In these texts the city chronotope has a pattern similar to American essayist John Perry Barlow’s (1990) notion of cyberspace. This is something like the mythologised American 19th Century West in its lawlessness, opportunism and harshness. For the ordinary person, the rhizome city is also: ‘*vast, unmapped, culturally and legally ambiguous, verbally terse...hard to get around in, and up for grabs. Large institutions already claim to own the place, but most of the actual natives are solitary and independent, sometimes to the point of sociopathy*’ (Barlow, 1990). This co-constitutes patterns of particular forms of movement, existence and participation.

*Naked Lunch* (Burroughs, 1959) constitutes a deterritorialised, lawless Chicago and Interzone in which individuals move individually and opportunistically. Police also move in this way, representing another group of those who seek to gain power by the control of flows. *The Man in the High Castle* (Dick, 1962/2007) and *Do Androids Dream* (Dick, 1968/2007) depict new territorial zones and borders constituted by shadowy powers for capitalist ends. In such spaces as this, traversal and movement are essential but participation is self-serving, limited and often feral. Interaction in social and physical space and time is short term, opportunistic and without loyalty, and is ultimately for buying and selling. *Naked Lunch* (Burroughs, 1959) and *Do Androids Dream* (Dick, 1968/2007), represent the reason for the characters’ movement in and between the fragmented pockets of their cities as seedy, dangerous forms of commerce: drug buying and dealing and avoiding arrest for drug buying and dealing (Burroughs, 1959), and employment in ‘retiring’ (Dick, 1968/2007, p. 456) androids. While Burroughs’ and Dick’s texts are in many senses critiques of capitalism and control, they nonetheless intensify these constitutions rather than re-imagine them. There are degrees
of collaboration and anarchism in capitalism, but there is no ultimate escape from its regulating forces.

Calvino’s (1978) wandering explorer Marco Polo is equally unbonded to his cities and spaces. The movement of other and minor characters in these texts; drug addicts and modern urbanites, is often represented as aimless wandering, endless repetition, or loops, like people trapped in well-worn grooves despite their ostensive freedom from commitments. Ordinary people are deterritorialised, as the spaces do not engender belonging, are passed through for commerce or flaneur-like (Benjamin, 1997), as spectators. Commitment to place is in fact a risk and a liability, as it restricts freedom and flexibility and is likely to result in an unnecessary level of responsibility for problems (Bauman, 2001), as seen in Burrough’s William Lee. In these texts of the rhizomatic city those who are successful do not really live in space but move through it. The disempowered, such as Dick’s protagonists (1962/2007, 1968/2007), are those who have less fluidity of movement.

**Rhizomatic city spacetime**

So far, dynamism, fluidity, multiplicity, impossibility, fragmentation, branchedness, machinic voice and flows, capitalism and opportunism are patterns of intensity in the rhizomatic city. Among other things, these constitutions can enable material/representational dialogue, original relationships and opportunities, multiple and complex forms of possibility in time and space, new attention to the opportunities of the present, new histories and futures, flows of commerce, power through control of flows, open-ended and inconclusive flows unfettered by emotion, and also affective disengagement from place, time and people. Like the mythological American Wild West, this spacetime has the sensibility of unharnessed potential. It collapses old and creates new boundaries and operates on the frontiers, pushing these ever-outward. It is an unruly space, governed only contingently and partially by those who can manoeuvre short-term control of the flows of commerce and power.
Patterns of spacetime, humanity, epistemology and writing in the rhizome city

In the previous section I read text fragments and texts through one another in an apparatus to attend to patterns of intensity and disturbance in the rhizome city, a postmodern city chronotope. In this section I continue to notice and extend these rhizome city diffraction patterns, and am interested in what they might co-constitute with respect to the images of humanity, epistemology and writing.

In the rhizome city, the image of humanity is a component of the rhizome and has the characteristics of the rhizome. These spaces of contingent and indeterminate boundaries and strange, brief connection, flux, multiplicity, and fragmentation co-constitute the same potential for rhizomatous extension, fragmentation and multiplicity in the protagonists in Naked Lunch (Burroughs, 1959), Invisible Cities (Calvino, 1978), and Do Android Dream of Electric Sheep? (Dick, 1968/2007). These are not heroes on a path to develop, discover and assert their identity, but are those who negotiate their lives and the vast, ambiguous and complex spaces of the world with unpredictable and disjointed agency and few expectations of solidity or stability of place or relationship.

And carnivals: Spacetime of materialising heteroglossia

The relationship between strange language and strange materiality is foreground in the patterns of the rhizome. The litany of ‘The Word’ (Burroughs, 1959, pp. 180, 181), here, is a great example of Bakhtin’s (1941) bizarre and atypical carnivalesque spacetime. Carnival spacetime is suspended from the conventions of living, in which eccentric behaviour is accepted, interaction between people becomes free and familiar, normal separations are dissolved and new alliances and meetings can be formed and theatrical expressions of the physical, prodigious, grotesque and the sacrilegious are fulsome. The Word is heteroglossia as spacetime of irreverent, dirty, extreme, copulating, rhizomatic connection. Dick, Burroughs and Calvino use their copulating
relational spacetimes to conceptually explore real, possible, unreal, and impossible spaces, times, and beings, ‘in and out, fore and aft like an innaresting sex arrangement’ (Burroughs, 1959, p. 180).

Dick’s materialisation of ‘silence’ (1968/2007, p. 447) like ‘The Word’, also exhibits the carnival patterning its strong physicality and unnerving, hallucinogenic weirdness. Both text fragments involve synaesthesia, the merging of sensory information of sight and touch with emotional, mental, and material data into a new entangled, material manifestation of phenomena which are otherwise considered immaterial and vice versa. Material and immaterial boundaries are blurred. Silence oozes from the walls (Dick, 1968/2007) and books spill into the world in ‘riot yipes’ (Burroughs, 1959, p. 180).

Carnivalesque heteroglossia (Bakhtin, 1981) materialises exuberant language movement into new material possibility. The writer and reader enact restless indecisive movement between one possibility and the other without closure, making new rhizomatous thoughts about spacetime possible on each movement and each reading. In Invisible Cities (Calvino, 1978) as I have said,
the suspect nature of language is foregrounded and the reader’s oscillation between doubt and the concrete imaginaries of the cities in the text is put to use to generate new rhizomatous connections in the mind of the reader especially with regard to history, space, architecture and design, extending the possibilities and impossibilities of cities. *Do Androids Dream* (Dick, 1968/2007) constitutes writing as an extended conjecture on a contingent possibility, concretising a world which might have existed, and thereby giving us a view both of this possibility and of our own world, in from outside (Le Guin, 1979), which would not have been otherwise enabled.

Connection with the strange and unknown is both risky and enterprising. Bakhtin states: ‘As a living, socio-ideological concrete thing...language for the individual consciousness, lies on the borderline between oneself and the other. The word in language is half someone else’s’ (Bakhtin, 1981, Chapter 4, location 4133). Human language, especially in the novel, is the embodiment and the constitution of the open-ended relationship between the human self and difference, between differentiation and the unknown. In the rhizomatic chronotope both creative and anxiety provoking possibilities of language stem from this dialogic quality. The reader and the writer should be prepared for the fact that this can produce some unnerving creations.

In these texts, embodied heteroglossia can be insistent and forceful, designed to break habits of thought and push new, sometimes shocking imagery and associations into being. In *Naked Lunch* (Burroughs, 1959) many voices with no authorial privilege (Bakhtin, 1981), constitute chaotic coexistence and un-unified narrative. Burroughs’ particular technique is the vernacular of the classless and the dispossessed. It is verbose, insistent and
aggressive, as McHale (2004) has commented. He pushes a form of existence upon the reader, which assumes the reader's limited understanding of the kind of existence and world he writes of and tries to break the reader's comfortable frames of reference; to give the reader his form of ass-fuck, embodied in both the form and explicit content of the text, as seen in this text fragment, to the left.

In these loud voices a field of ideological contention comes into being, through confrontation and high sensation, in both senses of the word. Alternatives of morals, crime, punishment, sex, drugs, snuff pornography, sensory experience and altered mindstates are forcefully if ambiguously constituted by means of carnivalesque sensory description, hostile, obnoxious and jostling voices; a constitution of a version of capitalism itself. The chronotope and its heteroglossia bring into being these exuberant and forceful constitutions to present some of the chaos and complexity of such alternative existences in the ineludible context of capitalist commerce. The carnivalesque in the chronotope shows the potential of writing and thinking and constitutions in exuberant, forceful, affirmative, diverse terms: terms of 'yes, this, and this, and this', terms of more and more shifting variety, insistent possibility and bizarre paradox.

And ball-bearings in the machine: Individualised humanity

The contingency and infinite possibility of this chronotope can be an intoxicating and exuberant affirmation of life. But, as I have suggested, at the same time these conditions can induce a 'fearful stupor' (Gomel, 2010, p. 82) drawn from overwhelming uncertainty and the sense of infinite possibility. A prominent entanglement in this anxiety is the constitution of the human being as highly individualised. Individualism co-constitutes our disempowerment, disconnection, paranoia and a search for meaning limited to the self-referential.

The supposed potential for everyone to be free and successful constitutes it a failing of the individual if she is not: If she is ill, or unemployed, or alone, or
poor (Bauman, 2001). In a similar pattern to that in the heroic path, in this
chronotope of flux there is no useful totality to be made of the sum of peoples
and the other characters in these two novels share existential struggles in the
complex, uncertain world, but in spite of the commonality of problems, there
is no common action. There are no safety nets or neighbourly support systems.
As in the globalised world (Bauman, 2001), in this chronotope, writing these
struggles of existence serves to bring home the message that for the ordinary
person agency is small, attempting to extend it is largely pointless and that we
each must suffer alone. This writing, in spite of its rhizomatic nature,
dermines its own opportunity for change.

But the rhizome city does not create a form of individualism in which we are
polarised and locked in combat. Instead humans are shaped as ball bearings in
the machine of flows, perpetuating dynamism by ceaselessly seeking the
connections which might satisfy their desires. Burrough’s junkie Lee (1959)
is especially disinterested in the movements of other likewise bouncing ball-
bearings, except for when they interfere with his own frictionless ease of
movement. But all the characters in Naked Lunch (Burroughs, 1959) Invisible
Cities (Calvino, 1978), and Do Androids Dream (Dick, 1968/2007) are heedless
of the outcomes of the bigger machine; in whether the instrument constitutes
a machine-gun, or a sweatshop or a pin-ball-machine. They know better than
to waste energy in these concerns. Reality is tested and understood from the
particular and limited perspective of – what’s in it for me? Where collective
roles in life come to be seen as naïve and pointless, shared identity and action
break down (Sennett, 1993).

“Maybe you’re an android,”
Officer Crams said. “With a false
memory, like they give them.
Had you thought of that?” He
grimaced frigidly as he continued
to drive south.

(Dick, 1968/2007, p. 514)
As also seen in the heroic path chronotope, fragmented characters are unknowable and fearful. In the rhizome city our own identities elude us and the unknowable identities of others produce paranoia. Rick Deckard’s employment in *Do Androids Dream*, as retirer (exterminator) of androids involves constant suspicion about who is and who is not a real human. This suspicion inevitably extends to himself. In the city of the junkie in *Naked Lunch* (Burroughs, 1959) there is the same need to be suspicious of everyone and protective of the self. Without marked territory we are open to encroachments; without marked authority we are dependent on our own defences; and without stable identity we can trust no-one. Others are likely to seek to damage or exploit us as we all are part of the same paradoxically interdependent yet insular fight for survival. We develop and entrench divisions between ourselves and those who are alien (Bauman, 2001).

In *Naked Lunch* (Burroughs, 1959), all others are fuzz or squares or rubes: despicable threats or idiots. Other junkies are not viewed with solidarity or spared any sympathy, as seen in the text fragment to the left. These alien others enable Lee/Burrroughs to extend some creative agency; his descriptions are visceral, shocking, designed to make readers take notice, to break comfortable notions of the world. They enable him to maintain his sense of himself as one who is not deluded by the world and who knows and sees it as it is and thereby has power. This necessitates others in the role of those who can be looked down upon and despised.

Individualism in the rhizome city has two related and significant patterns in common with the heroic path chronotope. First, as I have indicated, it constructs humans as isolated and separate from each other. Second, as I discuss next, it constructs the universe and nature as existing separately and outside of humanity. We see spacetime as containing pre-existing and
determinate characteristics which determine society. We see our own agency as restricted to that of ball-bearings in this impervious machine, serving to keep its flows moving.

And the juggernaut: Spacetime of the impervious, dynamic machine

The manifestation of this sense of individual human impotence is entangled in the creation of what Castoriadis (2010) has named a heteronomous society. Heteronomy; the belief that the laws governing human existence and action come from outside the society, from nature and necessity, means that society does not recognise its own creative role in shaping these laws and as such refuses to put limits on itself. In contrast an autonomous society can be attentive to its own creativity and active and questioning in and of its constitutions.

Castoriadis (2010) has argued that an autonomous society cannot arise out of the global system of capitalism. The ontological received wisdom in the rhizome city chronotope in the neo-liberal capitalist world is that the universe is contingent and in flux. This helps to co-constitute a social belief that humanity plays no role in the construction of these conditions. This pattern gives new shape to the archetype of the frightening other, discussed in Chapter Three. In this chronotope the frightening other is the certain knowledge of the amorality of the universe. This loss of autonomy disables the sense of necessity to justify assumptions, and the capacity for radical, conscious creativity. It disables onto-ethical agency. Like a junkie, the society becomes locked in a continuous, closed system, regenerating until it must eventually degenerate.

Research and writing apparatuses are forms of the kinds of institutions which should enable an autonomous, critical and questioning world. But the rhizome city chronotope tends to be restrictive in taking our questioning very far. ‘We are critically disposed, but our critique, so to speak, is ‘toothless’, unable to affect the agenda for our ‘life-political’ choices’ (Bauman, 2001, p. 99). The form of critique manifest in the media and wider social world is concerned to a large extent with personal and consumer issues: satisfying sensory need, coping
with our own emotions and finding some satisfactory sense of identity, as in *Naked Lunch* (Burroughs, 1959) and in *Do Androids Dream* (Dick, 1968/2007). Like the needs of the junkie, these desires turn out to be un-gratifiable in this chronotope.

In the rhizome city, philosophical and critical deliberation on institutions, politics and apparatuses is disabled. Because of the co-constituted wisdom that contingency and flux must mean chaos and these are natural laws, the chronotope constitutes no grounds upon which it makes sense for one to make a stand, or assert one way of living or world perception over another (Castoriadis, 2010). Surrender to the supposedly irreversible logic of this reality is a prominent characteristic of both neoliberalism (Bauman, 2001) and this chronotope. Epistemological systems are hazy and to a large extent irrelevant: people live, they move and they report. The chronotope functions, it enables open-ended and inconclusive chaotic events and writing, it enables new associations and unlocks creative iterations. But it does not tend to enable understanding, analysis, or philosophising of them, because function, not meaning, is the point and because such function stands outside of humanity, in nature, and cannot be shaped.

In the rhizome city therefore, space, time and contingency have powerful agency. They exert their influence back at us as a juggernaut of impervious force and dynamism. This is in contrast with the anthropocentrism of the heroic path chronotope in this thesis. In the rhizome city the desire to create the self by exerting control over one’s environment, is suspect, naïve and ignores the spacetime contingency which surrounds the characters. In

‘God what a marathon assignment,” Rick said. “Once I began on it there wasn’t any way for me to stop; it kept carrying me along, until finally I got to the Batys, and then suddenly I didn’t have anything to do. And that-” He hesitated, evidently amazed at what he had begun to say. “That part was worse”, he said. “After I finished. I couldn’t stop because there would be nothing left after I stopped.”

(Dick, 1968/2007, p. 607)
both *Naked Lunch* (Burroughs, 1959) and *Invisible Cities* (Calvino, 1978),
material space and material space questions are prioritised over abstract
meaning and moral. In Dick’s novel (1968/2007) meaning and morality are
explored but the dynamism of the universe is unbeatable. After a ‘marathon
assignment’ in which Rick makes a near-record of android killings in one day,
he reflects: ‘*I couldn’t stop because there would be nothing after I stopped*’
(Dick, 1968/2007, p. 607). Movement is ceaseless and perennial and morality
is ultimately an unfruitful pursuit. Epistemology is about the ambiguous,
limitless relations between humans and contingent space and time. Personal
survival is important, but writing documents this with little expectation of
enactment of agency or transformation.

*And junkie agency*

*The junk merchant doesn’t sell his
product to the consumer, he sells the
consumer to his product. He does not
improve and simplify his
merchandise. He degrades and
simplifies the client.*

(Burroughs, 1959, p. 224)

As I have said above, the juggernaut universe tends to close opportunities for
certain kinds of onto-ethical agency. With regard to the kinds of agency that
are left, the postmodernist, rhizomatic chronotope re-distributes rather than
generally increases these. Just as in drug commerce, the chronotope facilitates
comparatively more and diverse enactments of agency among those able to
take advantage of flows and flexibility and impoverishes agency among the
more immobile, dependent and deprived (Bauman, 2001).

In John Isidore’s earth neighbourhood in *Do Androids Dream* (Dick,
1968/2007), following *World War Terminus*, those who could, have left earth
long ago for Mars, and only the very old and the ‘specials’ like John, who have
no choice, remain.
One of the options left available to humanity is a form of junkie agency. Like a powerful drug, the city holds the promise of the realisation of unbounded potential, but due to its amorality and imperative to keep flows moving, societies and individuals, like junkies, become locked in a continuous, closed system, regenerating until they must eventually degenerate. While the extent of agency of the comparatively powerful sellers and the disadvantaged buyers may vary, this closed system ultimately applies to both, as all are subject to the autonomous, machinic universe.

As with Burroughs’ drug dealer and junkie, the willingness and ability to ‘degrade’ (Burroughs, 1959, p. 224) people and place and to leave, to ‘destroy what one has made’ (Bauman, 2001, p. 39) are necessities for survival. The individual is left with what short term opportunities the present offers, rapid consumerism and the pursuit of material, sensory desires. These are some of the ways people can maintain a sense of agency in the uneasy juggernaut universe. In Rick Deckard’s world in Do Androids Dream (1968/2007) consumerism, status and moral uncertainty are reflected in the symbol of keeping an animal. The market in synthetic pets is strong, co-constituting the need to participate in the pretence of affluence, status and a caring nature. ‘To say, “Is your sheep genuine?” would be a worse breach of manners than to inquire whether a citizen’s teeth, hair or internal organs would test out authentic’ (Dick, 1968/2007, p. 438).

Burroughs’ (1959) junkie is a striking image of human agency as oscillating, restless, irreconcilable struggle within and against sensory need and the capitalist society. Lainsbury (2004) discusses the short story writer Raymond Carver’s postmodern chronotope similarly, as constituting the body as site of contested possession between selves and capitalist society/ideology. In Naked Lunch (1959) the agency of the junkie William Lee pivots entirely around his

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*(Dick, 1968/2007, p. 444)*

*In a giant, empty, decaying building which had once housed thousands, a single TV set hawked its wares to an uninhabited room.*
A red orchid bloomed at the bottom of the dropper. He hesitated for a full second, then pressed the bulb, watching the liquid rush into the vein as if sucked by the silent thirst of his blood. There was an iridescent, thin coat of blood left in the dropper, and the white paper collar was soaked through with blood like a bandage...As he squirted the water out, the shot hit him in the stomach, a soft sweet blow.

Look down at my filthy trousers, haven’t been changed in months. The days glide by on a syringe with a long thread of blood...I am forgetting sex and all sharp pleasures of the body – a grey, junk-bound ghost. The Spanish boys call me El Hombre Invisible...

(Burroughs, 1959, pp. 62, 63)
horrific or perverted strings of images, associations, ruptures and discontinuities, manifesting inner and outer paranoia, the nature of addiction, weird copulations and fantasies, and associated controlling bodily, bureaucratic and political systems. Burroughs enacts language as unpredictable, empty and insular, and at the same time macabrely, corporeally creative, like one of his own ‘innaresting sex arrangement(s)’ (Burroughs, 1959, p. 180) or his torture machine.

The rhizome city in these texts does not especially manifest a pattern of writing as agent of either self or social change. Marco Polo of *Invisible Cities* (Calvino, 1978) is one of the most favoured in the juggernaut capitalist chronotope. He has the capacity for mobility, but this is enabled by emotional distance. In his position as explorer and reporter under the patronage of the Emperor Kahn, he maintains a role on the fringes of the degenerating junkie system, and in spite of his agency, has no role in altering conditions.

As in drug commerce, the role of actors in the rhizome system is not to politicise or philosophise existence. In the globalised world the aim of existence is supposedly freedom (Bauman, 2001); freedom for movement, freedom from bonds to place and people, freedom of creative thought and rhizomatous connection. But people need financial, emotional, and/or physical security in order to achieve such freedom of movement (Bauman, 2001). This tension between freedom and security becomes a central one in the neo-liberal, dynamic society. The fluidity and absence of meaning which constitute limitless freedom also negate solidity and security. This creates an absence of a sense of mooring, and patterns of insecurity and uncertainty (Bauman, 2001). The affective sensibility and malaise of this spacetime becomes patterned like that of the addict, with impotence, inadequacy and depression, and an incapacity for change action (Bauman, 2001). In *Naked Lunch* (Burroughs, 1959) and *Do Androids Dream* (Dick, 1968/2007), a spacetime open to the supposed potential of an unlimited universe of possibility and yet also to a lack of security creates a lack of conviction that choices have any determinable or predictable results, bringing indecision and a sense of paralysis.
**And the torture machine: Technocratic, dynamic spacetime**

“While in general I avoid the use of torture...the threat of torture is useful to induce in the subject the appropriate feeling of helplessness and gratitude to the interrogator for withholding it. ...To this end I devised several forms of disciplinary procedure. One was known as the Switchboard.

Electric drills that can be turned on at any time are clamped against the subject’s teeth; and he is instructed to operate an arbitrary switchboard, to put certain connections in certain sockets in response to bells and lights. Every time he makes a mistake the drills are turned on for twenty seconds. The signals are gradually speeded up beyond his reaction time. Half an hour on the Switchboard and the subject breaks down like an overloaded thinking machine”.

(Burroughs, 1959, p. 33)

As I have suggested, Burroughs enacts writing itself as a torture machine, using extreme forms of amoral, repulsive, shocking, visceral, macabrely creative, and rhizomatic language. The pattern of the torture machine is worth attending to in the chronotope as it is enabled by machinic, supposedly value-neutral, imperviously functioning, dynamic, expansive spacetime. These tendencies also promote science and technology as instrumental and expanding constitutions that stand for progress.

Power is held by those who can control flows, and the flows of information and of technology are primary to the expansive, connective power of the rhizome. Both Castells (1996, 2001) and Barad (2007) explain how new flows re-configure power and boundaries rather than dissolve them. Information and technologies exacerbate and manipulate unequal resource distributions, expanding some opportunities and diminishing others. Marco Polo in *Invisible Cities* (Calvino, 1978), has significant power as the constitutor of information about Kahn’s Empire, and thus constitutor of the Empire itself.
One of the exemplary forms of technology as component in the flow of power is the torture machine, and an example is described by Benway, of the Annexia police, in *Naked Lunch* (Burroughs, 1959) above. Benway devises torture machines as ‘useful to induce in the subject the appropriate feeling of helplessness and gratitude to the interrogator for withholding it... Every time he makes a mistake the drills are turned on for twenty seconds’ (p.33). The power to regulate the flow of torture is pure power itself; to generate effects and information free of the shackles of morality.

The rhizome city chronotope with its entangled constitutions of global capitalism enables the exciting freedom to make bold, task-oriented experiments, such as torture. Only segmented, partial, task-oriented and short-term activities make sense in a chronotope of flux and unpredictability. Where there is no hold on the present, there is no capacity to plan the future (Bauman, 2001) and long term, wide-vision planning and ethical debate are shut down. This helps to explain how such constitutions as torture can be justified in the world. Progress and dynamism are perpetual natural laws rather than co-constitutions of human agency, and so the seeds for ethical and critical reflection, analysis and democratic debate about such things undernourished.

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*In the lives of emperors there is a moment which follows pride in the boundless extension of the territories we have conquered, and the melancholy and relief of knowing we shall soon give up any thought of knowing and understanding them...*

(Calvino, 1978, p. 5)
Iterative patterns and further disturbances

Rhizome city and creative fluid materiality, time and space

If science fiction has a major gift to offer literature, I think it is just this: the capacity to face an open universe. Physically open, psychically open. No doors shut. What science, from physics and astronomy to history and psychology, has given us is the open universe; a cosmos that is not a simple, fixed hierarchy, but an immensely complex process in time. All the doors stand open....All connections are possible. All alternatives are thinkable.

(Le Guin, 1979, p. 206)

The beautiful quote from Le Guin (1979), above, illuminates the spatio-temporally rhizomatic city as an open universe of self-generating possibilities, multiple realities, cross fertilisations, synergies and creative potentials in writing and reality and SF writing as a wonderful a set of methods in these aims.

The rhizome city also constitutes writing as dynamic, hyper-corporeal, trans-corporeal, heteroglossic, and carnivalesque. This dynamism enables new relationship: between alternative times, spaces, histories, futures and bodies. And in turn, this constitution of multiple relational possibilities assists the reader to think beyond the text, to the implications of further possibility and impossibility. It enables us to think and write in terms of ‘yes, and, yes, and, yes, and..’, and so constructs the premise that reality and ontology are multiple and facilitates the thinking of more and more new connections and alternatives.

Rather than constituting space and time as separate and/or stable, the dynamic rhizome co-constitutes a world in which objects, space and time are dirty, forceful, copulating, and have blurred material/immaterial boundaries. Spacetime is agentic and powerful, it moves, and has influence on bodies and objects. The past is not left behind but ingrained or enfolded in the enfolding
of the present. Through this enfolding of matter, space and time, traditional boundaries such as matter and the human senses can lose their previous designations and different boundaries can be materially enacted. The matter, space and time of the rhizome city enact agency in a world of differentiated, iterative becoming.

**Rhizome city and the new doxa of uncertainty and flux**

> The first is easy for many: accept the inferno and become such a part of it that you can no longer see it. The second is risky and demands constant vigilance and apprehension: seek and learn to recognise who and what, in the midst of the inferno, are not inferno, then make them endure, give them space.

(Calvino, 1978, p. 165)

The rhizome city enables the problematisation of much of that which might otherwise be unquestioned, including capitalism and technological progress, and gives us another view in. New possibilities of entangled time, space, ethics and human knowledge making practices are implicated in Marco Polo’s advice to the Emperor in *Invisible Cities*, above: ‘seek to learn and recognise who and what, in the midst of the inferno, are not inferno, and make them endure’ (Calvino, 1978, p. 165). There is potential for co-constitutions of worlds, history and future, in which we do not relinquish the universe to rhizomatosus, chaotic, frenetic, competitive spacetime as fixed in nature, outside of ourselves. Instead, by giving space to that which we find worth sustaining, we attend to the present moment and we play a concerned role in shaping the future.

However, Smethurst (2000) articulates a discomfort about the postmodern chronotope which resonates with the patterns of this chapter. He suggests that it is: ‘losing its power to worry, to provoke and question, especially to question its own nature and origins. The emergence of an unlikely hegemonic postmodernism can be detected; a postmodernism which is hopelessly imbricated in consumer capitalism and paradoxically acknowledging the failure of art to represent an unrepresentable world....’ (p. 11).
Barad’s (2007) onto-ethical-epistemology and critique of the metaphysics of individualism assist in noticing how co-constitutions of agency and the nature of phenomena might be major obstacles in the power of chronotope for co-constituting writing as both a creative and an ethical research apparatus. In order to give space to that in the universe which is not chaos and uncertainty, research and writing chronotopes need also to create vision and morality, in the sense of concern for the implications and effects of lives, worlds and writing. They need to also to create the understanding that we are not totally subject to the laws of chaotic, uncertain, impervious nature, but ourselves help to constitute these laws.

The rhizome city as it has emerged in these textual patterns does not in general lend itself well to these aims. The chronotope, with its entangled constitutions of global capitalism constitutes a juggernaut universe and a heteronymous society, in which people view themselves as lacking in agency to shape the impervious, dynamic forces of nature. The image of humanity co-constituted in this chronotope, while fluidly connected, is individualistic. A form of junkie agency can be exercised for short term personal or sensory gain or expansion of power over flows, and is dependent on high personal levels of detachment from time, space and others. This kind of agency enables bold short term, task oriented experiments detached from ethics, spacetime and people; the kind of detachment which enables drug commerce and torture machines. The cognitive dissonance produced in this paradoxical state of high potential and low agency can manufacture high levels of anxiety, indecision, and a sense of impotence.

Postmodernist fiction sets itself apart from modernist fiction by denying unification or totalising synthesis. But the new doxa co-constituted in the rhizome city seems a totalising narrative of multiplicity, fragmentation and dynamism. As Smethurst (2000) also argues, the postmodern novel should not be seen as merely a mirror of ‘politically and ethically indeterminate, capitalist, consumerist’ (p. 11) society. The chronotope is not a mirror or a representation but an active and creative form, and a particular materialisation and frame through which the world is seen. The separation of human from nature and
the construction of the universe as relentlessly dynamic and amoral, do not lend themselves well to recognising the apparatus and ourselves as part of the nature we seek to understand (Barad, 2007, p. 26). The limitation of the chronotope therefore is primarily that does not tend to enable the enactment of agency in terms of ethical consciousness, where ethics is seen not as our responsibility to ‘other’, but as accountability for the relationships of becoming, in which we are a part (Barad, in Dolphijn & van der Tuin, 2012).
6. Faltering machine: Social science writing and possibility in the rhizomatic chronotope

Spacetime and texts of the faltering machine

The serious injury done to Gregor, which disabled him for more than month – the apple went on sticking in his body as a visible reminder since no one ventured to remove it – seemed to have made even his father recollect that Gregor was a member of the family, despite his present unfortunate and repulsive shape...

(Kafka, 1916/1972,

An assemblage...has two sides: it is a collective assemblage of enunciation; it is a machinic assemblage of desire. Not only is Kafka the first to dismantle these two sides, but the combination that he makes of them is a sort of signature that all readers will necessarily recognize.

(Deleuze & Guattari, 1986, p. 81)

This chapter attends to particular intensities and disturbances between patterns of the rhizome chronotope in social science writing-as-research and the patterns of the rhizome in fiction from the previous chapter. In this chapter I entangle poststructural social science texts in the apparatus. I enact entanglements of Deleuze and Guattari’s writing machine from Kafka: Toward
a Minor Literature (1986) and three rhizomatic social science writing-as-research texts: Maclure’s (2006) article, The bone in the throat: some uncertain thoughts on baroque method, Alverman’s Researching libraries, literacies and lives: A rhizoanalysis (2000), and Wyatt, Gale, Gannon and Davies’ (2010) Deleuzian thought and collaborative writing: A play in four acts. Patterns co-constituting a faltering machine emerge as a variation of the rhizomatic chronotope. I bring forward certain patterns created by the entangled fictional texts from the previous chapter, and I draw on Kafka’s fictional works here too, as I explain below.

Deleuze and Guattari’s Kafka: Toward a Minor Literature (1986), extends a glow in this apparatus because the concept it elaborates, the ‘writing machine’ is a seminal conceptualisation of the rhizome as it is applied in poststructural social science research. But it glows with special vitality because of its connections with Kafka. Like the image of Casaubon in Middlemarch (Eliot, 1871/1965), and that of the cracks in the ice floe in Faces in the Water (Frame, 1961), Gregor Samsa, the ungeziefer (insect-like vermin) in Metamorphosis (Kafka, 1916/1972) is an image-form which has had agency in my reading and writing for some time.

Kafka’s Gregor Samsa (1916/1972) slowly changes into an insect-like creature. He embodies the ambiguity and repulsiveness of the transformative, existing somewhere between the visionary and liberated, and the trapped. His situation is bizarrely and profoundly domestic. He has no way of properly existing in this between state in the world, and stays in his bedroom, sporadically attended to by his family who are loyal but increasingly embarrassed and distanced and are relieved when he dies. Yet, in the face of the degree of preposterousness of the actual events they are weirdly blasé, appearing to experience little of the wonder or confused hesitation between natural and supernatural that we might expect. In the absence of any character to do the hesitating, this is left to the reader, who experiences this as a disorienting sense of estrangement.
If Casaubon (Eliot, 1871/1965) shapes my experience of research as prolepsis, the struggle to find a suitable form for the aspirations of the intellect, and attempts to avoid the blinkered, private path, Gregor shapes it as entangled in elements of the repellent and the domestic; that is, somewhat absurd, disorienting, mobilised, corporeal, immanent and defamiliarising.

And yet just on this occasion he had more reason than ever to hide himself, since owing to the amount of dust which lay thick in this room and rose into the air at the slightest movement, he, too, was covered with dust; fluff and hair and remnants of food trailed with him, caught on his back and along his sides; his indifference to everything was much too great for him to turn on his back and scrape himself clean on the carpet...And in spite of his condition, no shame deterred him from advancing a little over the spotless floor of the living room.

(Kafka, 1916/1972, pp. 52,53)

In the text fragment here Gregor (Kafka, 1916/1972) is well into his metamorphosis and is leaving behind the niceties of hygiene and consideration for others. The surrealism and cabin-fever of living in one room, the dust balls and food remnants, the sense of becoming something both strange and familiar to oneself, scuttling and deformed, are extraordinarily evocative of my embodied-mental-affective PhD experience, more especially as I have for the most part not only studied but have also earned my income from my one-room apartment, feeling often surrounded by my own dust and tangled sheets. In this confined space research has flapped its crippled wings and struggled to liberate, but has not been in control of its own metamorphosis and its strange forms. It desires: Perhaps functioning wings, perhaps to just come out of the bedroom and have a way of being in the world. It embodies the shame of retreat from and strangeness in the world, and the shamelessness of existence as living, breathing obsession: with an idea, a theme or a pattern. And the research cannot transcend these conditions as they are entangled in what it is: Grubby, scrabbling, domestic, confined, deformed, compulsive, changing, moving, striving. Kafka has helped shape my reading, writing and research experience as creative mutually entangled acts on thresholds of real and unreal, latent and manifest, visionary and banal, affective and material, representation and imagination. Research is immanence. Research is wonder
Deleuze and Guattari’s response to Kafka involves their own form of attraction to the radical implications of fiction entwined in philosophy and theory. *Kafka: Toward a Minor Literature* (Deleuze & Guattari, 1986) is a text elaborating writing as function to keep flows moving, as exemplified in Kafka’s work. The writing machine is not metaphor or symbol, but is an actual machine; that is, writing is only essentially machinic, it exists to function and perpetuate flows. Kafka’s stories and novels are the quintessential example of writing which does not separate content from form in a dialectical, structural sense, but is a machine of expression which itself can disorganise its own forms, freeing up an intensity of expression and content that cannot be separated. Assembling and dismantling, enunciation and desire, are ‘enmeshed in each other’ (Deleuze & Guattari, 1986, p. 47). The writing machine constitutes writing as machine of connecting, assembling, dismantling, textual flows. It is then, also deeply entangled in the rhizome city chronotope of the fiction of the previous chapter. The writing machine is a particular constitution of the rhizome as an embodiment of academic writing, entangled in the constitution of the rhizome as an embodiment of spacetime.

Maclure’s article *The bone in the throat: some uncertain thoughts on baroque method* (2006), glows especially because of its intensities with the irreverent, playful, disturbing, provocative and exuberant spirit of the rhizome city of Calvino, Dick, and especially Burroughs, discussed in the previous chapter. It lives up to the poststructural ideals of fragmentation, diversity, confusion, excess, conflict and tension and it aims at ‘a hopeful figure for a productively irritating method’ (MacLure, 2006, p. 729). Maclure’s text elaborates the possibilities of a baroque method, arguing that it could work more provocatively and politically...
than the methods to hand, and attend to the irrational, the sensual, the 
forgotten, the perverse, and the marginal.

is an experiment to analyse the function of a teenage ‘read and talk’ group for 
developing literacy. Alverman performs a more traditional analysis of 
interview data and then enacts a rhizoanalysis, enacting connections without 
interpretation. She notices disjunctions and areas of silence between the two 
forms and enables new connections and movement between ideas, which 
extend beyond the data. Alverman’s writing glows because she enacts a 
process which is in some ways similar to my own in this thesis. She connects 
apparently disparate texts from disparate sources (pop culture, the academic 
world), to see what they do, and in this process she stumbles, attempting 
something which is new to her and she is not quite sure of. She brings modesty 
and humility to her writing apparatus, documenting the uncertainties in her 
process as she experiences them.

Wyatt, Gale, Gannon and Davies’ (2010) *Deleuzian thought and collaborative 
writing: A play in four acts* is an experiment in Deleuze-inspired collaborative 
writing between the four authors, undertaken over a period of time, again to 
enact and attend to the function and flow of writing, without interpretation, 
but here focussing on the experience of writing collaboratively. I select this 
text as this approach enables attention to entangled authors in the machine, to 
assembling and dismantling categories of self and text.

Lastly, Burroughs’ *Naked Lunch* (1959) from the previous chapter has also 
emerged as a key component in the entanglements of this chapter. Burroughs 
is a part of Deleuze and Guattari’s machine. They quote *Naked Lunch* in *A 
Thousand Plateaus* (1987). The connections between Burroughs’ machines 
and those of Deleuze and Guattari have been discussed by others, although 
more in literary studies (for example, Koerner, 2010; Moore, 2007; Wood, 
1996), rather than social science. Reading Deleuze and Guattari through 
Burroughs brings out different sensibilities in the writing machine which are 
sometimes more intensely resonant to me than readings of their theory in
education and social science. These are unique, highly corporeal, often perverse, violent, insular and grotesque. Along with Kafka and MacLure’s baroque, Burroughs’ text brings the writing machine to life.

In common with the rhizome city, this chronotope co-constitutes spacetime as multiplicity, dynamism and open-ended potential. The chosen texts enable research which contrasts with the patterns of the Western metaphor of the tree of knowledge which supports binary logic and symbolises linear ordered systems of thinking. Instead this research is patterned by movement between things from the middle (Alverman, 2000), where there are no beginnings and no culminations. In the faltering machine, determinate points and directions in spacetime are not relevant. Liberation of something other (Deleuze & Guattari, 1986) in/of spacetime and in/of research are everything. But new patterns also emerge in this chapter, most prominently in the form of spacetimes of stalling, pause and suspension. Reality through the rhizome, in its social science faltering machine variation, contains within it the possibility of creative pause and emptiness. Spacetime is an infinite plane of permanent and fluid flux and unpredictable becomings, with no point in looking to the horizon for an idea of the future, for fixed points. But spacetime is at the same time a manifestation of material things. These things are also indeterminate and not fixed. Part of their indeterminacy is their porous and permeable nature. They contain spaces of pause, stillness and emptiness, in which receptivity and relationship are also possible.

This writing apparatus enacts and creates my own unique way of understanding the rhizome and its chronotopic possibilities. It helps me to examine what is already there in my own history, relationship and responses in relation to the rhizome, to deepen my attention, and to attend in new ways. Some of the ideas here might be contradicted within the many Deleuzian writings, and therefore the reader may have trouble engaging with these. However, Deleuze and Guattari emphasise that the generativity of concepts; that which they produce, is what matters over their consistent use or their limitations or boundaries (Deleuze & Guattari, 1987). As in the other chapters in this thesis, the challenge of my process is also to activate some generative
resonance with the reader about the possibilities I suggest. The validity of the experiment is in the agency of the possibilities that it suggests. As in a novel, the agency of the text is generated in its new constitutions and in the ways it draws new attention to phenomena. But the agency of these constitutions and phenomena is also dependent on their being somehow accessible to others; having some kind of intensity for others and with their own experiences of the world, and this is also my hope.

**And... faltering machine, stalling, pausing, porous experimental liberation**

A baroque method would resist clarity, mastery and the single point of view, be radically uncertain about scale, boundaries and coherence, and favour movement and tension over structure and composure. It would open up strange spaces for difference, wonder and otherness to emerge.

(MacLure, 2006, p. 729)

It is in the spirit of Deleuze that we have left the nature of the space open; it is an experiment in writing; it does not have a timeline or an order of speaking/writing laid down for it. It is a smooth space, perhaps –

(Davies, in Wyatt et al., 2010, p. 730)

We believe only in a Kafka that is neither imaginary nor symbolic. We believe only in one or more Kafka machines that are neither structure nor phantasm. We believe only in a Kafka experimentation that is without interpretation or significance and rests only on tests of experience.

(Deleuze & Guattari, 1986, p. 6)

The Word is divided into units which be all in one piece and should so be taken, but the pieces can be had in any order being tied up back and forth, in and out fore and aft like an innaresting sex arrangement.

...Gentle reader, the Word will leap on you with leopard man iron claws...

(Burroughs, 1959, pp. 180, 181)
In the texts of this chapter, writing and spacetime are dynamic and perpetuate flows. But the apparatus also enables attention to significant patterns of stalling, faltering, silence and blank space. As in the rhizome city, the processes for writing here, in/of the machine are of flow, and are not to do with finding or interpreting metaphors or signifiers, or assimilating or synthesising into themes or structures (Deleuze & Guattari, 1986). But in the patterns in this chapter, it is important that the flow must liberate. Writing is an experiment, and it has an aim and can be evaluated against this aim. It is not only to do with observing and reporting on flow and function. Writing must move toward ‘smooth space’ (Wyatt et al., 2010, p. 730); must spill ‘off the page’ (Burroughs, 1959, p. 180); toward freedom from constriction; toward a ‘liberation of contents’ (Deleuze & Guattari, 1986, p. 61). The world opens ‘smooth space’ (Wyatt et al., 2010, p. 730) and ‘strange spaces’, ‘for difference, wonder and otherness to emerge’ (MacLure, 2006, p. 729). This writing apparatus then co-constitutes spacetime itself as experimental; enacting its own assembling and dismantling function, striving toward liberations.

The methods of this liberation have intensity with the methods of the rhizome city. This liberation works by experiments to break down distinctions between form and content. Deleuze and Guattari (1986) describe methods for this. In the experimenting, liberating function of senseless, unknowable law operating in The Trial (Kafka, 1925/2015) and The Penal Colony (Kafka, 1919/1961), Kafka enacts an ambiguous image of law, suspends logic and sense, disorganises his expressions, and the image metamorphoses into something other, equally indeterminate (Deleuze & Guattari, 1986). The resulting text at once assembles and dismantles ‘the law’ as phenomena; the two are the same thing (Bogue, 2003).

Just as the law and the texts do not present an image of law, but are an

“He wants Anna to bring him his breakfast”. There was a little laughter from the neighbouring room. It was not clear from the sound of it whether there were several people laughing. The strange man could not have learned anything from it that he hadn’t known already, but now he said to K., as if making his report “It is not possible”.

(Kafka, 1925/2015, pp. 1,2)
experiment in mechanising an image of law (Deleuze & Guattari, 1986), in this chronotope, space and time and objects in the world also do not present themselves, but mechanise possibilities of themselves. The world perpetually enacts experiments to assemble and dismantle its own form and content, mechanising new images and sedimentations and new possibilities.

But, as I have said, in the patterns of this chapter, the dynamism of writing and of the world is not always perpetual and inexhaustible. Spacetime is not only fluid and becoming. The machine also stalls, and it is in this stalling space that liberation takes on forms. In Kafka’s work the machine does not liberate smoothly, but falteringly. ‘It is not possible’, (Kafka, 1925/2015, p. 2) says the strange intruder of K’s request for breakfast before he is mysteriously dragged off to his trial. Kafka’s mechanisms continuously stall movement and provoke hesitation and doubt, before momentum is picked up in a slightly altered, slightly strange direction. Laughter is heard in the background. Kafka’s experimenting spacetime makes connections and creates possibilities. Movement in it is halting and disorienting. Its resulting phenomena are experienced by readers in these faltering spaces. The new forms themselves are nightmarishly ambiguous.

MacLure’s baroque method (2006) intensifies the patterns of exuberance, strangeness and unease of the previous chapter and similarly favours tension and dynamism to break structure and the sense of composure. The method advocates the use of the theatrical, distorting textual and visual devices, fakes and simulacra, embrace of the supernatural, defamiliarisation, resistance to generalisation or abstraction, excess and marginalia, and an ‘abject status as frivolous or degraded vis-a-vis dominant meaning systems of cultural practices’ (p.732) in ‘attempts to represent the unrepresentable’ (p.731). Writing is thus

The baroque has come to stand for an entangled, confounded vision that resists the god’s-eye perspective and the clarity of scientism. Baroque figures and metaphors—the ruin, the labyrinth, the library, the (distorting) mirror, the trompe l’oeil, the fold—speak to contemporary imaginaries of the postmodern.

(MacLure, 2006, p. 731)
conceptualised as baroquely enfolded, being and becoming, struggling and resisting, obscure, illusionistic, excessive and overflowing. In addition to its dynamism and tension, this baroque spacetime is freakish, gothic, distorted, and excessive, is made of corners and drawers of intrigue, is bursting with miniature oddities, uncanny objects and illusory surfaces.

The baroque also co-constitutes patterns of faltering spacetime. Here these are ‘vertiginous’ (MacLure, 2006, p. 732). The distorted vision of the baroque enables ‘(a)n analytics of ramification and displacement…(p.733). That is, in a pattern intensifying Kafka’s, it rests on disorientations, disconcertions and ambiguous new forms which produce ambiguous shifts of affect, felt in the body and in space. For example, ‘the trompe l’oeil ‘fools the eye’ by imitating its object so faithfully that the onlooker is momentarily gripped by an inability to tell the difference between representation and reality, original and copy’ (p.734). *Paradise Lost* is described enacting abrupt disconcertions of scale in Satan’s position in the universe (MacLure, 2006, p. 733). The text constitutes a mischievousness character in spacetime to sinister effect. The onlooker lacks a safe position and sense of footing. Shifts of scale and focus produce states in which in which the spacetime as it is comprehended falters and the body is ‘gripped’ (p.734) with vertigo, awe, wonder, and anxiety in and of the world, involving a destabilisation of the onlooker’s own sense of scale and relationship in the world.
In the faltering moment, the world in its new ambiguous form becomes bold and forthright. MacLure refers to Latour in calling this ‘the recalcitrance of the object’ (p.734). The object may seem to look back, or to otherwise assert itself. The onlooker is ‘gripped’ (p.734) by the world. Spacetime and objects are resistant to being taken for granted as a backdrop to human action, they deflect the objectifying gaze and assert their agency in striking multisensory, embodied and visual forms. This complicates and entangles the subject-object relationship, creating hesitation over these distinctions. Bodies, subjects, objects, space and time become entwined in shifting gazes and relations. Disconcertion enables liberation from established ontic categories without producing new ones but instead creating different, unnameable forms and different unnameable relationships between and in space.

As MacLure suggests in this text fragment, research here might be evaluated for its capacity to ‘dwell more resolutely’ (2006, p.731), in this faltering space and its unnameable, vertiginous, ontic relationships. A moment of arrested oscillation and irresolution is a spacetime in which subjects, objects, time and space enact relationships without settlement of what that relationship is or means. It is determined relationships that determine entities. The baroque method liberates possibilities in research and in the world by subverting habitual relations in and with time space and objects.
Wyatt, Gale, Gannon and Davies throw out or disorganise the established codes and forms of writing an academic article: ‘*We wanted to treat writing as a flow not a code.*’ ‘*(I)t does not have a timeline or an order of speaking/writing laid down for it*’ (2010, p. 730). They re-constitute collaborative academic writing as textual/performative, experimental engagement between authors.

Wyatt, Gale, Gannon and Davies (2010) enact entangled times, countries, cities, and spaces in their text, so that their text has an intensity with Calvino’s *Invisible Cities* (Calvino, 1978) in the sense that their flow of language and spacetimes creates super-positions, new ‘*possibilities of being otherwise in other places*’ (Wyatt et al., 2010, p. 731), new intensities, new moments in new kinds of places. The resulting text is four open-ended acts exploring ‘*Flows and the In between*, ‘*Haeccities*’ (the ‘thisness’ of a moment), ‘*Listening*’ and ‘*Writing*’. Times and places are foregrounded and are embodied. They are entangled in voices, objects, moments, memory and writing process.

**Susanne:** I have never been in snow as it falls and never seen icebergs floating in saltwater...I am very interested in the possibilities entailed in being otherwise in other places.

**Bronwyn:** I love the feel of myself in the morning here in Firenze, when I greet others, including complete strangers, with *buongiorno*. It is warm and connecting.

(Wyatt et al., 2010, p. 731)

The *Word* is divided into units which be all in one piece and should so be taken, but the pieces can be had in any order being tied up back and forth, in and out fore and aft like an innaresting sex arrangement.

(Burroughs, 1959, pp. 180, 181)

Read through the patterns of the liberations of the exuberant ‘*innaresting sex-arrangement*’ (Burroughs, 1959, pp. 180, 181), of the previous chapter, the particular liberations of Wyatt, Gale, Gannon and Davies (2010) and of Alverman (2000) emerge with gentleness and respect. Wyatt et al’s text is generated in the poetry, pace and rhythm of their flows. Their pace and rhythm read quietly, in measured, gentle, even polite stanzas. Turn taking and non-interrupting are enacted. These rhythmic, sensory and poetic
methods enable new relationships in the world to be liberated in subtle ‘flashes between one story of being and another’ (Wyatt et al., 2010).

Where the rhizome city enacted by Burroughs (1959) constitutes apparently continuous, thrusting dynamism, where copulation liberates confused new forms such as superimposition and hallucination, Wyatt, Gale, Gannon and Davies (2010) constitute a dynamism and superimposition which also contains porosity and pause. Empty space between voices, like breathing, constitutes an opening of new space. My attention is drawn to Susanne’s writing above which images ‘icebergs floating in saltwater’ (Wyatt et al., 2010, p. 731), and its juxtaposition with Bronwyn’s warm Florencian experience of place. These images resonate with the ice floes of this apparatus and with my method of text as embodied ice floes on the page. ‘(T)he possibilities entailed in being otherwise in other places’ (Wyatt et al., 2010, p. 731) open through shifts between place and voice, majestic arctic sea and crowded terracotta city, cold and warmth, affect, language and material forms. Spaces constituted in Wyatt et al’s text liberate a potential also already there in the ice floes of their apparatus. They enable, as these authors say, attention to haecceity, the fragile qualities of a thing or moment: its ‘thisness’.

This fragile attention is enabled in the space between the ice floes on the page.

In Wyatt, Gale, Gannon and Davies (2010) text, and in the ice floe method, the fragile momentariness of the textual relationship is liberated in textual rhythm, dependent on both the empty pause and the determinate beats together. Text fragments/ice floes conceptualised in isolation are like a habitual practice: static, determinate entities. Together, and with the reader, space between becomes manifest, and in this space is relationship, which is where spontaneous, unselfconscious, indeterminate newness can emerge. Integral to...the search for words to bring to the surface the haecceity of life of the moment, to bring images out of their shadows, and it involves sparks and flashes between one story of being and another, which gives it life in a new way, more open to the flow of becoming. (Wyatt et al., 2010, p. 735)
this space is tolerance, lack of judgement, and open listening to the other (Davies, 2013) and to the ‘gap’ (Frame, 1961, p. 3), the space itself, which might be the world in potential.

As in the rhizome city, the temporal, dialogic present and immediacy of voice are given creative emphasis in Wyatt, Gale, Gannon and Davies (2010) text. An emphasis on the temporal present over aspirational struggles brings to mind Bakhtin's discussion of Dostoyevsky's interest in ‘coexistence and interaction’, connected at a single point in time (Bakhtin, 1973, p. 24). This is not a constitution of existence as identities in struggling hope of evolution, as in the humanist heroic path, but a representation of ontology in which co-existence in the moment is the one connecting and creative thing in the universe. Writing is to invoke co-existence and interaction rather than to move toward something. This means it is at once dynamic, but its flows paradoxically intensify the experience of the co-existing moment. This is a different iteration of the pattern of emphasis on the present and ‘short-termism’ of the capitalist rhizome city. The distinction is the intent to enable relationship in the present rather than to exploit the present.

In Calvino’s (1978) text, this distinction is also manifest in the choice to see the present as opportunity for autonomous action to make space for ethical relationship, or to see it as chaotic inferno to which one is subject. The text fragment implies that creative potential dwells in this choice to make space.

_The first is easy for many: accept the inferno and become such a part of it that you can no longer see it. The second is risky and demands constant vigilance and apprehension: seek and learn to recognise who and what, in the midst of the inferno, are not inferno, then make them endure, give them space._

(Calvino, 1978, p. 165)
Alverman’s (2000) text also intensifies this pattern of liberations via stalling and empty space in the spacetime. Mapping the flows of discourse in her educational research showed up silences as another kind of non-obviousness. When a map of the flows of discourse was laid over the original analysis of the interviews with the teens in the literacy group, areas of sexuality and power, violence, race and social class became visible as issues the researchers were aware of but which the participants did not raise. Mapping and then re-mapping these social agents as geographies, provided a way for emptiness to become visible and thereby hold creative potential.

In Alverman’s (2000) text, the faltering experiment also manifests in researcher disorientation. Alverman both sees the potential in rhizoanalysis, and feels that she has mechanised its gears, and at the same time is not certain of what it is that she has managed to liberate. An area of silence emerged in what had previously been noted as a lack of whole hearted cooperation on the part of the participants with the expectation that they all would read the same books in order to discuss them. This was re-configured as a process of rhizomatic function: a rhizomatic literacy practice demonstrating a break with the norms and expectations of the school and book club institutions. In the rhizome, this is not a breakdown in understanding to be avoided (Morgan, 2001) but a situation of previously unapparent potential set free, here in the form of the reading practices of teenagers working differently. However, as

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*I had hoped to avoid asking the meanings of texts per se and to concentrate instead in engaging with those texts through my textual ‘others’... In retrospect...I am not certain that I was ever able to leave behind the notion that meaning, at least partially does reside in the text.*

*...rhizoanalysis has made it possible for me to “see” in the data something other than what I went looking for in the first place.*

(Alverman, 2000, p. 126)
Alverman also notes, attending to the setting free of practices which are a ‘break with the norm’, seems inextricable from interpretation. She ‘had hoped to avoid asking the meanings of texts’ (Alverman, 2000, p. 126) and instead to engage the texts with other texts, but the separation of ‘engaging’ and ‘asking meaning’ was problematic.

The faltering machine enables breaks from the norm such as reading practices outside of the agreed structure to be liberated and thereby become real. It enables serious attention to these new real forms. But by this serious attention, they then become interpretations. Of some of her research outcomes, Alverman seems to ask: Have I merely reconstructed representations, albeit through a different process? And of other aspects of her research she seems to ask: How should these empty, silent spaces be approached and engaged with? What is liberated? How is a text to be called research if its liberations are not given serious attention? The processes, products, meanings and purposes of research are destabilised and Alverman is disorientated. This constitution is common in poststructural social science research, for example, Brtziman (2000, p. 29) asks: ‘if the agreement (about transparent discourse) is always betrayed, how is the ethnographic pact effectuated? How does one understand plausibility and persuasion? If the relationship between the real and the representational is always in doubt, what is the basis of belief and identification?’

In this chronotope research exists both within and against the dominant discourse (Lather, 2007) and this is an irresolvable relationship.

This pattern of the faltering machine makes accepting loss the real force of learning (Lather, 2007) and nostalgia a primary motivation to write (Attridge, 1992). Alverman ‘works the ruins’ (Lather, 2000) of research, in which repetition and the play of difference are the only ground left for moving toward new research practice. Her failure is necessary as those who try to avoid a ‘transcendent purchase’ (Lather, 2007, p. 10) in the world, on the objects of study, must be ready to fail in order to learn how to find their way into new possibilities. Writing in this co-constitution is described by Derrida as ‘a movement of nostalgic, mournful lyricism to reserve, perhaps encode, in short to render both accessible and inaccessible’ (Attridge, 1992, p. 35). A stumbling,
nostalgic, melancholy and mistrusting relationship, within and against spacetime is co-constituted. Learning, research and being can only make the machine falteringly work over the ruins.

In the faltering machine, then it is significant to attend to the patterns which show that the world is not all and only fluid and becoming, but that its material and immaterial liberations occur in its pauses and places of emptiness.

And...cabinet of curiosities: Wonder, scale, loss, vertigo, research

A kind of voluptuous combination of two different intensities to create a third.

(Wyatt, Gale, Gannon, & Davies, 2010, p. 738)

Operating by seduction rather than argument, it invites them in to handle the ‘exhibits’ rather than just to look at them—to forge their own connections.

(Maclure, 2006, p. 738)

From then on, desire will function in two coexisting states: on the one hand, it will be caught up in this or that segment, this or that office, this or that machine or state of machine...On the other hand and at the same time, it will take flight on the whole line, carried away by a freed expression, carrying away deformed contents, reaching up to the unlimited realm of the field of immanence or of justice, finding a way out, precisely a way out, in the discovery that machines are only the concretions of historically determined desire and that desire doesn’t cease to undo them

(Deleuze & Guattari, 1986, p. 60)

The cabinets’... contents were concealed in nested drawers, shelves, niches and boxes, behind internal doors, frames and partitions. These contents often included devices that distorted or played with reality: lenses, mirrors, optical games, paintings and clockwork automata. Thus the cabinets played with representation and reality—nesting one representation within another, producing doubles and deferral, putting reality into suspension.

(Maclure, 2006, p. 737)
In the text fragments above emerge further iterations of these patterns of stalling or suspended spacetime. In a universe of immanence, stalling and suspension can enable tiny and temporary escape from our-selves, our nostalgia and our self-revolving perspective, in which gap wonder in the world is allowed to flourish. MacLure’s (2006) cabinet of curiosities spacetime is manifest out of desire for that which is both material, and is also not yet. The cabinets were popular on a historical cusp of powerful material/immaterial forces in which wonder took place as a liminal moment between ignorance and enlightenment: ‘informed both by the waning Gothic world of miracles, marvels and church relics, and by the accelerating growth of humanistic science, stirred by encounters with the New World’ (MacLure, 2006, p. 737). The cabinet is therefore also constructed of the materials of nostalgia and tinged with loss, but simultaneously offers an escape, a leap into the world, into marvel and awe.

MacLure (2006) describes the cabinet of curiosities as containing nested or concealed drawers in which strange objects are kept, which play with representation and reality. The cabinet and its objects enact the spatial and object disconcertions of the baroque, in miniature, through optical games, mirrors, lenses, hybrids, automatas, illusory paintings. While vertiginous, these objects are also seductive. They lure the viewer in, to handle and interact, in a pattern like that in Deleuze and Guattari’s (1986) machine, in which desire is manifest in the lure to be part of the machine in operation. The cabinet contains material objects, which are already something, connected to each other and to other particular objects and assemblages, but they are also suggestive of something other, something in potential, which is unnameable.

...on the one hand, it will be caught up in this or that ...machine or state of machine; it will be attached to this or that form of content...On the other hand and at the same time, it will take flight on the whole line, carried away by a freed expression, carrying away deformed contents

(Deleuze & Guattari, 1986, p. 60)
The cabinet of curiosities works within and against banality. It attends to the banal and sees it as mysterious.

The potential of re-imagining the banal extends to our human image. I imagine these cabinets containing secret sly mirrors, in which we can catch a glimpse of what lives behind the shiny plane of the mirror and looks back with casual vigilance when we come upon it unrecognising, by surprise. Our mirror-self is like a creature from another world, letting us get away with nothing, and letting on nothing. I also imagine them containing, as well as the tricksy mechanised constructions of human imagination, odd withered objects of natural/unnatural science under bell jars; delicate two-spined fossils and dark humanoid digits. On discovering and handling these, we are temporarily distanced from ourselves and our knowledge of the universe, and are instead gripped by curiosity and rapt attention which is focused at once on the particulars of the material object and on its unknowable implications in the world. The ontological problem of at once belonging to a set (humanity) while identifying it and discussing it (Currie, 2011) is temporarily subverted.

Defamiliarised objects confuse binaries such as depth and surface, inner and outer, truth and deception. Kosofsky Sedgwick (1986) analyses this defamiliarisation in relation to the fundamental aims and effects of gothic literature. By one interpretation gothic explores inner depth, inner spaces, inner conflicts. This is based on the psychological model of the self where our outer surface is viewed as superficial, ostensibly rational. The outer self conceals and represses our primal and sexual self, which is irrational. The interpretation implies that what is surface is deception and what is underneath is truth. This model would suggest that *Metamorphosis* (Kafka, 1916/1972) is a metaphorical depiction of some deep, concealed, irrational, yet authentic inner conflict. But the postmodern gothic can problematise binaries such as depth and surface, inner and outer, truth and deception. Reason and repression are not seen on the surface and irrational and the sexual are not found in the depths. Instead, surfaces mechanise possibilities. The cabinet of curiosities and its gothic objects produce ‘*doubles and deferral, putting reality into suspension*’ (MacLure, 2006, p. 737). Universes are nested
inside each other, concealed behind illusory surfaces, showing, not truths, but possibilities of themselves in flashes or through tiny pinholes in the fabric of materials or texts or our understanding.

This threshold form of attention which spans the particular, material and determinate and also the possible, the abstract and ramifications is enabled by use of the minor scale. As I have said, in the baroque world opening avenues for wonder is also dependent on disconcerting relationships involving scale and points of view. The minor scale, in the writing machine and in the cabinet of curiosities, is a scale of creative significance, paradoxically intensifying the multi-sensory wondering capacity of interaction with objects and the world. Major literature, like the supposedly determinate world of individual objects, has an established content and uses appropriate form to express that content. But a minor literature, which is revolutionary, begins by expressing itself and doesn’t conceptualize until afterward (Deleuze & Guattari, 1986, p. 28).

The cabinet of curiosities utilises the miniature scale in its project to enable new relationships in the world. Binaries between corporeal and abstract, between the general and the specific, between the small enough to be held and felt and the large, infinitely complex, and ungraspable are set aside. In MacLure’s (2006) research problematizing competing emotions, beliefs and practices to do with touch in schools and child care settings, small bits of text, effect...
and emotion, words, touch, theories, conversations, blame, sensory experience, and history are grouped in miniature assemblages. From these ‘nested drawers’ (MacLure, 2006, p. 737) emerge a Gothic child, a new intensity and a new, nested text. As MacLure says, phenomena are already present in the small scale and the particular. The Gothic child-text is small, material and particular enough to be handled while simultaneously wondering about the inappropriateness of handling. And in these tiny attentions to particulars it reaches toward wonder about the complexities and particulars of the issues in larger scale times and spaces. It enables questions about how scale is made and is judged, about what is of large significance and worthy of attention, and what is small, and about the possibilities enabled in reversing or dissolving these binaries.

I try to draw on some of these potentials in the small text fragments I use in this project. Attentions to and re-arrangements of tiny particulars in text, phenomena, affect, effect, assisted by suspension of the need to discover an argument or a truth, enable a re-arrangement of relationship which lets wonder in. In this apparatus I draw on the arrangements of small textual particulars to help assist me in many situations; for starting thoughts and chapters, for making accumulative associations and mental imaging, for breaking up these associations when they emerge as too banal, for when I stall or have nothing to say, for resurrecting my enthusiasm. This method provides the feeling of engaging in creative entanglements, of being one with the machine. The minor scale enables a more reciprocal and embodied engagement with spacetime and objects. The method enables text-objects to assert themselves and is the more tangibly seductive for it.

The cabinet of curiosities constitutes the world itself as instigative. Spacetime throngs, crowds and jostles the onlooker and it watches back with sharp-eyed attention. Spacetime provokes wonder, which is uplifting but also fraught with inexplicable significance, as in dreams. These are the conditions which let in the manifestation of wonder as a simultaneously material and immaterial phenomenon. This is a ‘kind of voluptuous combination of two different intensities to create a third’ (Wyatt et al., 2010, p. 738): a sensual, imaginative,
relationship between the world and its contents, created by dwelling in the simultaneously determinate and indeterminate. The cabinet of curiosities then, might also be an image of the universe in which bodies emerge as ‘relatively stable points’ out of ‘flows or connections’ (Colebrook, 2006, p. 129) of wonder.

The constitution of research as cabinet of curiosities is also material and alluring but somehow ungraspable. Research is a process of wonder, to attend to phenomena which, on close inspection, are always revealed as strange, deformed and seductive, rather than unambiguous. Research in the cabinet enables new ‘intensities’ (Wyatt et al., 2010, p. 738), and constitutions in the world, by their affordance of simultaneous attention to that which is, and that which is sensed or glimpsed in potential but not manifest. The form of attention this demands of me requires ‘handling’, a material/immaterial relationship, looking sidewise at phenomena, opening to their looking back at me, rearranging, adding to, the suspension of judgement, and the willingness to see and pursue the absurd, ‘frivolous’ (MacLure, 2006, p. 732), or the gothic. These open my attention to further patterns suggestive of methods for dwelling in wonder, dwelling ‘more resolutely in the impossible moment of irresolution’ (MacLure, 2006, p. 731) between materiality and immateriality, which I attempt to explore in the patterns of the following chapter.
And... dwelling ‘more resolutely in the impossible moment of irresolution’: copulation, vampirism, junkies

There is a vampirism in the letters, a vampirism that is specifically epistolary... Kafka-Dracula has his line of escape in his room, in his bed, and his faraway force comes from that which the letters will bring him. .....The letters must bring him blood, and the blood will give him the force to create. He is not looking for a feminine inspiration or for a maternal protection but for a physical force that will enable him to write.

(Deleuze & Guattari, 1986, pp. 29, 30)

What got me by during that period was conceiving of the history of philosophy as a kind of ass-fuck, or, what amounts to the same thing, an immaculate conception. I imagined myself approaching an author from behind and giving him a child that would indeed be his but would nonetheless be monstrous.

(Deleuze & Guattari, 1987, p. ix)

If we remain immune to each other, closed to each other, too much consumed by the other series we are caught up in, there can be no fifth line.

(Wyatt et al., 2010, p. 732)

The cabinets’ contents were concealed in nested drawers, shelves, niches and boxes, behind internal doors, frames and partitions.

(MacLure, 2006, p. 737)

The Word is divided into units which be all in one piece and should so be taken, but the pieces can be had in any order being tied up back and forth, in and out fore and aft like an innaresting sex arrangement.

(Burroughs, 1959, pp. 180, 181)
Hyper-corporeal and trans-corporeal materiality are a creative force in the faltering machine. Text, research and life are not just entangled, but are in carnal, lascivious, vampiric relationships in a pattern manifest especially in the texts of Deleuze and Guattari, Kafka, and Burroughs. As discussed in the previous chapter, embodied heteroglossia in *Naked Lunch* co-constitutes an ‘innaresting sex-arrangement’ (Burroughs, 1959, pp. 180, 181) and any number of other and more explicit, bizarre and sometimes sadistic displays involving copulating reader, writer, text, voices and reality. Deleuze intensifies this lubricious pattern in his constitution of ‘the history of philosophy as a kind of ass-fuck,’ (Deleuze & Guattari, 1987, p. ix) producing monstrous children; philosophical creations of the human but which exceed the horizons of the human.

> Although my language suggests a reification of the writing, it is not that. It is a deep contrast to this. In these moments of writing energy it is an embodiment, I feel suffused with my actions, the action of writing becomes me...

(Deleuze & Guattari, 1986, pp. 29, 30)

The faltering machine strives to exceed the boundaries of the human by dissolving the self into the flows of the machine. In the text patterns here this is a practice which revels in corporeality to the point at which the boundaries of the corporeal are broken down. Wyatt, Gale, Gannon and Davies (2010) feel ‘suffused’ (Wyatt et al., 2010, p. 731) with the writing, they cannot ‘remain immune to each other, closed to each other’, or ‘there can be no fifth line’ (Wyatt et al., 2010, p. 732). This intensifies the vampirism of Kafka’s letters which ‘must bring him blood’ which will ‘give him the force to create’ (Deleuze & Guattari, 1986, p. 30). Kafka’s machine embraces all of his life, experience and relationships and all of his forms of writing; letters, stories and novels. The letters, written to and about people, were also gears in the flow of story and novel creation. And these flows were not unidirectional, but parts of life and
writing were involved in ‘constant transversal communication, in one direction and another’ (Deleuze & Guattari, 1986, p. 40). In Kafka’s life and letters and in Wyatt, Gale, Gannon and Davies (2010) writing intensities draw from each other to create a further intensity; one which resists closure and containment. As in the vampire, this is degenerating infection/creative life-force, out of and creating human/monster creatures. Remaining immune to the other is a closed system, whereas opening the self to suffusion with the other, to penetration of the skin, to generative infection, liberates something beyond the determinate, material human boundaries.

In MacLure’s baroque and gothic cabinet of curiosities there is something of the voyeuristic, grotesque and carnivalesque which also allows a ready relationship with Burroughs’ (1959), especially the junkie William Lee. Lee also constitutes and yet escapes the possibility of the closed system which is bound up in excessive, static materiality. His extreme corporeality enables creative agency; he is visceral and disgusting, he breaks apart comfortable notions of the world and the body as ordered, safe, clean and controllable.

In the previous chapter I stated that Burroughs junkie’s (1959) hyper-corporeal and trans-corporeal language escapes narcissism, which is energy only directed toward feeling in the self; a closed system. Read through the patterns of MacLure’s baroque (2006) and this chapter, narcissism might be understood as the objectification of personal feeling. The treatment of authentic feeling as a complete object without space for relationship results in a failure to liberate new contents. The junkie experience of the grotesque city and his internal bodily state are trans-corporeal, they flow into one another, without boundaries. The narrative uses extreme exploitation of hyper-corporeal and trans-corporeal language to enable it...
rhizomatic and mutating relationships with spacetime objects and the reader. Narcissism is escaped through trans-corporeal wonder which enables something other than the objectification of personal feeling.

The junkie also works in the aims of MacLure (2006) to mobilise resistance to dominant ideologies. As I have said, the language of Burroughs is verbose, obscene, aggressive, and vernacular; that of the classless and the dispossessed (McHale, 2004), enabling possibilities of ideological alternatives and contrasts, for example, with relevance to capitalist society. William Lee is also an ‘unreliable narrator’. This is a convention in fiction which exploits doubt about the honestly or sanity of the narrator and his or her version of events, to question honesty, sanity, truth itself, events, history or ontology. Unreliability can also be constituted in parody. Burroughs’, like Kafka, employs a kind of adolescent voice which is prone to swings of mood, is ironic, sarcastic, self-aggrandising, arrogant, self-deprecating, aggressive, whining, obscene, and lyrical (Dillard, 1982). Perspectives are created and simultaneously denied or ridiculed. This creates an ironic space in which we must work a little harder at making inferences, at spotting intertextualities, in order that we create for ourselves a narrative in the dissonance. The language brings a field of ideological contention into being by confrontation and sensation in both senses of the word.

As Le Guin (1979) says, in fantasy those who represent the frightening other due to their close connection to darkness and to fantastic perspectives include children and the schizophrenic or mentally unstable. The junkie might be added to this list. The de-territorialisation of the junkie in identity, place and mind provides him a heightened state of insight and precognition. It also provides the alienation which comes of his ability to see through the spectacle of consensus reality. This is an epistemology of otherness, where knowing is dependent on distance and estrangement is a gift and a loss.

The junkie then, as well as an image of limited human agency in the rhizome city, is also a baroque image of humanity and a method to ‘dwell more resolutely in the impossible moment of irresolution’ (MacLure, 2006, p. 731).
The junkie resists dominant narratives in insistent, obscene verbosity constituting his non-consensus life. He mobilises proliferating spacetime and material/immaterial possibilities by dwelling ‘more resolutely in the impossible moment of (material/immaterial) irresolution’ (MacLure, 2006, p. 731). He is inseparable from the flow of his senses, his hallucinations, the drugs, and the city. He exists on a baroque threshold between the self-obsessed and materially determined, and the liberated possibilities of the human. His unreliability assists in these constructions as it co-constitutes a distanced and absurd, parodic, ironic, sidewise perspectives of reality.

The junkie as baroque human enables a highly creative trans-corporeality. It escapes the closed system of the modern fetishisation of bodies as objects, which is manifest for example in popular TV and cyberspace fascinations with the material and corporeal in food, cosmetic surgery, weight-loss, murders, forensic murder investigations, housing renovations, and in which wonder and recognition of the mysterious are not especially well-tended.

And... dwelling ‘more resolutely in the impossible moment of irresolution’:
torture machine

But how quiet he grows at just about the sixth hour! Enlightenment comes to the most dull-witted. It begins around the eyes. From there it radiates. A moment that might tempt one to get under the Harrow with him. Nothing more happens after that, the man only begins to understand the inscription, he purses his mouth as if he were listening. You have seen how difficult it is to decipher the texts with one’s eyes, but our man deciphers it with his wounds.

(Kafka, 1919/1961, p. 180)

Breaking the boundaries of determinate bodies and their materiality is also manifest in Kafka’s description of the Harrow in The Penal Colony (1919/1961, p. 180), and Dick’s description of silence (1968/2007, p. 447). Around the sixth hour of torture the man in the Harrow becomes silent and he listens. He does not learn by reading or by tracing words as they track across his body, but he listens materially: to the corporeal experience of the inscription. Physicality
taken beyond the limits of endurance enables the boundaries of the body to break down and become one with the machine, and in this place of proximity, knowledge can be heard. These intensify this junkie pattern of creative possibility enabled by dwelling ‘more resolutely in the impossible moment of (material/immaterial) irresolution’ (MacLure, 2006, p. 731).

In the previous chapter, I called the method used by Burroughs and Dick synaesthesia, the confusion or crossing of boundaries of the senses. Stimuli cross boundaries and are perceived in unusual forms. Silence is felt, pain is heard. This resists the closure of habitual separation of sensory experiences and liberates new knowledge. In the patterns of this chapter, this phenomenon is also illuminated as confusion of subject and object. The onlooker does not receive mixed-up sensory stimuli from the passive object. The silent room, the torture machine, the world become wilful and forthright (MacLure, 2006), making themselves known in forms on their own terms. The roles of the world as object and the onlooker as the one who acts and experiences, are broken down.

In the writing machine of Kafka and Burroughs, dissolution of self into the machine means humanity takes on the qualities and voice of the machine. The atmosphere in form and content that pervaded Kafka’s stories was cold, impassive and constructed with a kind of impervious logic (Bogue, 2003). Like Burroughs, Kafka’s characters and writing implied the strict role of report/record without interpretation.

Silence. It flashed from the woodwork and the walls; it smote him with an awful total power, as if generated by a vast mill. It rose from the floor, up out of the tattered grey wall-to-wall carpeting. It unleashed itself...

(Dick, 1968/2007, p. 447)

*If, without knowing his own voice he should not find any public, but speaks solely for some record kept by no one, then I suppose we have to admit that he is a true manufacturer of the standardised prose: an autonomous sound in a great empty hall. It is all rather frightening, as in a Kafka novel, and it ought to be: we have been talking about the edge of reason.*

(Mills, 1973, p. 243)
In social science research, the machine voice is more likely to be associated with positivist writing than rhizomatic writing. In 1973, Mills made a direct comparison between the objective voice in research and Kafka's voice, helping to co-constitute the positivist writing chronotope as a ‘great empty hall’ (p.243) in which disembodied authorities speak.

But in positivism, the objective voice/writer is positioned outside of and distanced from the research and its subject. In these entangled writing machine patterns, the researcher-as-part-of-the-machine is not neutral due to distance, he is neutral due to his dissolution into the machine. This is constituted by a technique of defamiliarisation, which invokes emotional distance simultaneous with entanglement in the narrative and spacetime. In Metamorphosis (Kafka, 1916/1972) Gregor’s transformation into an Ungeziefer (unclean insect or vermin) is reported in the most unfantastic tone of banality. His family, while disturbed, experience this as a family crisis within the realms of worldly events. In The Penal Settlement (Kafka, 1919/1961) the torture machine attendant is enthusiastic about the effectiveness of the machine and impossibly blasé about the torture itself. The failure of the characters to be amazed or duly horrified intensifies disorientation in the reader, and heightens the confrontation between real and unreal.

*I simply report. Even to you esteemed gentlemen of the Academy, I have only made a report.*

(Kafka, 1917/2013, p. 25)
Rather than create absence of feeling, the defamiliarised machine voice heightens anxiety, and mobilises the sense of immanence and wonder, by constituting something which is outside of consensus reality and treating it as ordinary. The machine voice is spacetime speaking back, speaking its own ambiguousness and uninterpretable nature. This opens writing and spacetime to something which is outside of fixed, identity driven and category driven lines. Rather than the artifice of objectivity, Le Guin (1979) here suggests that this kind of constitution of machinic distance from the supposedly shared and subjective view of reality, is a powerful vision and a revelation.

For Deleuze and Guattari, the machine system’s closure is both to be watched against and inevitable. This occurs by the ‘diabolical innocence’ (Deleuze & Guattari, 1986, p. 33) of the full commitment to the particular and determinate, which means the failure to continue to re-invent. The dangers of the closed system are set in motion when the inscription/torture machine begins to.

*If I read a novel, I know what I am going to experience is reality, as expressed and transfigured through art...The shared world, the scene of our mortality.*

*But reading science-fiction or fantasy, I know that I am going to meet a personal variation on reality; a scene less real than the world around us, a partial view of reality.*

*But I know also that by that partiality, that independence, that distancing from the shared experience, it will be new: a revelation. It will be a vision, a more or less powerful or haunting dream. A view in, not out.*

(Le Guin, 1979, pp. 22, 23)

*The real panic is that the writing machine will turn against the mechanic. Look at the Penal Colony. The danger of the diabolical pact, of diabolical innocence, is not guilt but the trap, the impasse within the rhizome, the closing of all escape, the burrow that is blocked everywhere. Fear. The devil himself is caught in the trap. One allows oneself to be re-Oedipalized not by guilt but by fatigue, by a lack of invention, by the imprudence of what one has started, by the photo, by the police—diabolical powers from faraway.*

(Deleuze & Guattari, 1986, p. 33)
malfuction and the supervising officer voluntarily places himself inside it. In his full commitment to the machine he becomes a part of this mal/function (Kafka, 1919/1961).

_It had been clear enough previously that he understood the machine well, but now it was almost staggering to see how he managed it and how it obeyed him...The felt gag came to meet his mouth, one could see that the officer was really reluctant to take it, but he shrank from it only a moment._

(Kafka, 1919/1961, p. 194)

In his full commitment to machine he ceases to dwell ‘resolutely in the impossible moment of irresolution’ (MacLure, 2006, p. 731) and determines and fixes his own role and end as attendant/victim. The machine is both trap and diabolical transformation; which does not matter, as he is part of the machine and the machine is impervious, it does not differentiate between effects, it only produces.

The torture machine as an image of the research apparatus breaks down the boundaries of materiality and immateriality and dissolves the roles of the world as object and the researchers as the one who acts and experiences. It mobilises wonder by its machinic voice used to relate unspeakable events. It also constitutes a warning against complacency with method. The times when I use textual floes with confidence, when the writing flows smoothly and when I feel I know what to do if the machine falters, are also the times the machine mobilises wariness. Keeping the flows moving is blood-letting, and to do this with confidence is objectification and stagnation of the machine or the method. Every creative avenue is also a trap of habit and of degeneration. The corpse of the officer ends up with his eyes open ‘with the same expression as in life; ‘calm and convinced,’ with a great iron spike through his head (Kafka, 1919/1961, p. 197).
And...dwelling ‘more resolutely...’: researcher-machine

A writer isn’t a writer-man; he is a machine-man, and an experimental man.

(Deleuze & Guattari, 1986, pp. 6,7)

The study of thinking machines can tell us more about the brain than we can learn by introspective methods. Western man is externalizing himself in the form of gadgets.

(Burroughs, 1959, p. 33)

If I am not the typist, I am at least the paper that the keys strike. If I am no longer the machine’s mechanic, I am least the living material with which it deals.

Maybe this is a much more essential place, one that is closer to the gears than is the mechanic.

(Deleuze & Guattari, 1986, p. 56)

I am a recording instrument... I do not presume to impose “story” “plot” “continuity”... Insofar as I succeed in Direct recording of certain areas of psychic process I may have limited function... I am not an entertainer.

(Burroughs, 1959, p. 174)

The patterns of this chapter cast us as indistinguishable from our technologies, our gadgets, our instruments of torture, our imagination. Humans are externalized ‘in the form of gadgets’, (Burroughs, 1959, p. 33) the writer is a
‘machine-man’, (Deleuze & Guattari, 1986, p. 7), she is ‘the paper that the keys strike’ (Deleuze & Guattari, 1986, p. 56), the keyboard, the screen, ‘the living material’ (Deleuze & Guattari, 1986, p. 56) of the machine itself.

Haraway’s (1999) cyborg is an image of these blurred boundaries in this digital, connective era. We are already all cyborgs, embodying the human capacity to transform and transcend boundaries with imaginative and material resources. Cyborgs embody irony and they do not demonise technology or materialism (Gough, 2003). And this dissolution, this ironic, non-judgemental, cyborg space is a ‘more essential place’ (Deleuze & Guattari, 1986, p. 56).

In the cyberspace era, the possibilities of the human-machine and the implications for spacetime proliferate exponentially. The technology of modernity was analogue, represented through forms of direct calibration, plotting and measurement; hence determinate forms were theorised to exist in determinate space and time, and determinate lives and narratives could be constructed. But in this era, digital, virtual and computational machines enable an excess of information and assimilate torrents of data in the moment rather than in a determinate space. It is impossible to definitively establish anything (Smethurst, 2000), to define a moment in time simultaneously with a position in space. There can be no plotting or development of a life, and there can be no plotting or measurement of singular, linear spacetime. There is only proliferation: of information, phenomena, space, time, and data which cannot be fixed and represented or ultimately separated.

The researcher-machine pattern in the contemporary world enables attention to the material/immaterial technological apparatuses of research. An indeterminate yet immaterial aspect of this PhD experimental apparatus which is of note has been the wonder enabled by material books. In the first year of my PhD I moved countries bringing with me two suitcases and 18 boxes of books. I stacked these up the walls, next to the bed and on the desk and gazed at, remembered, re-arranged, flicked through, returned to, added to, and lived with the books, and made the machine work. In my practice, the materiality of
books in the apparatus allowed space in the work routine for material/immaterial wonder (MacLure, 2006), and the pleasure of the text (Barthes, 1974) in handling and reading and listening aside. A journal note from very early in the thesis process demonstrates attention to the materiality of books in contributing to the apparatus:

At the moment I have by the bed 2 books on Shinto, a novel by Murakami (After dark – not as good as the Windup Bird or Hardboiled Wonderland), a memoir by Murakami (What I talk about when I talk about running). I have just put on the reachable stack Keats and Negative capability, Borderliners by Peter Hoeg, The Wind-Up Bird, Lyle Watson’s Heaven’s Breath – A Social History of the Wind.

In view of MacLure’s (2006) baroque practice, it is fruitful to consider that the book is an equally entangled and instigative entity in the research relationship. My reliance on books in collections, stacks and shelves is resonant with Eco’s description of the library in The Name of the Rose (1984) to the right. The speaking and murmuring of books amongst themselves is an aspect my own practice is dependent on. These observations and the patterns of this chapter lead to the questions: What is the nature or experience of books in relationship with each other? What is their agency? How is the book, me? What can happen in the space between in the book-book relationship and in the book-me relationship?

Later as I switched from material texts to digital texts, the materiality of the apparatus became eyes, fingers, screen, elbows, coffee and cup, small room, clicking fingernails, keyboard, mouse, and typing, typing, typing. And other

Until then I had thought each book spoke of the things, human or divine, that lie outside books. Now I realized that not infrequently books speak of books: it is as if they spoke among themselves. In the light of this reflection, the library seemed all the more disturbing to me.

It was then the place of a long, centuries-old murmuring, an imperceptible dialogue between one parchment and another, a living thing...

(Eco, 1984, p. 286)
things which are difficult to classify as material or immaterial: Kindle software, Endnote, library databases, highlight, copy, paste, cut, paste, and delete.

This change in practice has propelled me more forcefully into my diffractive method. I was previously intent on writing comprehensively, researching with thoroughness, crafting and carefully delineating an argument. I experienced this sensually; as a combing and re-combining of the text, refining it and working on tangles and snarls until they were smooth. I experienced writing as this sensory action of combing smooth before becoming aware of the idea of smooth space in the Deleuzian sense (Deleuze & Guattari, 1987). I had previously applied smoothing to the line of thought, which was an ordering and a hierarchical arrangement of the elements of the argument.

But the use of more virtual data meant dealing with a fluid and exponentially growing volume of data which provoked vertiginous uncertainty. It meant that I could not use the methods of the careful argument anymore without feeling too ponderous and overwhelmed. I have increasingly turned to the processes of diffraction; of floating glimmering fragments of text around on the page in boxes, to see them in relations together and nested within my own text. This looser method accelerates the research, makes it more intensely proliferating, but is also much more disconcerting and untidy. The tangles and snarls are too numerous and too impossible and they multiply, so out of necessity, they become instead sites of attention without disentanglement, places where I attend to particulars and peculiarities. Textual tangles are places where my smooth movement is halted and where something troubling is stubbornly sedimented.

This difference in research practice is also a different relationship with wonder, as the relationship with/between the material and the particular has changed. On reflection I acknowledge that I have also always experienced books as a retreat, a place of protection and solace. This sense is intensified as I recall the feeling of bodily rest I have felt since childhood on entering a library. Books are a kind of church. There is spirituality in them and in the practice of communing with them. Research and ideas have this same power
of solace and retreat. But in material books, as in a church, a part of this spirituality is in the sensual experience; the physical communion is necessary for the mysterious transubstantiation. Digital texts feel more like miniscule fluid drops in an infinite unknowable flow, and manipulating them is the work of an instant. They are not objects of colour, size, weight, to be held, opened, exposed, riffled through, marked, and consequently somehow they feel less mysterious, less objects of wonder and possibility. Something of the sensory and the particular is lost or is not brought to attention and the wondering experience is less fully charged with affect.

Stapleton (2015) argues that in fact we do need to also recognise the sacredness of the digital. Our non-recognition of this is due to the fact that we are encouraged to think of digital objects and texts as both immortal and immaterial. This notion comes in part from our Newtonian ideas of physics – that matter must be inert rather than active. It also comes from the experience we have as individuals of the difficulty of deliberately removing digital data – we have little control over it once we have released it into the world. But the digital realm does not exist in isolation from its material infrastructure of servers, wires, plastic, metals. And data do have a mass, however small. And digital objects such as texts do degrade, and can disappear entirely. Thus we have some erroneous ideas about the mortality of the digital and our intra-actions with it.

Stapleton (2015) argues that our sense of digital objects as immortal, permanent and virtual rather than material removes our sense of their vulnerability and sacredness. For example, digital art is not cared for and protected in the way that material art is. It is important to remember that the digital realm is not separate from the material realm, and thus shares a similar capacity to enable wonder about material/immaterial immanence.

Heim (2002) reminds me that in the cyberspace apparatus, there must also exist places of stalling, suspension and silence alongside the flows of information and proliferating data. As in texts such as Wyatt, Gale, Gannon and Davies’ (2010), these stalling and suspended spaces enable respect for the
relationships and materials of cyberspace. The cyberspace machine has a fragility that we do not often contemplate. Its creative potential can drown in clutter and in disrespect. The Internet, for example, enables intimacy at a distance, which reinforces isolation as well as connects. This enables the capacity to detach authorial ownership from text and may disable the sense of a need for respect in interactions. Respect for the sacredness of cyberspace acknowledges its fragility and that it too is dependent on creating space for creative human and non-human relationship (Heim, 2002).

Respect for the material/immaterial possibilities of wonder with/in cyberspace leads to questions about the agency of computers. My perspective has been that my laptop is inanimate without me to control it. But the discussion above and MacLure’s reconfiguring of Latour’s recalcitrance of the object (MacLure, 2006) lead me to re-consider my respect for the experience and agency of the laptop. I note that it asserts itself in enacting its own spaces of stalling. In my expectation of instantaneous obedience, I have experienced frustration in the times the computer whirrs for long seconds as it struggles to process new Endnote entries, or the times it whips away my carefully placed text boxes to the page previous, or shoves them over the top of other text boxes. I have interpreted this as its dullness. But what differences are these faltering spaces making to the research and its material effects? What if I were to attend to these pauses and moves as creatively generative spaces and disorientations in the relationship between myself and the laptop?

And while the laptop seems more recalcitrant than the book – more unsafe, more unpredictable in its agency – and books seem happier to help, I might rethink this. Are books so compliant? This leads me to a different set of questions: What are the implications of not respecting the aliveness or the sacredness, of the materials I interact with? What decision-making properties do they have and enact in shaping the research? What generosity are they demonstrating which should be acknowledged? What sense of humour? The laptop without me seems to lack possibility, but what possibilities do I also lack without the laptop? And what are the still unknown possibilities of the
coming together of myself and my laptop, in mysterious entanglement with other material/immaterialities?

And...marks on bodies: Spacetime of agonistic force, rupture, encounter, torture, proliferation, critical mass

What got me by during that period was conceiving of the history of philosophy as a kind of ass-fuck, or, what amounts to the same thing, an immaculate conception. I imagined myself approaching an author from behind and giving him a child that would indeed be his but would nonetheless be monstrous.

(Deleuze & Guattari, 1987, p. ix)

If a weaker baboon be attacked by a stronger baboon the weaker baboon will either (a) present his hrump fanny I believe is the word, gentlemen, heh heh for passive intercourse or (b) if he is a different type baboon more extrovert and well-adjusted, lead an attack on an even weaker baboon if he can find one.

(Burroughs, 1959, p. 77)

Gentle reader, the Word will leap on you with leopard man iron claws, it will cut off fingers and toes like an opportunist land crab, it will hang you and catch your jissom like a scrutable dog, it will coil round your thighs like a bushmaster and inject a shot glass of rancid ectoplasm.

(Burroughs, 1959, p. 181)

Jones (1994) describes postmodernism precisely as an ‘antagonism’, produced when ‘the presence of the ‘Other’ disrupts a discourse so thoroughly as to prevent it from being itself’ (p. 212). Perceived as an external threat to a discipline’s self-identity, yet born from its inner logics, postmodern or deconstructive work is always liable to oscillate between being spat out and swallowed up by modernity’s deep affinity for closure.

(MacLure, 2006, p. 731)
One of the strong patterns in the faltering machine chronotope as it emerges in this apparatus is that its dynamism is characterised agonistic force and resistance. The faltering city mobilises and functions through motion and flow and so questions of the control of motion and flow are of significance. Deleuze and Guattari (1987) argue that power is based in the capture of flows of all kinds: population, commodities of commerce, money or capital. Therefore resistance to any form of containment, including the ideological, is an ethically evaluative quality. In the current education landscape for example, it is important to interrupt ideology, to challenge and disconcert rather than to confirm and recognise territory and categories, as in current dominant education narratives difference, complexity, ambiguity and wonder are negated (MacLure, 2006). Researchers and students are neither well-trained nor encouraged to be disorientated in the landscape.

In Deleuzian theory, new knowledge comes via an encounter (Deleuze, 1994), and an encounter embodies an energy of force and friction, ‘antagonism’ (MacLure, 2006, p. 731), or ‘rupture’ (Deleuze & Guattari, 1986, p. 28). In recognition, our understanding is re-confirmed; we find a representation of something which was already in place in our minds and in our culture. In an encounter, our typical ways of understanding the world are challenged, our eyes are opened to new thought. The encounter forces a rupture, a cut or a ‘crack’ (MacLure, 2006, p. 730) in our habitual modes of being.

Deleuze and Guattari state:

> The divisions of oppressor and oppressed, repressors and repressed, flow out of each state of the machine, and not vice versa. This is a secondary consequence.

(Deleuze & Guattari, 1986, p. 57)

This indicates that the determinate qualities of dominance, aggression, oppressor, oppressed, marginalised and so on are not fundamental to the machine but are only possible consequences. But the repetition of the notion that the energy of creative regeneration is perpetually dynamic in resistant, forceful, rupturing, antagonistic ways reinforces a pattern in which combative
competition is conceived as one of the most basic aspects of life. Deleuze and Guattari say: 'We invoke one dualism only in order to challenge another' (1987, p. 20). That is, this method of posing dualisms pitted against one another is merely to paradoxically foreground the invalidity of dualisms and for 'refuting the absurdity of people's obsessive pursuit for an ultimate/immobile Truth' (Yang, 2010, p. 846). There is value in this approach. The practices of knowledge-making involve articulating distinctions, and sometimes it is useful to see these as poles (Tuana, 2008). The argument that the constant reconfiguring of dualisms draws attention to the fact that the dualisms we rely on are not 'in nature', but are flexible, is valid. But my own particular experience of this as primary approach to knowledge is that it also constitutes the idea that while particular dualisms are not in nature, duality itself is inescapable in nature, or at least in our human understanding of it. And all that dual and polar relationships enable: resistance, antagonism, power struggles, are also then essential and fundamental in nature and in our understandings of it. This re-constitutes rather than escapes the pattern in which 'opposing ideas are presented in agonistic competition with one another' (Martin, 1991, p. 24). Creative life, research and writing must seek to antagonise (MacLure, 2006, p. 731), to 'rupture', (Deleuze & Guattari, 1986, p. 28) to 'ass-fuck' (Deleuze & Guattari, 1987, p. ix), to 'leap on you with leopard man iron claws... (to) inject a shot glass of rancid ectoplasm (Burroughs, 1959, p. 181).

The desire for power is in Deleuze Guattari's (1986) text, at one with the machine. The desire to make the gears go into operation, or to be the material of the machine is fundamental to the machine itself:

*Being an assemblage, desire is precisely one with the gears and the components of the machine, one with the power of the machine. And the desire that someone has for power is only his fascination for these gears, his desire to make certain of these gears go into operation, to be himself one of these gears or, for want of anything better, to be the material treated by these gears, a material that is a gear in its own way.*

(Deleuze & Guattari, 1986, p. 56)
Aside from the junkie, then a further image of humanity, of the researcher in the machine then, is then that of the ‘experimental man’ (Deleuze & Guattari, 1986, pp. 6,7); the bold experimenter, desiring the perpetuation of the machine in motion to see how much force, friction, antagonism it can proliferate in order to liberate. This constitution of an essential desire for enacting the perpetuation of the machine has resonance with the pattern of technocracy explored in the previous chapter. There, a pattern normalising dynamism, contingency, fragile bonds and short-term thinking emerged, in which the human desire for expansion and fascination with the possibilities of technology was supported. The juggernaut universe was a spacetime which enabled bold experiments in short term, task oriented goals such as torture, unfettered by ethical analysis.

As Barad (2007) says, our intra-actions contribute to the differential mattering of the world. This apparatus and these patterns are personal ones, but I can see some of their sedimentations also at work in the world, as powerful experimental, liberating, agonistic and also violent machines. These include the machines of war and science: torture machines, weapons machines, atomic machines, and a particular way of understanding physics.

*The Harrow was not writing, it was only jabbing, and the Bed was not turning the body over but only bring it up quivering against the needles. The explorer wanted to do something, if possible, to bring the whole machine to a standstill, for this was no exquisite torture such as the officer desired, this was plain murder.*

(Kafka, 1919/1961, p. 196)

While in general I avoid the use of torture – torture locates the opponent and mobilizes resistance – the threat of torture is useful to induce in the subject the appropriate feeling of helplessness and gratitude to the interrogator for withholding it.

(Burroughs, 1959, p. 33)

The torture machines of Kafka and Burroughs intensify the already existing patterns in Deleuze and Guattari’s writing, of machines of encounter, of force,
of agonism, of recording, of inscription, of dominance and submission, of use of the machine for pure effects and goal-oriented function, unhampered by entanglements involving complex ethics. While Kafka, Burroughs and Deleuze and Guattari enable the problematisation of technocracy and violence, they also amplify and consolidate the marks on bodies (Barad, 2007) made by machines which facilitate possibilities of violence. They make violence, and new forms of violence seem inevitable. Kafka’s punishment and execution machine in In the Penal Settlement (Kafka, 1919/1961), inscribes indecipherable script on men’s bodies until death, assembling and dissembling knowledge and enlightenment. Burroughs’ ‘switchboard’ (Burroughs, 1959, p. 33) is to be used with caution as it can enact a closed system which ‘locates the opponent’ determining and enabling resistant power flows. But used sporadically and as a threat it can mobilise flows of gratitude and compliance enabling dominance. In conjunction these patterns reinforce these possibilities in existence, not as unproblematised potentials, but as natural potentials in the rhizomatic existence.

The researcher as the bold liberating experimenter, proliferating force, also enables the notion that thinking and research are a kind of explosive chain reaction, a critical mass. As Barad says, critical mass is: ‘when a single neutron enters a sample of nuclear material which produces a branching chain reaction that explodes with ideas’ (Barad, in Dolphijn & van der Tuin, 2012, p. 49). Again, this has resonance with the pattern of rhizomatic spacetime in which the desire for bold experimentation, expansion and fascination with the possibilities of technology are supported. Barad comments that this image of thinking as critical mass is ‘chilling and ominous’ (Barad, in Dolphijn & van der Tuin, 2012, p. 49). This pattern in the chronotope assists to explain how, for example, humanity can be in the nonsensical possession of military technologies which we are afraid we might use. Atomic and nuclear weapons are technologies in the image of the rhizome. They assume massive, violent proliferation as an epitome of power. They work by fission: a mass of enriched plutonium or uranium set off into exponential chain reactions by massive compression (Gillis, 2012). The splitting of an atom, sets off the splitting of
many other atoms, setting off the splitting of multitudes more atoms. This is an achievement of thrillingly unprecedented power, enabling humanity the sense of entangling him/herself in the ultimate exploitation of this limitless, dynamic capacity in nature. Atomic fallout and nuclear waste in both social and chemical form have also turned out to be great examples of rhizomatic process: widespread, unpredictable and rippling infinitely through time. The belief that society and the universe are pure rhizomatic function assists in a pattern which disables a sense of ethical agency. This pattern helps us to constitute ourselves as subject to laws of proliferation and contingency existing outside, in nature (Bauman, 2001). It constitutes the inevitability of violence and the kinds of beliefs that leave only the option of operating in the image of the rhizome and perhaps feeling gratitude to the universe when torture and chaos do not break us down entirely.

Since different agential cuts materialize different phenomena – different marks on bodies – our intra-actions do not merely effect what we know and therefore demand an ethics of knowing; rather, our intra-actions contribute to the differential mattering of the world. Objectivity means being accountable for marks on bodies; that is, specific materializations in their differential mattering. We are responsible for the cuts we help enact not because we do the choosing..., but because we are an agential part of the material becoming of the universe.

(Barad, 2007, p. 178)
And...stalling ethics

So, on an immanent understanding, the connections of life produce a harmony of accords, some flows producing expansive connections that create further connections and further flows, and a harmony of discords, where certain connections produce little or no resonance.

(Colebrook, 2006, p. 129)

At times I wondered (and still do) whether or not this was an analysis meant for application. Would have been better to consider rhizoanalysis in the abstract only?

(Alverman, 2000, p. 125)


(MacLure, 2006, p. 738)

We believe only in a Kafka that is neither imaginary nor symbolic. We believe only in one or more Kafka machines that are neither structure nor phantasm. We believe only in a Kafka experimentation that is without interpretation or significance and rests only on tests of experience.

(Deleuze & Guattari, 1986, p. 6)

Alverman (2000) found much theoretical writing on rhizoanalysis in research but few examples of its application, and this, alongside her struggle to avoid interpretation, led her to wonder if it is ‘better to consider rhizoanalysis in the abstract only?’ (p.125). Alverman’s stalling seems to connect problems of disorientation in distinctions between theoretical and applied research, and in meaning making, and research ethics. This makes me think again about my
own repeated stalling and re-writing of similar ensnared issues in this chapter: abstraction, practice, immanence, transcendence, ethics and amorality.

Enactments of ethics are entangled in the specific apparatus for knowing, are already present in constitutions of theory and in the spacetime and materiality of the research (Barad, 2007). As Smith (2005) also argues of the Deleuzian machine, in the faltering machine chronotope the imperative to continuously seek beyond, toward liberation tends to unavoidably constitute a world in which the only truly relevant ethically evaluative principle is to examine that which either exhausts and degenerates existence or which transforms, increases the powers to live and opens up new possibilities. Deleuze and Guattari write that they believe only in ‘experimentation that is without interpretation’ (Deleuze & Guattari, 1986, p. 6) and only in ‘machines that are neither structure nor phantasm’, (Deleuze & Guattari, 1986, p. 6). In this immanent spacetime, ‘tests of experience’ (Deleuze & Guattari, 1986, p. 6) are evaluative. These tests of experience must primarily attest to the capacity of the research experience to realise the desire to make the machine function, or to be part of machine functioning. Aside from this fundamental desire for power, researchers bring their own desires and ethics to the machine. This might also, but would not necessarily, involve care, compassion, or shared accountability for the marks made or the co-constitutions of such difference and proliferation.

These ethical-ontological co-constitutions make me falter. As explored in the previous chapter and already mentioned again in this one, in the complex entanglements of this era, a chronotope of flows and fluidity of connection helps also to co-constitute fragile bonds, which enable detachment from phenomena, meaning, people and places. This pattern of detachment is

Neoliberalism tends on the whole to favour severing the economy from social realities and thereby constructing, in reality, an economic system conforming to its description in pure theory, that is a sort of logical machine that presents itself as a chain of constraints regulating economic agents.

(Bourdieu, 1998, para. 6)
intensified in Deleuze and Guattari’s illustrative examples such as the baby who cuts and transforms the flow by his functioning desire to suck and excrete (Deleuze & Guattari, 1986). ‘The syntheses are passive in that they are nonconscious and automatic, uncontrolled by any pre-existing order or directing intelligence…. A partial-object cuts a given flow, and then itself emits a flow (Bogue, 2003, pp. 67, 68). In this non-conscious functioning state, and if there can be ‘no determination of the next partial-object that cuts its flow’ (Bogue, 2003, p. 68), there can be no especial moral imperative bound up in the image of research for co-responsibility for the effects of the machine.

In the social sciences the integral nature of ‘ethics’ to every aspect of research is acknowledged. Any research which aims at pure experiment without interest in the morality of outcomes and effects is unacceptable. But, as Barad (2007) argues, our notion of ethics is still inadequate and this is partially because we do not attend closely enough to how ethics and the ontic are co-constructed in our images of research.

In the patterns of this chapter, the rhizomatic machine does not always, only, or necessarily co-constitute combative, forceful, antagonistic, resistant, competitive, impervious forms of spacetime. Wyatt, Gale, Gannon and Davies’ (2010) text draws on the rhizomatic method and co-constitute a dynamic spacetime which has ‘porosity’ (Youngblood Jackson & Mazzei, 2011, p. 123) and is receptive. An experimental rhizomatic, liberating spacetime need not privilege the dynamic and the proliferating over stalling, pause, silence, wonder and haecceity, as the patterns in this chapter attest. The rhizomatic machine also enables the capacity to ‘dwell more resolutely’ (MacLure, 2006, p. 731) in these unnameable, vertiginous, ontic relationships. But in order to dwell there we need to first learn to recognise this place, and all of the other patterns of spacetimes that the method enables. Rather than accepting the rhizome and becoming ‘such a part of it that (we) can no longer see it’ we need the ‘constant vigilance’ to ‘seek and learn to recognise who and what, in the
**Iterative patterns and further disturbances**

Again in this section I re-iterate some of the patterns of possibility emerging through this chapter, and sustain the diffractive method by attending to further disturbances in these patterns.

**Research as wonder in an instigative world**

The heroic path into terra authentica creates struggles to write the self and creates research as an ordeal to this end. The faltering machine creates a faltering, sidewise regard for writing, research and spacetime, and these throw back a sidewise regard. One of the exciting propositions of the faltering machine is that nature in the chronotope is not inanimate. This pattern is manifest throughout the texts used here, but is intensified especially in the patterns of the baroque (MacLure, 2006). The world itself is instigative and matter asserts itself in the processes of knowing. The world is then domestic, material and banal and yet is also full of wonder, enabled through suspending belief in the determinate and domestic boundaries of objects and phenomena, so that new relationship can emerge.
Research is then a cabinet of curiosities: Material and alluring but ungraspable, accessed by wonder, by attending to phenomena which are always strange, deformed and seductive, rather than unambiguous. The gratification of possession of knowledge and objects and their determination is postponed. Research writing enacts wondering relationships with the world, and draws attention to this strange indeterminacy of phenomena and to the entangled nature of the material and the immaterial, in writing and language and in the world. Research in the cabinet enables new ‘intensities’ (Wyatt et al., 2010, p. 738), and constitutions in the world, by their affordance of simultaneous attention to that which is, and that which is sensed or glimpsed in potential but not manifest. Because of this, the faltering machine is particularly useful for enacting resistant, alternative mechanisms of dominant positions and institutions, such as law and education systems.

The forms of attention this wondering research demands involve handling, a material/immaterial wondering relationship, looking sidewise at scale and phenomena, opening to their looking back, rearranging, adding to, the suspension of judgement, and the willingness to see and pursue the absurd or ‘frivolous’ (MacLure, 2006, p. 732).

These open attention to further patterns suggestive of methods for dwelling in wonder, dwelling ‘more resolutely in the impossible moment of irresolution’ (MacLure, 2006, p. 731) between materiality and immateriality and other forms of relations. This baroque method leads me to ask: What are the implications of respecting or not respecting the aliveness or the sacredness, of the materials I interact with? What agency do they enact in shaping the research? What fragility or generosity are they demonstrating which should be acknowledged?

I was put in hospital because a great gap opened in the ice floe between myself and the other people whom I watched, with their world, drifting away through a violet-coloured sea where hammerhead sharks in tropical ease swam side by side with the seals and the polar bears.

I was alone on the ice.

(Frame, 1961, pp. 3,4)
This spacetime is dynamic, but has porous qualities which intensify the possibilities of the interactions of the moment. Wonder is enabled in space, hesitation and faltering in the flows of becoming. Bodies emerge as ‘relatively stable points’ (Colebrook, 2006, p. 129) through new relationalities. So, as well as to proliferate and liberate, writing might be to invoke spacetimes of co-existence and interaction. Integral to this spacetime is tolerance, lack of judgement, and open listening to the other (Davies, 2013) and to the ‘gap’ (Frame, 1961, p. 3), the space itself, which might be the world’s potential; the input the world is giving/can give.

### Frivolous, degraded methods and dark arts

*We like to think we live in daylight, but half the world is always dark; and fantasy, like poetry, speaks the language of the night.*

(Le Guin, 1979, p. 11)

In my apparatus the cabinet of curiosities contains natural/unnatural objects such as dark, withered, humanoid digits and devices of fantasy such as the concealed mirror which reveals a glimpse of the other or alien within the self.

The widening of the embrace of research writing to involve both the ‘artistic’ and ‘supernatural’, is to me, sensible and necessary if we are talking about the artificiality of binaries such as rational and irrational, material and immaterial, natural and unnatural, and the rupture of forms and suspension of disbelief to enable new forms. The embrace of the artistic is less controversial, especially in poststructuralism, but the connotations of the ‘supernatural’ in research are bigger obstacles. In terms of dominant and even poststructural research practice and meaning systems, writing involving entanglements of the ‘supernatural’: the paranormal, psychic, magical, occult and even the intuition are spurned and dismissed. But an ‘*abject status as frivolous or degraded*’ (MacLure, 2006, p. 732), is argued by MacLure as a signifier of a generative means of baroque method. In working toward ‘*meeting the universe halfway*’ (Barad, 2007) I cannot understand an argument which suggests that so-called supernatural phenomena should not be attended to. The supernatural; that
which is beyond our understanding of that which we call nature, is the very stuff of the exploration of research and universe. ‘The supernatural’ is not scientific terminology, but it stands for a diverse range of subjective and binary exclusions in research apparatuses, which close down opportunities for attending to diffractions. The improprieties or the dark arts of research; the practices and experiences which people are fearful of discussing but which form part of research apparatuses are worthy of attention.

In fiction, irrational techniques are celebrated and ‘intuition’ is not a frivolous and degraded word. Science fiction author Philip K Dick is renowned for using the I Ching to assist in the plot development in one of his novels (Cover, 1974), and New Zealand author Eleanor Catton won a Man Booker prize for her novel *The Luminaries* (2013) in which she used astrology to shape characters, chronology and structure and plot:

I found a programme online that could track the movement of the planets through the constellations of the zodiac. I typed in the co-ordinates of the Hokitika gold fields, dialled the clock back to 1864, when gold was first discovered in the region, and began to watch the skies revolve.

Over the next four years (of gold-fields time), I tracked the movements of the seven bodies visible to the naked eye over Hokitika’s skies, wondering how I could turn the archetypes of the zodiac into human characters and a sequence of horoscopes into a story. Something caught my eye – a triple conjunction in Sagittarius, the house that Jung associated with the collective unconscious – and I knew I had a place to begin.

(Catton, 2014 para. 6)

Astrology, considered a superstitious nonsense by many readings: ‘Some reviewers have been exasperated: how could such hocus pocus provide the ground plan for a serious work of fiction?...Others were admiring but befuddled’ (Mullan, 2014 para. 3), is in another reading an exemplary tool of knowledge and research. Never claiming any causal relationships, astrology instead attends to complex intra-actions between complex and changing phenomena in all scales of spacetime. Emphasis is on the nature of the relations (aspect, groupings, speed, proximity, mass, direction, human and non-human phenomena, in conjunction with other aspects, groupings, speeds, proximities,
masses, directions and phenomena). Emergent, manifest and contingent events and entities are not resulting effects but are co-emerging. The point is not prediction but understanding the possibilities and potentialities co-emerging through relations.

Catton describes her use of these unusual methods in terms similar to Lyotard’s paralogy (1996): A form which shocks, which moves away from banality, but not so much as to be dismissed:

This is a baroque method (MacLure, 2006). It deploys the affective and aesthetic frisson of the defiant, frivolous and degraded status of method (such as the astrological approach), in connection with love of something known and familiar. This manifests a creative new intensity between banality and strangeness.

Too defiant, and the idea will be shrill; too imitative, and the idea will be safe. For me, the moment when these two charges first come together – when I connect, imaginatively, something that I love as a reader with something that I long for as a reader – is the moment the idea for a story is born.

(Catton, 2014 para. 1)

**Junkie-method, trans-corporeality, porosity, loss and death**

One of the patterns of the faltering machine is its carnality, lasciviousness and trans-corporeality. Burroughs’ junkie (Burroughs, 1959) is a baroque image of wondering, trans-corporeal humanity and a method to ‘dwell more resolutely in the impossible moment of irresolution’ (MacLure, 2006, p. 731). Objects and spacetime are transubstantiating; possessing awesome properties of something both material and possible. Sometimes then, research writing is ‘a kind of ass-fuck’, (Deleuze & Guattari, 1987, p. ix), or an opening of the self to suffusion with the other, to vampirism, to penetration of the skin, to generative infection, and this liberates something beyond the determinate, material human boundaries. The junkie embodies these in creatively generative forms.

The junkie resists dominant narratives in insistent, obscene verbosity constituting his non-consensus life. The junkie mobilises proliferating
spacetime possibilities in the flows of excessive and repulsive physical/sensory desires, of language, of drugs commerce and authoritarian control. He/she is one with his senses, one with the hallucinations, with the drugs, with the city, and with the flows. The junkie enables a corporeal revelry which escapes the closed system of the fetishisation of bodies as objects by its rhizomatic flows of language and new intensities of spacetime and materiality.

The excesses of Burroughs’ junkie might mean he also exceeds the criteria of a method of paralogy: a means to explore ideas and concepts to destabilise consensus, but not so shockingly that the destabilisation is ignored or repressed (Lyotard, 1996). Burroughs’ junkie voice may not have widespread appeal, but it does enable irony and rhizomatic possibility without the likelihood of accusations of sentimentality. The affective orientations in poststructural social science writing machines tend towards disorientation, the nostalgic and the melancholy, and some researchers (for example, Lather, 2007) have commented that the search for a voice which does not efface itself in artificial objectivity nor drown in melodrama or sentimentality is challenging. Burroughs’ junkie embodies a research voice which enables narrative which accommodates disorientation and loss, but without melodrama and sentimentality, by dealing in resistance, irony, parody, humour and contradiction.

McHale (2004) writes that the greatest irony, contradiction and source of loss in our lives in the postmodern era is the knowledge that there was once a time when we were not alive and there will come again a time when we are not alive. Postmodernist literature helps us to confront the ultimate and contradictory ontological frontier, which is death. At a deep level we cannot make sense of death as it is impossible for us to imagine our own nonexistence. The addict William Lee (Burroughs, 1959) looks askance at all ontological boundaries, including the binary of living and degenerating, of that which nourishes and that which destroys. The junkie’s unreliable and machinic, detached voice, co-constitutes a distance from ourselves as human, and creates absurd, parodic, ironic, sidewise perspectives of drug addiction and reality, enabling co-existence of life with death to be possible.
The chronotope contains a quality of porosity in its pauses and spaces, and as Tuana (2008) says, porosity in nature does not distinguish between toxic or nourishing relationships. It allows the world to flourish, enabling breathing and oxygen, but also harbours and nurses entanglements which are destructive, potentially at the same moment. A spacetime of both dynamism and porosity acknowledges that nothing is eternal, entanglements and connections generate life as well as death. For Deleuze and Guattari (1986) the writing machine closes its creative system in the full commitment to the particular and determinate, which means the failure to continue to re-invent. But I am not sure that this is the only reading I would give to the patterns of possibility in degenerations of the faltering machine. The faltering machine can work in flux and pause, regeneration and death. In attending to these qualities, the sedimentation of phenomena into particulars might be seen not as the production of permanent and fixed entities in a closed system, but as the production of living, dying entities, in a system which recognises both. Degenerating infection and creative life-force both emerge out of relationality. But remaining immune to the other is in fact not possible. There is no closed system, everything is always suffused with others. The faltering machine implicates the possibility of a rhizomatic ethics which does not polarise and privilege exuberant liberation and proliferation of life against the closed system, but privileges relations which both renew and degrade. This is a new ethic of relations in themselves rather than relations which involve antagonism, competition and the desire and struggle for life and power.

While that porosity is what allows us to flourish—as we breathe in the oxygen we need to survive and metabolize the nutrients out of which our flesh emerges—this porosity often does not discriminate against that which can kill us.

(Tuana, 2008, p. 196)
Multiplicity, proliferation and differentiation

My affective experience with the rhizome throughout my academic life has been one of fascination, but also of dissonance and unease and this chapter has brought these patterns forth. The rhizome chronotopes constitute humanity as subject to universal and non-conscious functions of proliferation, contingency and uncertainty which we have no role in creating. We are ‘left only with the slim and rather pat suggestion that the inherent uncertainty of the universe is our one salvation’ (Barad, 2007, p. 17). Uncertainty and flux are the conditions we must resign ourselves to, and so where we can we embrace this mystery and exploit its creative potential, and where our personal conditions are not favourable for asserting ourselves in this way we become the losers in the game. While porous and empty qualities are present in the chronotope as it emerges through this apparatus, they might be overlooked in an emphasis on rhizomatic research as a ‘machine of flows’, perpetually striving to liberate a multiplicity of contents. This is significant, as the apparatus determines where attention is directed and where cuts are made and these attentions co-determine reality.

Multiplicity, proliferation and differentiation are patterns of intensity in this chapter and are everywhere in the apparatuses of postmodernism and poststructuralism. Lyotard’s (1996) characterisation of the postmodern condition is ontologically and epistemologically multiple and proliferating. Postmodernism rejects narratives of totalising truths, objectivity, coherence, and any other universally reified concepts in favour of contingency, diversity, decentring, marginal, (Eagleton, 2013) multiple, localised, specifically situated contextual power relations (Powers, 2008). Foucault defines his own enterprise as purging historiography of the old concepts of continuity, causality and temporal progression and substituting them for the (spatial) categories of discontinuity and difference (Gomel, 2010, p. 2). Lather (2013) discusses the most recent turn in social science methodology as ‘non-totalizable, innumerable, resisting statis and capture, hierarchy and totality, what Deleuze might call a thousand tiny methodologies’ (p. 635). Multiplicity, difference and impermanence are the eternal and infinite state illustrated in
the world in Deleuze’s baroque, multiplicity, difference and repetition, and fold (1990, 1993, 1994).

Entangled in these patterns of multiplicity I often read the negation of unity. In the postmodern era, the process of undoing any grand narratives of existence has made notions with connotations of unity or holism passé. Crockett (2013) describes the dichotomisation of multiplicity and unity as a highly sensitive issue in poststructuralism. He relates an on-going disagreement between Deleuze and Badiou, revolving around Deleuze’s celebration of a multiple ontology while Badiou made repeated attempts through the deconstruction of Deleuze’s writing to demonstrate that he was ‘ultimately a philosopher of the One’ (Crockett, 2013, p. 3) masquerading as a pluralist (Crockett’s term). The fundamental Oneness to which Badiou refers is Deleuze’s notion of the virtual, the state of becoming rather than the actual, which Badiou claimed was given transcendent status.

The problem is not the presence of a dichotomy in itself, as dichotomies as representations are useful in thinking. The problem is the rigidity of and degree of consensus about the dichotomy. Where the entangled discourses produce dichotomies as fixed constructions, possibilities cannot exist simultaneously and alternative constructions outside of the binary cannot be considered. Crockett’s (2013) view is that the perspective of Deleuze and Badiou is an aspect of European post-Holocaust resistance to ideas of totalitarianism. However a firm belief in multiplicity can be read as totalising a narrative as any other; it can enact a new, restrictive doxa. If the endeavour is as Deleuze says, to pursue the eternal rupturing of concepts (1994), we should ask: Why privilege multiplicity? What is beyond proliferation and multiplicity? What are proliferation and multiplicity in entangled relations with?
**Dynamic struggle, power and agency**

My unease with the rhizome is intensified by my perception of the patterns manifested in the chronotope by the entanglement of multiplicity with ideas of dynamic power, conflict and struggle. In the rhizomatic chronotopes it is acknowledged that power is a useful way of understanding dynamic situations, agency and the possibilities of multiplicity. Deleuze and Guattari (1987) describe a universe of dynamic flows, in which power is enabled by capture of flows. Therefore resistance to any form of containment, including the ideological, is an ethically evaluative quality. Resistance, rupture, and agonistic force are the central forms of power exertions and liberating agency.

As St. Pierre says, this notion of poststructural resistance is to offset the humanist notion of disciplinary power (St. Pierre, 2000). In the humanist heroic path chronotopes, power and agency are human attributes, and this is limiting because it denies agency in the world, separates us from ‘nature’, and creates anxiety and uncertainty as it ignores the fact that the globalised world works against the just distribution of power and agency. In poststructuralism resistance is not a thing but an effect of a relation of power. ‘It is not a single unifying concept; rather, there are a multiplicity of resistances, just as there are a multiplicity of relations of power’ (St. Pierre, 2000, p. 492). Power is the tension of the relations between multiplicities of dominations and resistances. As Foucault says it should not be understood as inherently evil or repressive (Foucault & Kritzman, 1988). The poststructural understanding of power enables ‘more complex and subtle analyses of desires, relationships, strategies, and structures’ (St. Pierre, 2000, p. 493) than those enabled by humanism.

However, as Barad (2007) says, the possibility of agency does not require a ‘clash’ of apparatuses, for example a set of dominations and resistances. Agency and effects in the world do not most naturally and fundamentally arise from the struggle between contradicting desires. They are the dynamic of disturbances continually reconfiguring and re-patterning the manifestation of the world. Intra-action implicates entangled relationships and their patterns of disturbance as agentic. This is the process by which one part of the world
makes itself intelligible to another part of the world. This relationship and its patterns do not compete, have no intrinsic tension, struggle or desire, until or unless these are part of the apparatuses which materialise them. Power, tension and conflict are second order manifestations – the effects of interference patterns. This emphasis on power is a way of understanding dynamic relations, but is not a necessary or essential way.

If power is the description we give to relations in the proliferating multiplicity of the universe, we tend to see relations as always involved in self-protecting, desiring, antagonistic, competing, struggling tension. In spite of the fact that poststructuralism after Foucault emphasises that power should not be considered a force held by individual entities (Foucault & Kritzman, 1988), an emphasis in poststructuralism on competing regimes, tensions, power and resistance as essential shaping agencies in relations assists to construct the kind of relations which must be tied to determinate entities. This is because these diffraction patterns help to co-constitute multiple separateness; inward facing, desiring self-protection and desiring self-expansion. Militaristic principles become fundamental ontic principles: Power, tensions, factions, fractured societies, battles, marginalisation, domination, expansion of empires, penetration or violation of boundaries and contradictory forces. The effects of this include an inhibited capacity to re-conceive of situations without conflict at the centre, and an ontic dynamic of continual reconfiguration of opposing tensions and factions. Nature conceived in this way seems exhausting and unsustainable.

The rhizome chronotope can enable creative possibilities and new intensities but we need additional qualities in the apparatus to help us examine what we could, but perhaps should not, liberate. Experimenters, writers and readers can bring their own desires and ethics to the machine and can ask: Does it work for me (Baugh, 2000)? For example, in his narrative experiments, Gough (2003) draws on both a Deleuzian approach, and on a diffractive approach, and in this way, identifies explicitly and is able to explore the ways that his methodology is not only about the possibilities of the open ended experiment, but is also and fundamentally about attending to differences that matter; about
the ethical co-constitutions of his experimental apparatus. Gough’s (2003) diffraction enacts a range of narrative experiments in educational research. He emphasises the functions of the ‘machineries’ (p. 58) of detective stories, SF stories and educational research as narratives of inquiry which are not ultimately to answer a question, to produce a story providing a cohesive account, of something. When students view these machineries in connection to the machineries of educational research, Gough states, they can explore issues of ‘deception ‘ and authenticity, and the eccentricities and subversions of various detective’s methods, of collective and individual inquiry, objective and participant voice, and doubled inscriptions of events. These ethics are not those that stand in judgement on practices and effects, but those that deliberately attend to the relationship between practices and effects, marks left in the world, in their multiple forms and possibilities. They are fundamentally concerned not just with the fact that the rhizome can liberate contents, but that new and old liberations always leave marks in the world.

When rhizomatic social science research is constituted privileging striving, dynamic, proliferating function, it does not necessarily ask what the research writing liberates in its stalling spaces, porosity and receptivity. The writing machine can, but does not always especially direct attention to ethical entanglements in effect/function. Its ethic is liberation and excess of life, but this is problematic as the question of whose life (Colebrook, 2006) or what kind of life is not necessarily considered relevant. As Colebrook says this blocks some of the profound questions. The epistemological questions the rhizome chronotopes raise are: Is this or is this not liberation? But they do not tend to ask what kind of liberation, for what kinds of entities, and what is enabled or disabled in these liberations?
7. Coral reef: Porous, fragile, sedimented, enfolded world

...we are left only with the slim and rather pat suggestion that the inherent uncertainty of the universe is our one salvation...we are left wandering aimlessly through a barren landscape with no markers, no compass, only an empty feeling that quantum theory is somehow at once a manifestation of the mystery that keeps us alive and a cruel joke that deprives us of life's meaning...

I would argue, on the contrary, that quantum theory leads us out of the morass...

(Barad, 2007, p. 17)

...what is needed is an analysis that enables us to theorize the social and the natural together, to read our best understandings of social and natural phenomena through one another in a way that clarifies the relationship between them.

(Barad, 2007, p. 25)
The experiment so far...

In this writing experiment I have so far explored four chronotopes co-constructed in fiction and social science research texts and the kinds of methods, epistemology and worldly constitutions they help to make possible. In Chapter Three and Chapter Four, iterations of a heroic path chronotope emerged, in which the world is conceived as a path for humans to walk, test themselves and become heroes, in which knowledge is self-knowledge, and agency is held by humans as those privileged beings in the universe with the consciousness and capacity for such self-knowledge. Research is conceived as heroic ordeal, in which the challenge is to discover latent inner human resources and to effect deep personal transformation or self-creation.

Writing methods which enable and create this heroic path include writing the dark abyss of despair, and creating threshold spacetimes of profound disturbance and destabilised reality. Such research and writing is introspective and subjective, giving voice to the marginalised, and enabling personal, creative and/or resistant constructions of the self or selves. These methods and patterns are intensified by structures such as Campbell’s (1993) hero’s journey and Turner’s (1967) rite of passage: the call to adventure, the crossing of the threshold, the various tests and ordeals, the return home in a new and mature, changed form. Research occurs in humanist developmental stages in a largely linear space in which humans have a comparatively large

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In the literary artistic chronotope, spatial and temporal indicators are fused into one carefully thought-out concrete whole. Time, as it were, thickens, takes on flesh, becomes artistically visible; likewise, space becomes charged and responsive to the movements of time, plot and history.

(Bakhtin, 1981, Chapter 3, location 1304)
degree of autonomy to enact effects and transformations, albeit with ambiguous and confused results.

The creative power of this chronotope is its nourishment of the seeds of human and self-expansion, inducement to maintain motivation and persistence through risk and serious obstacles via their conceptualisation as opportunities for reward, and nurturing of the sharing of human experience for more profound knowledge of both its differences and intensities. The horizon and ideal of the world is home, safety, and civilisation, where the rewards of transformations and new knowledge can be enjoyed. The obstacles and crises of the path rest on the fact that transformation is often partial and tinged with disappointment, but the promise of the path is that the commitment to walk it is in itself heroic, and those who take up the challenge are already heroes. Therefore, ethically evaluative principles of research are demonstrations of integrity in the striving toward self-knowledge: Commitment to the path; courage; willingness to sacrifice; the broadening of human understanding through empathy with other humans as companions in misery (Schopenhauer, 1970) in the same existential ordeal; creative harnessing of latent potential out of the abyss of despair; the finding and unique expression of personal voice for personal, political and social empowerment, and authenticity in representations of self and experience.

But this human-centric understanding of knowledge and research can also inhibit understandings of material and immaterial systems. Relationships between human and non-human phenomena tend toward the imperialistic: non-human phenomena and entities are a comparatively passive backdrop to human action. Representations of nature and matter are judged by their ‘authenticity’ and concrete reality which tends to mean the extent to which they provide finely detailed reinforcement of empirical realist norms of time and space. The meaning of non-human phenomena is its potential to be colonised in the service of the human project for self-knowledge and extension of human agency and creative capacity. Ethical understandings emphasise human personal, political and social concerns, and this is inherently limited as
human concerns are taken to be individualised and largely separate from other phenomena and activity in the world.

In the two variations of the chronotope of the rhizome in Chapters Five and Six: the rhizome city and the faltering machine, the world itself is experimental, striving to liberate, in dynamism, fluidity and connectivity. Therefore ontic boundaries are contingent – open to all liberating possibilities. The horizon then does not exist; space time is an infinite plane, entirely unpredictable and open to all possibility. There is to some extent a flattening of hierarchy between phenomena, and thereby a more instigative role for space and time and non-human phenomena is enabled. Matter, including non-human matter, can be more closely attended to, and as the contingency of matter is recognised, matter becomes a site of wonder and possibility: The corporeal is prodigious and mysterious. Patterns of stalling, space and hesitation in connective flows are also significant in enabling wonder and the mystery of relationship itself to assert itself. But this pattern of stalling, or hesitation, is not always explicit or recognised in rhizomatic texts, which tend to emphasise tension, resistance, dynamism and proliferation.

The creative power of the rhizome chronotopes is liberation, embrace of change, the new and the original, resistance to determination and containment, elusive movement, non-conformism, shattering of comfortable, dominant ‘knowledge’ and systems, proliferation of more and more diversity. Research and writing are understood as experiments in these aims: to perpetuate flows and new, strange relations, to liberate new prodigious contents. The meaning of these new creations is indeterminable, and therefore largely irrelevant, what is significant and therefore ethically evaluable, are dynamic, ongoing liberations of new life.

In this experiment, in some intra-textual relations this rhizomatic liberation extends to the resistance of space and time to determination and containment, and the subsequent potential and temporary dethroning of humanity as beings of agency and significance above others. In some intra-textual relations this liberation brings forward relationship itself; co-existence and interaction in
the moment, as equally significant to the perpetuation of flows. And from some intra-textual relations emerge things in-between what is and what might be, which enable the release of qualities of wonder and mystery in the universe.

But the essential interest in writing experiments to liberate in the rhizome chronotope does not especially enable attention to that which co-emerges with liberations and is marked by them in their ongoing movement in the world. In the non-conscious functioning and uncertain state of rhizomatic writing, and if there can be ‘no determination of the next partial-object that cuts its flow’ (Bogue, 2003, p. 68), there can be no especial moral imperative bound up in the image of research for co-responsibility for the effects of the rhizome machine. In this way, another kind of humanistic privilege is enabled in the rhizomatic world: that which allows humanity to exert unsustainable pressures on the planet, because it can. While ostensibly operating in a flattened hierarchy of phenomena and entities, the ethic of liberation gives humanity permission to wield and develop its tools and strategies of exponential and accelerated change and liberation.

My already there relationship with the rhizome in social science includes my sense that this is not an image in which sharing, democratic relationship is at the heart. The celebration of dynamism, proliferating differentiation and excess constructs these as natural and essential qualities in the universe. These co-constitutions of the rhizome in conjunction with other entangled phenomena in the world such as the conditions of globalisation and neoliberalism, make competition, antagonism and violence also seem inevitable in nature. In these conditions, active, striving, competitive force is naturalised and receptive energies and porous space may be conceived as passive and an antithesis to life.
Iterative patterns and opportunities for a chronotope of agential realism

What if we were to recognize that differentiating is a material act that is not about radical separation, but on the contrary about making connections and commitments?

(Barad, 2014, p. 184)

The notable presence in the world of fragmented differentiation, multiplicity and conflict is explained by agential realism not as evidence of their reflection of the fundamental nature of the world, but as co-constituted materialisations of particular apparatuses attuned to these phenomena, and excluding others. In a world conceived as perpetual, antagonistic and uncertain flux, in which the ethical imperative is to live as an experiment, to strive to resist capture, to create tension, to rupture, differentiate and proliferate excess, it is challenging to imagine how responsibility and ethics are to be enacted beyond the imperative to avoid containment, and difficult to conceive of the role the researcher is to take in enactments of ethics.

In this final chapter I experiment with Barad’s claim that agential realism offers important alternatives to the above co-constitutions, enabling ‘us to theorize the social and the natural together, to read our best understandings of social and natural phenomena through one another in a way that clarifies the relationship between them’ (Barad, 2007, p. 25). The central question is how we might conceive of research as ‘a matter of differential responsiveness...to what matters’, (Barad, 2007, p. 335): How to understand it as a part of the complex process in which ‘part of the world becomes determinately bounded and propertied in its emergent intelligibility to another part of the world’ (Barad, 2007, p. 149).
If we follow agential realism (Barad, 2007) and try to reconsider these issues by re-thinking the assumption of pre-existing determinate entities, this enables binaries of unity and multiplicity, singularity and differentiation, liberating dynamic power and passivity, dynamism and stillness, to be reimagined. This is not a move toward unity and wholeness or grand final narratives about the cohesive explicability of everything, but a move to reconsider these and other phenomena in entangled and indeterminate relations, rather than binary ones. Barad (2014, p. 175) describes ‘a relation of difference within’. This is the coming together of (what we see as) opposite qualities. Subject and object, wave and particle, matter and meaning, unity and difference, resistance and passivity are not given, static or pre-existing, but are ‘contingent separations – within phenomena’ (Barad, 2014, p. 175) emerging dependent on measurement or apparatuses of knowing.

I argue that the kind of space-time-dynamic in which these contingent separations, dependent on measurement are accommodated, dualities are undone, and possibilities are open to many manifestations through agential cuts, is manifest in liminal or threshold chronotopes. Patterns of liminality can be read in Barad’s work, especially in her discussions of the indeterminacy principle and it’s unsettling of ontic binaries. For example: ‘Quantum physics radically queers the classical physics understanding of diffraction. Differences within (dark within light within dark…) move to a deeper level of meaning-mattering (differentiating-entangling)’ (Barad, 2014, p. 176). ‘Quantum entanglements are not the intertwining of two (or more) states/entities/events, but a calling into question of the very nature of two-ness, and ultimately of oneness as well. Duality, unity, multiplicity, being, are undone’ (Barad, 2010, p. 251). ‘That which is determinate (e.g. intelligible) is materially haunted by – infused with – that which is constitutively excluded (remains indeterminate, e.g. unintelligible’ (Barad, 2014, p. 178). And, Barad quotes Trin: ‘Not only that we live in many worlds at the same time, but also that these worlds are, in fact, all in the same place – the place each one of us is here and now’ (Barad, 2014, p. 176).
In this chapter I bring together text fragments and patterns explored so far which also glow with resonance with these and other principles of agential realism and with Barad’s text *Meeting the Universe Halfway* (2007). I do this to mobilise further diffractive patterns which might start a conversation about ways a chronotope of agential realism might be co-constructed in research apparatuses and in texts.

A chronotope in texts, which worked to co-constitute some of the central principles of agential realism (Barad, 2007) might need to co-constitute:

- Phenomena as fundamentally indeterminate: There are no pre-existing or fundamentally separate entities. Determinate phenomena and entities only emerge through measurement, knowing or attention through specific (not necessarily human) entangled apparatuses. This would include means to attend to the inseparability of the social and the natural
- Intra-actions as the essential quality bringing the universe and its phenomena into being. Phenomena emerge together through intra-actions. These intra-actions enable, among other things, congealing of matter into entities
- Temporal enfoldedness and co-emergence of past, present and future in the universe, phenomena and matter
- The inseparability of ethics from the co-constitutions of the world, including matter and knowledge. Ethics; the differences that make a difference to the possibilities, limitations and marks in the world, are already there in co-constituting entanglements.

In this experiment so far, I have noted some textual patterns which may give access to some of these ways of understanding. I need to reinforce that I do not intend to imply that the ontological constructions of these fiction and non-fiction texts have a sound scientific basis, in the sense that they are scientifically possible and fully consistent with contemporary scientific logics or understandings. Rather, I mean to point out that many implications of
quantum theory and agential realism require re-imagining and re-configurations which are very difficult to conceive of. It is, for a start, of use to experiment with chronotopes and patterns which might approach some of these implications, and may give us some access and practice in re-thinking of the world in these new ways; to create new patterns of understanding and co-construction.

The textual patterns in the experiment so far, which may provide some ways of constructing and attending to the above qualities in the world in research writing, include:

- Temporarily indeterminate or liminal spacetimes manifest by the techniques of writing the ‘liminal phase’ in the texts of the heroic path in fiction and in social science, for example, in the context of the hobbit’s (Tolkien, 1955/2005) and the research hero’s journey (Deegan & Hill, 1991; Jones, 2013), and the detective fiction crime scene (Christie, 1942/2014). These enabled temporary disturbances in consensus notions of static reality and spacetime, roles, hierarchies, epistemologies and knowledge.

- Indeterminate, wondrous phenomena, space, time, entities and cause and effect, manifest in patterns across rhizomatic texts such as those of MacLure (2006), Kafka (1916/1972), and Burroughs (1959), by the methods of defamiliarisation of real and unreal, hybrid forms, and trans-corporeality. Matter is contingently sedimented, and crosses boundaries.

- Wondrous, indeterminate phenomena and boundaries, and the inseparability of the social and the natural, created by the technique of defamiliarising scale. New relations and meaning were enabled between large and small, abstract and material, the whole existing within in the particular, in patterns of intensity especially through Eliot’s kaleidoscopic vision in *Middlemarch* (Eliot, 1871/1965) and MacLure’s *Cabinet of Curiosities* (2006)

- Destabilisation and re-imagining of the human/nature divide by the manifestation of agentic, lively and instigative non-human phenomena.
These emerge via disconcertions of scale, illusion, defamiliarised spacetime and trans-corporeality. The world becomes recalcitrant and strikes or looks back, especially in the patterns of in MacLure’s baroque (2006), and Burrough’s *Naked Lunch* (1959). These ontic shifts enable spacetime and subject and object to become confused and the range of phenomena which are active and agentic is broadened.

- Attention to the co-constituting nature of relationship itself, by the methods of creating complex shifting networks of material and immaterial entities, in the kaleidoscopic vision of *Middlemarch* (Eliot, 1871/1965) and in the strange, baroque *Cabinet of Curiosities* (2006). These methods facilitate a kind of wonder and sense of the mystery and ambiguity of phenomena, objects and lives as they emerge together in relations.

- Attention to relationship itself, that is, attention to intra-action rather than the intertwining of two or more pre-existing entities, enabled by the constitution of spacetime as porous. New attention which is undirected and yet attuned to reception is enabled by pauses, empty space silence and hesitation in the dynamism of machinic flows (Alverman, 2000; Wyatt et al., 2010). Out of porosity – indeterminate spacetime, new intra-actions can occur and make themselves intelligible to one another, and new phenomena co-emerge. This enables attention to fragile, momentary, open-ended intra-actions as the primary quality co-constituting the world.

- Attention to marks on bodies and to temporality by these methods of wonder in shifting relationships. The history, present and future of political, social, natural, environmental, personal spheres are entangled in marking and co-congealing entities and experiences of existence. These assist us to ‘read...understandings of social and natural phenomena through one another in a way that clarifies the relationship between them’ (Barad, 2007, p. 613).
In addition to the above, the ice floe continues to be an aid to me in attending to the essential indeterminacy of the world, to shifting and wondrous relationships of social and natural phenomena, to intra-action from which phenomena co-emerge and to the ‘sedimenting historicity of practices/agencies’ (Barad, 2007, p. 180). The image of the ice floe has materially embodied frozen chronotopes and their glimpses of possibility in the research apparatus as contingent sedimentations though which I can avoid prolepsis, focus attention and contain and manage the project. I have explained the way I have used text fragments like ice floes on the page in this experiment, to attend more closely to the way text co-emerges in relationships, the way concepts are embodied within and also co-emerging with the research apparatus, and are co-constituting and involved in the making and marking of the world. In the ice floe we can see how entities emerge and consolidate through complex and wondrous relationships: past, present and future, molecular compounds, geology and land forms, oceans and currents, minerals, temperature, climate, atmosphere, humans, plants, animals, emissions, industry, finance. In the ice floe we can also see how sedimented entities live, die and transform, and cross material and immaterial boundaries: between ice, water and vapour, and between great and small and deceptive scales.

These ice floes also draw attention to the inadequacy of our understanding of ethics. Ice floes as material forms embedded in knowledge-making practices highlight the danger and inaccuracy of the persistent claims from the political sphere that debates about issues in general and climate change as a particular and significant example, must be ‘practical’ and ‘rational’ rather than ‘ideological’. For example, while diverging political standpoints exist on the actions needed to address climate change, the Australian Prime Minister’s recent public statement that coal, solar and nuclear power: ‘...are all things. They don’t have any moral characteristics. (Turnbull, 2015), caused no dissent on factual grounds. This version of empirical realism in the neo-liberal age says that morality and ethics are indisputably detached from physical things and consequently detached from the ‘rational’ actions humans take in response to physical things. Morality and ethics are ‘ideological’ and therefore
insubstantial. With this concretised image of separate, non-ideological 'things' in the world at the core of apparatuses for knowing we will continue to view the possible responses to climate change, shrinking polar regions and rising sea levels as essentially restricted to the choice between two options. The first means ‘rationally’ taking no responsibility for changes to things and nature, as things and nature are separate from us and operate under their own rules. The second means ‘rationally’ taking responsibility for things or phenomena in nature as problems created by yet external to ourselves and thus accepting the overwhelming, depressing and impossible obligation that humanity must ‘fix’ these problems. Neither of these options are possibilities of hope.

In addition to the ice floe, I also consider in this chapter a final emerging pattern in the phenomenon of the coral reef as a useful chronotope to think with. The coral reef offers other material-discursive qualities which are highly generative in thinking about ontic entanglements and co-constitutions in research writing.

History and humanities scholar McCalman’s text *The Reef: A Passionate History* (McCalman, 2013) explores how history, lives, text, geography and biology have co-emerged in the Great Barrier Reef off the coast of Queensland, Australia. Coral reefs clearly demonstrate the inseparability of entities, as highly complex ‘contingencies of geology and biology’ (McCalman, 2013, Prologue, location 200), sedimenting through relationships of light, temperature, water, animal and plant life, soil, sand, rock, and slowly subsiding ocean floor, as well as human industry and economic and political systems. In this chapter I also suggest that they enable a chronotope in which matter is conceived as both wondrous and porous, and why these qualities are important in our worldly co-constitutions.

As a way of sustaining the ongoing diffractive patterns begun here through the ontological re-imagining which accessible through fiction, I throw three last fictional texts into the apparatus. These texts intensify patterns of agential realism in notable ways. They are Murakami’s *The Wind-up Bird Chronicle* (1999) and *1Q84* (2012) and Lindholm’s *Wizard of the Pigeons* (2002).
These three novels are works of liminal fantasy; a genre which itself offers some unique co-constitutions. I have argued that patterns of liminality are manifest in Barad’s (2014) writing and that the kind of space-time-dynamic in which contingent separations, dependent on measurement are accommodated, dualities are undone, and possibilities are open to many manifestations through agential cuts, is manifest in liminal or threshold chronotopes. Liminal fantasy fiction manifests such a chronotope. It cultivates a powerful sense of latency and indeterminacy in the world (Mendlesohn, 2008). Rather than giving prominence to the exuberant and infinite possibilities that science fiction creates in flux, branched-ness, differentiated fragmentation, and machinic flows, the liminal fantasy form brings into being suspended, indeterminate and entangled forms of ontic constitutions. The liminal fantasy texts I refer to here create cities which contain pockets of emptiness; entangled existences, liminal places and times which flicker in and out of materiality and visibility and in which alternative worlds and possibilities are accessible.

In the liminal fantasy universal indeterminacy is suggested without fanfare by a saturating tone of defamiliarisation; indeterminate and/or liminal ontic phenomena are not only possible but are largely unremarked upon. Characters are ontologically hesitant, yet are receptive, demonstrating none of the shock or disbelief we might expect when non-consensus ontic possibilities emerge. Irony rules; there is no monosemic correct reading that validates or invalidates a single understanding of events. The limen; the indeterminate threshold, is manifest on multiple levels: In spacetimes and ontology, in meaning, natural laws, social rules, epistemologies, in entangled relationships which demonstrate the inseparability of entities, and in the narrative form itself, which refuses categorisation as reality or fantasy (Mendlesohn, 2008).

The powerful sense of latency is achieved by the combined effect of the reader’s wonder and unease at the events, the characters’ unnaturally blasé response to events, and the refusal of the text to reveal its truth or logic or to fit categorisation (Mendlesohn, 2008). Is this an insane or unreliable narrator? Is the narrative intended to be ‘realism’ or ‘fantasy’? Is there a hidden logic or
explanation – a dream sequence, a twist – which will make sense of it all? The reader waits, and continues to wait, to discover such clues to the ‘real’ and determinate meaning of the narrative world, but these are never provided. The reader works at the text during and beyond reading, without resolution, and the possibilities of the work mutate, maximising the sense of wonder.

In the examples of liminal fantasy I use here, the co-constituting relationship of texts, writing, epistemology, history and the material world is also brought forward, creating opportunities to extend conjectures on writing as material, sensory, temporally enfolded, co-emerging with the world. I further suggest that while maintaining the anthropocentric tradition of fiction in the sense that human characters are pivotal and essential in the narrative, some liminal fantasy does extend opportunities to co-construct a position of more humility for humanity, as emergent and contingent entities, entangled among a huge range of others.
Liminal city and coral reef: Porous, fragile, sedimented, enfolded spacetime

Porous world: Receptive, intra-acting space, listening, attunement, intelligibility

I run in a void. Or maybe I should put it the other way: I run in order to acquire a void. But as you might expect, an occasional thought will slip into this void. People’s minds can’t be a complete blank...What I mean is, the kinds of thoughts and ideas that invade my emotions as I run remain subordinate to that void.

(Murakami, 2008)

Taking a breath, I sat on the floor of the well, with my back against the wall. I closed my eyes and let my body become accustomed to the place. All right then, I thought: here I am at the bottom of a well.

(Murakami, 1999, p. 221)

It was the strangest thing not to be able to see my own body with my own eyes, though I knew it must be there. Staying very still in the darkness, I became less and less convinced of the fact that I existed.

(Murakami, 1999, p. 230)

And as for the famous void, well, it isn’t all that it was supposed to be (or not be), either. According to quantum field theory, the vacuum is far from empty; indeed it’s teeming with the full set of possibilities of what may come to be.

(Barad, 2007, p. 354)
In Chapters Five and Six, a pattern of space and stalling emerged in the chronotopes, which I characterised as a form of spacetime porosity. This porosity enabled attunement to indeterminacy and latent possibility. In the text fragment above, Barad (2007) acknowledges the existence of a void or vacuum in the universe, but states that this is not empty, but rather, full of the possibilities of everything which might possibly exist. This must be taken together with the proposition that matter and determinate entities are not separate to space and time – that is, the vacuum is not empty space around subatomic matter, but is somehow also part of the nature of matter: a part which is teeming with possibilities. I cannot claim to comprehend this well, but it seems to assist me to think of the nature of the universe as porous, something like the structure of coral, where porosity is not ‘emptiness’, but space in which nutrients are channelled and communication throughout the colony occurs (McCalman, 2013). Porosity in coral is not separate from, but part of the coral, teeming with life, possibility and communications. Porosity in coral is essential in the enactment of parts making themselves intelligible to other parts, in their ‘ongoing differentiating intelligibility and materialization...’ (Barad, 2007, p. 176).

In Murakami’s *The Wind-Up Bird Chronicle* (1999), the image of the well enacts a similar porous function. The protagonist Toru is searching for his wife who has gone missing in Tokyo, but paradoxically spends a good deal of time sitting at the bottom of an empty well, as described in the text fragments above. The well co-constitutes a space where we can see that ‘edges or boundaries are not determinate either ontologically or visually’ (Barad, 2007, p. 156). Within the well, Toru moves between times and worlds, or rather, memories and alternative places and times manifest and move through him. Murakami writes:

> Here in the darkness, with its strange sense of significance, my memories began to take on a power they had never had before. The fragmentary images they called up inside me were mysteriously vivid in every detail, to the point where I felt I could grasp them in my hands.

(Murakami, 1999, p. 222)
In traditional fiction and Freudian psychology the well is an image of depth and intuition; access to the inner self. For example, Davies (2001) cites Turner Hospital discussing her writing process, below:

Similarly, Le Guin writes that fantasy writing helps to access truths otherwise inaccessible, because it occurs in the depths and the darkness: ‘*You get the facts from outside. The truth you get from inside*’ (Le Guin, 1979, p. 198).

But Murakami’s well constructs depth and surface; stillness and dynamism; the vacuum and the quality in nature in which every possibility exists at once, as not fixed or mutually exclusive. In an agential realist notion of space and time, the spheres of interior and exterior lose their previous designations and different boundaries are enacted (Barad, 2007). The well is a place of extreme immobility and ‘*overwhelming numbness*’ (Murakami, 1999, p. 65), yet is full of dynamic pasts, presents, and futures. These are sometimes ethically ambiguous, complex and entangled situations, for example, a wartime sequence in which a Japanese soldier in Outer Mongolia is forced to witness a torture event. The porosity of the well enables teeming possibilities to flow or exist at once and their potential marks on the past, present and future are notable, or can be speculated on.

*The process of writing is, to use Clement’s terms, a long syncope for me. I climb down into the bat cave of sensory, moral and philosophical and interrogative data, and I grope around down there, and things happen, things both euphoric and terrifying, and I set them down during this long syncope when I lose track of everything else (of time, of my body, of my normal functions in the world; I am seriously dysfunctional when I am writing), and when I climb out again with written pages, they are as mysterious and alarming and beautiful to me as an opal pulled out of the dark*

(Davies, 2001, p. 196)
Above, Barad (2007, pp 144-145) cites Hacking’s comment that the researcher needs to be alert and attuned to noticing the agency of the experiment, its idiosyncrasies and its possibilities. Attunement to indeterminacy and latent possibility is important in research which aims to shift from old sedimented concepts and constructions to new possibilities, but we are not well trained to think and write in these ways. Writing defamiliarised reality, in which judgement is suspended throughout as in Murakami’s text and embodied in the well, is a powerful enabler of this kind of attention. Tolerance and receptivity are important in the capacity to notice such possibilities. Toru’s tolerant and unassuming attitude toward the strange events in the well causes the disorientation which enables us to suspend judgement. In this chronotope questions of power and uses of authority, conflict, tension and struggle are relevant but are understood as also co-emerging with/from the apparatus, rather than as inherent characteristics. An energy of force and antagonism is not the essential force in the universe. Rather, the agency of intra-action is a more essential quality.

In support of this, one of the most well-known conceptualisations of the way suspended judgement is associated with a creative mind-state integral to the act of writing is Keats’ ‘negative capability’:

*Negative capability: ...when man is capable of being in uncertainties, Mysteries, doubts, without any irritable reaching after fact and reason.*

(Keats, 1925, p. 48)
Negative capability also implicates a suspension from the need to determine, to strive for fact and reason. Negative capability in research apparatuses implicates porosity, a state or quality which is attentive, open, receptive, communicative, empty of judgement: a space for new relationship, and a space in which all possibilities exist. Porous space enables knowing as ‘a matter of differential responsiveness...to what matters’, (Barad, 2007, p. 149) and thus enables new co-emerging phenomena, a process by which ‘part of the world becomes determinately bounded and propertied in its emergent intelligibility to another part of the world’ (Barad, 2007, p. 149).

This differential responsiveness implicates a capacity in experimenters to increase their responsiveness to porous space and relationships between emergent things, to allow and witness their emergent intelligibility to one another, without foreclosing meaning. In Chapter Six, in Wyatt, Gale, Gannon and Davies (Wyatt et al., 2010) rhizomatic collaborative writing, this responsiveness was sometimes characterised as a form of listening. Barthes pleasure of the text, to the right, which I have mentioned earlier in the project, also intensifies this pattern implicating researcher attention without determination as a form of listening; attention to the text that makes itself heard indirectly.

The text: it produces, in me, the best pleasure if it manages to make itself heard indirectly; if reading it, I am led to look up often, to listen to something else. I am not necessarily captivated by the text of pleasure; it can be an act that is slight, complex, tenuous, almost scatterbrained; a sudden movement of the head, like a bird who understands nothing of what we hear, who hears what we do not understand.

(Barthes, 1974, pp. 24, 25)

The significance of listening is also marked in Murakami’s wind-up bird, which is the sound of the world having ‘its spring wound for the day’ (Murakami, 1999, p. 57): a sound which demands constant, but indeterminate attention. A porous chronotope implicates listening indirectly: enables a responsiveness to the world which enables relations but does not presume kinds of relations:
The patterns of this experiment suggest that a porous chronotope can also help to imagine and co-constitute wonder in the research apparatus. Wonder is important. Wonder is an affective epistemology involving the understanding that all is not already bounded and determinate, and the sense that latent and mysterious possibilities exist. The kind of wonder in the patterns of this experiment does not manifest the wondrous diversity of matter separately from the wondrously infinite and latent unmaterialized possibilities. In this experiment wonder is generated at the threshold, where objects lose their determinate ‘thingness’ and engage in new, undefined relationships; between the material and the immaterial, manifest and potential, between scales, between places and times, between categories of phenomena.

A porous chronotope, like the coral reef, enables research writers in an epistemology of responsiveness to wonder and intra-action. The Great Barrier Reef off the coast of north-eastern Australia, is a phenomenon of wonder, so vast and ‘so extensive that no human minds can take it in’ (McCalman, 2013, Prologue, location 117) encompassing thousands of individual reefs and

Research, coral, porosity, latency and wonder

As happened each morning, I heard the wind-up bird winding its spring in a treetop somewhere. I closed the paper, sat with my back against a post, and looked out into the garden. Soon the bird gave its rasping cry once more, a long creaking sound that came from the top of the neighbour’s pine tree. I strained to see through the branches, but there was no sign of the bird, only its cry. As always. And so the world had its spring wound for the day.

(Murakami, 1999, p. 57)
islands, and manifesting an enormous and mysterious array of coral forms so diverse that many defy classification (McCalman, 2013). Therefore, like the ice floe chronotope the reef embodies wonder, in its shifting scales: majestic, incomprehensible size, and miniature complexity; its extraordinarily diverse, alien, uncategorisable, strange and beautiful forms, and in its infinite, mysterious, shifting and diffractive relationships with other co-emerging phenomena.

*Time and space intra-act with material force and agency and are representations of those physical realities that are ‘available in a given historical stage of human development’.*

(Bakhtin, 1981, Chapter 3, location 1306).

Being such a phenomenon of wonder, the Great Barrier Reef has already been significantly entangled in different apparatuses for knowing through human eras (McCalman, 2013), co-emerging in ‘*representations of those physical realities that are ‘available in a given historical stage of human development’.*’ (Bakhtin, 1981, Chapter 3, location 1306). Beach, sea and reef were conceived by the Australian Indigenous people of the region as inseparable, and inseparable too from home, culture and memory. The loss of reef homelands then, affected the loss of points of reference for the whole network of relationships and structure of social groups. The Barrier Reef had terrifying significance for early explorers such as Cook, who had never encountered such dangerously navigated edifices. The connotations of the term ‘Barrier’ were mutable and could be both malevolent and protective. Due to its scale, much of it invisible under water, the reef was not until recently conceived as a continuous, interconnected existence and region by Europeans. At present many understand it as entangled with humans and climate change, in an apparatus in which ice floes are also implicated. For many, it is now ‘*a microcosm of the fate of the planet’.* And ‘*(t)he battle to save it is a microcosm of the new battle within ourselves*’ (McCalman, 2013, Part 3, Section 3, location 4196). These perspectives demonstrate corals as a substance generating a wonder which enables the social and the natural to be read through one another, in ways dependent on the attention directed by the apparatus.
The reef then, enables attention to the entwined emergence of ‘contingent separations – within phenomena’ (Barad, 2014, p. 175): qualities such as small and large, deep and surface, the material and the immaterial, which are not static and only make sense in a particular apparatus which places them in particular relations. This quality of the reef aids us to respect objects for their wondrous qualities, but without reifying them. It enables the reminder that even contemporary quantum physics does not properly understand distinctions between that which is matter and that which is not matter, how these come into being, and what their latent potential is, as is demonstrated especially in the phenomenon of dark matter. In social science we might use this reef thinking, for example, to loosen configurations of knowledge, methods, and ‘issues’, and to attend more to the wondrous possibilities of new material and immaterial relationships.

As this project advocates, novelistic thinking and writing are also methods which can assist in this epistemology. In precise academic writing, once concepts are developed and delineated, they fall short of their ultimate potential as objects of wonder as they become bounded and finite. In fiction writing methods, the writer draws more consistently on the experience at the threshold between manifest and latent. The liminal fantasy is an especially revealing genre, as it draws powerfully on a threshold chronotope, using defamiliarisation and the constitution of images of the threshold to create a saturating sense of latency (Mendlesohn, 2008).) In this fiction, wonder is generated as writing defamiliarises established categories and lingers suspended on the threshold of determinacy and possibility, where all possibilities remain open and unresolved. It asks: What if the world is both as we experience and understand it, and yet it is also not? What if there are latent possibilities in ordinary things?

Barad (2007) explains that uncertainty about the nature of reality is not the central ontological issue. It is not that we are uncertain as we cannot know reality, but it is that reality is itself indeterminate until measured.
Chronotopes constructing the universe as either fixed and determinate, or as fundamentally uncertain and in flux, are in many ways unhelpful in a quest to re-imagine research which ethically embraces the possibilities of the universe. Liminal fantasy chronotopes intensify the recognition of the underlying indeterminacy in existence, and entangle it in narratives to powerful affect. The genre manifests a threshold chronotope; a spacetime which exits between the determinate and the manifest, and the imagined or latent possibilities; which is neither determinate nor insubstantial. Its primary affective quality is a strong sense of latency; the sense of the anticipation of possibilities, on the brink of emergence. In *The Wind-up Bird Chronicle* (1999) close attention to the apparently banal, paradoxically heightens the sense of suspense. The reader is accustomed to the technique of narrative stalling in the mundane as a signal of something revelatory or shocking to come. Close attention to domestic routines – the woman arrives home at night, she put her key in the lock, she opens the door, she walks in to the hall, turns on the light, there is a sound, etc, etc, build suspense, and we brace ourselves in readiness for a shock. But in the liminal fantasy the stalling technique is sustained and ongoing and nothing is revealed. A prominent example in *The Wind-up Bird* is the protagonist Toru’s persistent noticing of the cry of an unseen bird outside his apartment. This gains increasingly strange significance. The ordinary morning bird call is defamiliarised; given repeated and suggestive attention, and this close attention to the mundane paradoxically enhances the sense of the unreal (Wray, 2004, Summer). The call of the wind-up bird takes on a portentous, but indeterminate significance, the sound of the world having ‘*its spring wound for... on the one hand, light seemed to behave like a wave, but different experimental circumstances, light seemed to behave like a particle...Remarkably, it turns out that similar results are found for matter; under one set of circumstances, electrons behave like particles, and under another they behave like waves.*

*(Barad, 2007, p. 29)*
the day' (Murakami, 1999, p. 57), a sound of accumulated but unreleased potential, on the verge of breaking through.

As happened each morning, I heard the wind-up bird winding its spring in a treetop somewhere. I closed the paper, sat with my back against a post, and looked out into the garden. Soon the bird gave its rasping cry once more, a long creaking sound that came from the top of the neighbour’s pine tree. I strained to see through the branches, but there was no sign of the bird, only its cry. As always. And so the world had its spring wound for the day.
(Murakami, 1999, p. 57)

This epistemology of wonder and latency generates a narrative which feels genuine, resonant with life, and also potentially profound or consequential. This sense of latency is not merely a suspenseful narrative hook, but is important in general in a chronotope to enable attention to the indeterminate nature of the universe. In the novel this latency is created by maintaining an existence entirely on the threshold between the mundane and the bizarre. The reader searches for associations and clues to meaning which remain highly tenuous, and waits, but the threshold crossing does not ever occur, as to cross the threshold, to provide or even to hint at an interpretation of meaning and reality, is counter to the aims and epistemology of the genre. The epistemology of the Wind-up Bird (Murakami, 1999) novel is new awareness of the world, a subtle and by some measures slight shift in understanding which is not to do with knowing determinate answers and phenomena but to do with an expansion of the sense of what might be; of the potential in the world.

This chronotope also enables attention to the text as co-produced, along with the measuring apparatus. The liminal fantasy text draws attention to the fact that the reader is inextricably implicated in the processes of determination of meaning, and in the apparatuses for knowing. The reader, who is always
already implicated in the determination of meaning, here has his or her attention drawn to this fact, because the author makes no attempt to hint to the reader what to think. In an interview, Murakami has described the driving power of his stories as missing and searching and finding, where finding involves disappointment (Wray, 2004, Summer). Even if the protagonist finds what he is looking for, in the end he will not be sure if it is what he thought it would be. Similarly the ‘text’: the thing that we find in writing and in reading is not a determinate pre-existing entity, it emerges out of and is entangled in, the latent possibilities of the writer, reader with the writing/reading apparatus.

\textit{Time and space thicken, ‘take on flesh’}

\begin{quote}
Tengo now sat on top of a slide in a playground in Koenji, looking at a pair of moons in the sky. An inscrutable new world silently surrounded him like lapping dark water.

(Murakami, 2012, p. 782)
\end{quote}

\begin{quote}
\textit{Matter is the sedimenting historiality of practices/agencies and an agentive force in the world’s becoming.}

(Barad, 2007, p.180)
\end{quote}

\begin{quote}
...it is not so much that I have written this book, as that it has written me. Or rather “we” have “intra-actively” written each other...

Furthermore, entanglements are not isolated binary co-productions as the example of an author-book pair might suggest...the forests, streams, and beaches of the eastern and western coasts, the awesome peace and clarity of early morning hours, and much more were a part of what helped constitute both this “book” and its “author”.

(Barad, 2007, p. x)
\end{quote}

The coral reef chronotope shows how matter also becomes consolidated in this process of text, meaning, reader and writer co-emerging together in their entangled relations. In the patterns of textual diffraction here, matter as well
as meaning co-emerge with text. As in Bakhtin’s description of the chronotope in general terms, text, time and space thicken and congeal, they ‘take on flesh’ (Bakhtin, 1981, Chapter 3, location 3575). As Barad says above, she and her book have “[‘intra-actively’ written each other’ (2007, p. x). And the intra-actions which have produced herself and the book involve more than binary relations, but rather involve the complex entanglement of many other things. Matter – including that which makes up Barad herself, Barad’s book, the forests, streams and beaches she writes of above, and the ice floes and coral reefs of this experiment – is ‘not a thing but a doing, a congealing of agency’ (2007, p. 336). It is the ‘sedimenting historiality of practices/agencies’ (2007, p.180). Matter, as a sedimenting or congealing of agency, like other phenomena, comes about through intra-actions. Humans and human actions including writing, are entangled in some of these intra-actions and make marks on the co-emergence of matter.

Murakami’s 1Q84 (2012) co-constitutes matter congealing through intra-actions involving writing, and attention to particular phenomena, through writing. In 1Q84, the character Tengo (a novelist) notices that certain nuances of the world are altered as he writes. After he has co-authored a story in which there are two moons in the fictional sky, he notices two moons in his own sky. Like other authors, Tengo knows well the feeling that the world he writes becomes part of himself and his existence. As he writes, difference is co-constituted – text and world emerge together. In this context, the sudden evidence that the supposedly exterior world has changed makes an intuitive sense to the reader. The reader’s attention is drawn to this phenomenon and to the entangled nature of a writing apparatus, through the character of Tengo’s editor, who presents the advice that Tengo craft the two moons with detail. By intra-actions involving attention to

Your readers have seen the sky with one moon in it any number of times, right? But I doubt they’ve seen a sky with two moons in it side by side. When you introduce things that most readers have never seen before into a piece of fiction, you have to describe them with as much precision and in as much detail as possible.

(Murakami, 2012, pp. 249, 250)
phenomena, ‘describing them with as much precision and in as much detail as possible’ (Murakami, 2012, p. 250) they are materialised, made ‘real’. Like Tengo and the character Fuka-Eri who co-authors the book with him, the editor is now also implicated in the emergence of the book and its effects in the world.

The two moons bring to life Barad’s idea that ‘(c)oncepts are materially embodied in the apparatus’ (2007, p. 143). Concepts and materiality are inseparable from one another and are reciprocally constituting. This idea is intensified in Mendlesohn’s (2008) description of the entanglement and inseparability of metaphor and reality:

The heart of the liminal fantasy is the moment where metaphor and magic become indistinguishable, where the reader is expected to suspend faith, not in reality but in metaphor, to allow metaphor to become concrete.

(Mendlesohn, 2008, p. 195)

The heart and strength of liminal fantasy is that it enables the reader to suspend judgement on which is metaphor and which reality; to suspend the need to separate the two. The novelist character Tengo asks: ‘Does this mean that my life has been nothing but a process through which I am giving concrete form to the dormant image inside me? (Murakami, 2012, p. 544). His writing and his life manifest concepts always already materially embodied in the apparatus (Barad, 2007), ‘giving concrete form to the dormant image(s)’ inside the writer and the broader, entangled apparatus.
Thinly sedimented and enfolded spacetime

On the far western shore of a northern continent there was once a harbour city called Seattle.

(Lindholm, 2002, p. 1)

...time and space, like matter and meaning, come into existence, are iteratively reconfigured through each intra-action, thereby making it impossible to differentiate in any absolute sense between creation and renewal, beginning and returning, continuity and discontinuity, here and there, past and future.

(Barad, 2007, p. ix)

Memory does not reside in the folds of individual brains; rather, memory is the enfoldings of space-time-matter written into the universe, or better, the enfolded articulations of the universe in its mattering.

(Barad, 2007, p. ix)

In liminal fantasy the thickening sedimentations of the world, the past and the present are less than solid, yet they are not fluid. Their substance is fragile and thinly enfolded and can be marked.

Time, for example, is co-constituted as enfolded in and emerging with other phenomena. The re-envisaging of time is important in an age when time is both compressed and hyper-accelerated and in which our actions will have impacts in a longer time scale than we are capable of conceiving. 'Short-termism'- the tendency to emphasise short term effects, risks and gains – is a marker of a capital driven society and a heteronymous society (Castoriadis, 2010): one
which does not believe in its own powers of influence on the shape and structure of social and natural forces. In the introduction to this project I gave climate change as a powerful example of a complex global phenomena which our common structures of understanding cannot deal with. Aside from our anthropocentrism, our ideas of time and causality as linear cannot deal with the way that climate change involves the expression of connections between events at vastly different scales in space and time. Climate change, sea level rise, sea temperature rise, ice floes in the polar-regions and coral reef degradation in the tropical regions are examples that show us clearly that we need more flexible and malleable ways of conceiving time and the ways time marks and is enfolded in matter.

Barad (2007) says, time is not a succession of evenly spaced moments, nor is it something that stands outside of matter and other universal phenomena. Time is itself configured through iterative intra-actions, including the agential cuts made by apparatuses for understanding, however unpredictable and indefinable these chains may be from the human point of view (Gomel, 2010). They are ‘infinitely malleable and partially predictable’ (Gomel, 2010, p. 84). This is difficult to conceive of. If time is not a measure or a uniform background, but is co-constituted in the materialisation of other phenomena, how can we think about this?

The city of Seattle in Lindholm’s *Wizard of the Pigeons* (2002), co-constitutes a thinned form of spacetime in which time is enfolded. The world, the past and the present have a thin substance, which can be marked. The constitution of a distanced or thin narrative and geography is common in fables. This fable-like quality is created by use of a somewhat dignified or solemn tone and ‘thinned’, indistinct and remote settings creating a distancing of author and reader from time and place (Gardner, 1991). *Wizard of the Pigeons* (Lindholm, 2002) opens with the reality of the cityscape held in doubt, as seen here at the top of the page: ‘On the far western shore of a northern continent there was once a harbour city called Seattle’ (2002, p. 1). A hallmark of a tale is it’s ‘absence of gratuitous detail….of atmosphere and psychologising. The truth of tales… is arrived at by a
"different process" (Thurman, 1982, p. 294). The locale and protagonist are 'storied', made legend of (Mendlesohn, 2008).

Agential realism says that the past and the future are always already in the present. The self always already has the other within it, including those in the past and those not yet born. And ‘(m)emory does not reside in the folds of individual brains; rather, memory is the enfoldings of space-time-matter written into the universe’ (Barad, 2007, p. ix). For example, as Punter (2000) says, postcolonial spaces, worldviews, writings and writers are necessarily haunted by the ghosts of those who were hidden and silenced in the imperial past. The totality of memory, experience, and events is imprinted in worldviews, in writings, in past, present, and future.

But traditional history narratives aspire to hide such ghosts and traces of sedimentation – human and otherwise – and other seams of their ontological violations and artifices. This occurs for example in the pretence that the selected historical figures of Australian history: Captain James Cook, Matthew Flinders, Bourke and Wills, are the significant protagonists, and that their identity in the history book is the same as the identity of the figure in the world; that the selected locations and events; Australian sites of European exploration and colonisation, are the key locations and events, and that their depictions in the books are indistinguishable from the places and events in the world. As discussed in a previous chapter, the ‘epic’ form (Bakhtin, 1981) and the ‘objective’ research form fall back on a distanced tone to establish themselves as authoritative; as a singular and true voice which stands outside of time and subjectivity.

In contrast, liminal fantasies which use the tone of fables use distance not to establish authority but to foreground questions and ontological seams by drawing attention to and/or transgressing these conventions (McHale, 2004).
The thinned tale contains fragments of past and present, and it may construct possibilities of alternative versions of these. In this way the thinned account manifests continuity as well as contingency. It explicitly questions singular veracity, framing alternative writings and readings as implicated in the events of history and present. For example, Wizard is made a legendary figure – he may have been a war veteran, a scholar, a homeless person, an engineer and a warrior, or a man battling with some form of malignant past. In phrases such as ‘some said’ (p.1), it is implied that his categorisation and truth are dependent on who has given the account and how – on the form of measurement applied. Similarly, other characters of the streets in the novel are enigmatic and liminal – possibly ‘real’, yet ‘ordinary’, or possibly mythical types, both ‘real’ and ‘magical’, or possibly creations of Wizard’s imagination. An apparatus involving the creation of a legendary or ‘thinned’ world where things are uncertain and distanced produces a malleably sedimenting world, enfolded with time, recording the marks of past and present, and recording the historical version which emerges from the ‘measurement’ of the telling or writing, but denying fixed pre-existing interpretations.

... an empirically accurate understanding of scientific practice...strongly suggests a fundamental inseparability of epistemological, ontological and ethical considerations.

(Barad, 2007, p. 25)

We are a part of that nature that we seek to understand.

(Barad, 2007, p. 26)

Because it can take into account the writing as co-constituting history, the apparatus involving the thinned world can also enable understanding of the ‘fundamental inseparability of epistemological, ontological and ethical considerations’ (Barad, 2007, p. 25) and our own ethical role in entanglements with nature.
Wizard (Lindholm, 2002) draws attention to laws and social rules as parts of apparatuses which have agency in co-constructing the world. In the novel Wizard, one of the urban homeless and possibly a war veteran, is close to invisible to the city at large. People and historical and cultural ideas which we choose not to attend to, do not exist. Rules and laws, rather than objective reflections of truths about that which protects us, are an aspect of our complicity in co-constituting invisibility and non-existence, and in the injustices these create.

Similarly, Wizard’s own explicit and powerful rules are also co-constituting of his word. He must never have more than a dollar in his pocket; he must remain celibate; and he must feed and protect the pigeons (Lindholm, 2002). These are the specific apparatuses Wizard uses in his attunement to and relationships with the world. His rules are tenuous, physically disciplined and compassionate, and these patterns are manifest in the co-construction of the city of Seattle, which is a precarious, materially demanding space which is largely benevolent, and yet, because of the entanglement of the rules of others, is also indifferent to and ignorant of Wizard’s existence. Lindholm draws our attention to Wizard’s rules by positioning them on a threshold between the banal and the fantastic. They are strange, unlike ordinary conventions of life, so we attend more fully to the way they diffract though the world and ontic phenomena. They are at the same time mundane rules, involving the everyday and the domestic. The authorial style in general is also dependent on this defamiliarisation (Mendlesohn, 2008) – unfussy statements of possibility without fanfare, contributing to this thin place. Rather than dismiss the rules as fantastic, our attention and response to rules in general shifts and opens. We are brought to wonder at their arbitrariness, their alternatives, their marks and diffractive patterns in the world.

_The point is that the specificity of entanglements is everything. The apparatuses must be tuned to the particularities of the entanglements at hand. The key question in each case is this: how to responsibly explore entanglements and the differences they make._

(Barad, 2007, p. 74)
Barad (2007) argues above that we must discover how to responsibly explore entanglements and the differences they make. Constituting a thinned world, of truths and materialisations which are thinly sedimenting rather than permanent and solid, and which are dependent on particular articulations and apparatuses, is helpful in this. The defamiliarisation of rules and laws creates our estrangement from them and enables us to see them and that which they assist in making substantial or invisible in the world, anew. Wizard shows that ‘The cuts that we participate in enacting matter. Indeed, ethics cannot be about responding to the other as if the other is the radical outside to the self’ (Barad, 2007, p. 178). In Wizard’s world ethics, rules, laws, people and the city, are mutually co-constituting.

**Research, coral, sedimentation, enfolded life and death**

...apparatuses produce differences that matter – they are boundary making practices that are formative of matter and meaning.

(Barad, 2007, p. 146)

Apparatuses are ‘boundary making practices’ (Barad, 2007, p. 146) and matter is ‘the sedimenting historicity of practices/agencies and an agentive force in the world’s becoming’ (Barad, 2007, p. 180). We need to understand how past, present and future are not left behind or ahead, but always ingrained or enfolded in the boundary making and mattering and the marking of the world. Coral reefs demonstrate an apparatus of such understanding. Coral reefs emerge through ‘contingencies of geology and biology’ (McCalman, 2013, Prologue, location 200). With these fundamentally inseparable entities, light, temperature, water, animal and plant life, soil, sand, rock, and slowly subsiding ocean floor, as well as human recreation, industry and economic structures, are entangled and through fragile communicating relationships, co-emerge as coral.
Coral also shows how life and death should also be understood as contingent boundary making practices that make up the world, rather than fixed and immutable binary states. Coral contains structures both living and dead, which are indistinguishably entangled. As sea levels rise, coral structures unable to access light die and become the rock formations from which new living layers of corals are inseparable and flourish. In coral, matter is constantly stabilising and destabilising, enfolding living and dying, enfolding history and present. Reefs are ‘nature’s archives and historians’, ‘complex databanks that record evidence of environmental changes from millions of years ago up to the present’, including ‘stories of the mass-extinction events of the geological past’ (McCalman, 2013, Part 3, Section 4, location 4673) and their links to other phenomena including the carbon cycle. Reefs then are models of enfolded, inseparable sedimentations of life and death and history and present.

**Research, coral, co-emerging differentiation, marks on bodies,**

As Thiele (2014) has suggested, the challenge of how to live in a world of multiplicity and differentiation without creating increasing conflict and separation is an issue of primacy in the ethics of the mattering of the world. This understanding of coral-like enfolded sedimentation creating contingent separations in the world assists us to re-consider complex phenomena, for example those which have been entangled in ongoing conflict, such as ‘history’, ‘justice’, or ‘race’. American journalist Ta-Nehisi Coates (2015) discusses the artificial separation of peoples into distinct races as a source of ‘old and indistinct sadness’ (p. 5) for him. Coates uses the signifier ‘those who believe that they are white’ (p.5), who have built their identity and society on the mistaken belief in the invention of ‘race’: the belief that ‘hair and hue’ are deeper and indelible attributes which can ‘correctly organise a society’ (p.5), and on exploitation of this belief and violence in its name. As he says, ‘white’ is a new invention. Before people were white they were something else: ‘Catholic, Corsican, Welsh, Mennonite, Jewish - and if all our national hopes have any fulfilment they will have to be something else again. (p. 7)’. But to his son he writes:
Coates (2015) articulates how American democracy is inseparable from its enfoldings of torture, theft and enslavement of bodies, and is a history and reality from which ‘no one can declare themselves immune’ (p. 5). The history and identities built around the constructed notion of race are corporeal, violent and irreversibly sedimented in the world, and enfolded in reality in the present and future. Morality and ethics are not detached from history and social phenomena, nor from ‘things’ including coal or coral or race. Morality and ethics are not abstract, ideological and insubstantial, but contribute to the enfolded mattering of bodies, culture, history and nature.

Coates’ (2015) discussion offers the possibility that if the differentiations race and whiteness are an invention, these can be re-invented, however, not by erasure of the past, as this is already there in what exists and what will exist. Human differentiation is like that of coral: co-emerging in wondrous forms through separations which are only contingent. As Barad says:

*To be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence.*

(Barad, 2007, p. ix)
In the *Wind-up Bird Chronicle*, the Leader says: ‘*There is nothing in the world that never takes a step outside a person’s heart*’ (Murakami, 2012, p. 638). But this should be understood at a more profound and complex level than the implication that pure-hearted intentions have good effects in the world. However well-intentioned research is, if it is only conceived as efforts to explain and understand the world and does not enable examination of its own role in the world’s creation, it is severely restricted in its capacity to work toward a more ethical and just world. The consciousness that creations in texts, minds and hearts are *always already* diffracting in the world, creating that which exists, can help us avoid the pretence that ethics is about responding to the other, and can mean ethics is about co-responsibility for our apparatuses, their diffractions and their effects.

In the introduction to this project I identified the Australian imperialistic fiction of *terra nullius*: ‘no one’s land’, as another complex apparatus which has brought certain things into being through certain boundary making practices, and cancelled out others. This has included the negation of the history of the continent prior to European contact and the near nullification of the present and future existence and culture of its Indigenous people (Lindqvist, 2007).

Coral reefs show us that apparatuses and materialisations such as race and *terra nullius* are both substantial and fragile, marked by, and marking the world with, their entanglements. Corals are the ‘canaries’ of the contemporary global world, as coral bleaching and death are some of the most materially marked and obvious indicators of how the balance of entangled entities is delicate, and can tip between enabling flourishing or destruction. Coral bleaching indicates shifting entanglements: changes in pollution, water nutrients, and water temperature which have reached levels patterning and leaving eternal marks throughout global eco-systems (McCalman, 2013). Coral shows that marks on bodies matter, that the resources we take for granted are contingent, not limitless and eternal, that they emerge from complex and fragile relationships, from which our own existence is inseparable. As a material intensity in a pattern which has at last been brought to our unavoidable attention, corals also show us that new thinking and co-
responsibility are matters of urgency. Marks on bodies are eternally enfolded in spacetime. The world, in any of its possible futures, will forever retain the traces of an intensification of destructive marks on bodies.

**Researcher-reef**

...human bodies, like all other bodies, are not entities with inherent boundaries and properties but phenomena that acquire specific boundaries and properties through the open-ended dynamics of intra-activity. Humans are part of the world-body space in its dynamic construction.

(Barad, 2007, p. 172).

... Ultimately, however, the far-reaching implications of Bohr’s epistemology and his posthumanist insights are cut short by his unexamined humanist commitments – his anti-Copernicanism, as it were, which places the human back at the center of the universe.

(Barad, 2007, p. 26)

*These causal intra-actions need not involve humans.*

(Barad, 2007, p. 140)

A last observation is that this experiment has not come far in the project to consider to what extent it is possible to displace anthropocentrism in our writing. It needs to be reinforced that agential realism constructs humanity as contingent separations among others, and ‘causal intra-actions need not involve humans’ (Barad, 2007, p. 140). Thus, an aspect of the liminal fantasy texts intra-acting in this chapter which is not properly consistent with agential realism is the emerging pattern of pivotal interest in the lives and locations of
humans and the assumption that humans are separate from the world. While I have suggested that liminal fantasy can point to an ontology of indeterminacy via its chronotope of the threshold, its maintenance of the virtually unquestioned literary tradition of the human protagonist at the narrative core means its anthropocentrism is inevitable.

It is difficult to conceive how fiction might move around this issue of anthropocentrism, and therefore this seems a significant limitation of fiction as a source of ideas and patterns for writing chronotopes of agential realism. But I do suggest that the liminal fantasy discussed in this chapter may contain some ripples for considering these possibilities. Murakami describes the way his writing process brings out an iteration of self which is separate yet is also part of him:

Please think about it this way: I have a twin brother. And when I was two years old, one of us—the other one—was kidnapped. He was brought to a faraway place and we haven’t seen each other since. I think my protagonist is him. A part of myself, but not me, and we haven’t seen each other for a long time. It’s a kind of alternative form of myself.

(Murakami interview, Wray, 2004, Summer para. 85)

This might suggest a modernist, fragmented constitution of identity, one in which the protagonist represents an aspect of the self, as the self is not unified and can only ever be experienced and represented contingently and partially. But on the other hand, the description can be seen as a constitution of self as distributed, or entangled and inseparable rather than fractured or doubled. And Murakami’s characters seem to support this possibility. Murakami does not so much write shattered, discontinuous, disjointed selves as are common in modernist fiction, or strange mirror selves, doppelgangers, or androids, which estrange and fracture the self and are common in postmodernist and science fiction (Klapcsik, 2012). Instead, in *1Q84* (2012), the characters Eriko, Fuku-Eri, and Tengo are in impenetrable entanglements. Eriko and Fuka-Eri are possibly the same person, or perhaps different kinds of intensities of one person. Tengo and Fuka-Eri/Eriko co-author a book together, and are inextricably joined in this way, and are also otherwise ambiguously connected.
The three are not so much alternative versions of each other as they are a distribution of identity and agency across three people. Like the doppelganger of science fiction, these characters also enable the questioning of the meaning and nature of authenticity. But not in the sense that they present an argument that authentic identity is an empty concept, containing no meaning or truth, but only infinite possible differentiations. Instead they arguably present a particular reality of identity which is different to that which we accustomed. This different form of identity, involves as I have said, inseparable entanglements. Humans are not singular, nor fractured individuals – they are perhaps, a distribution of agency co-emerging in human forms.

Further, in the novel, the relationship between the characters enables the co-emergence of agency in other, non-human forms. Tengo and Eriko co-author the story of the *Air Chrysalis*. ‘They joined forces to complete a single work. And the fruits of their collaboration turned out to have a great impact’ (Murakami, 2012, p. 661).

As Murakami goes on to say:

> Tengo wrote a story about the Little People and their deeds. Eriko furnished the basic story, and Tengo converted it into an effective piece of writing...It was published as a book and became a bestseller, as a result of which, if only temporarily, the Little People found that many potential avenues had been closed for them, and limits were placed on several of their actions.

(Murakami, 2012, p. 665)

Tengo and Eriko’s collaboration enables the co-emergence of other phenomena and further patterns in the world. The story they publish, has further diffracting effects, including certain (un-specified) restrictions on the movements and existence of other phenomena.

This writing, while largely anthropocentric, does enable some different thinking about agency and human identity which challenges the metaphysics of individual determinism. Humans are a distribution of agency co-emerging in human form non-human forms, inextricable from one another. Their significance is not centred on their unique individualised forms, but rather, the
reader’s attention is directed to the co-emerging phenomena and effects of their relationships.

When we research, we are always already entangled in the co-constitutions of the research and there is no way around this, so there can be no project to remove the researcher from research process and outcomes. However, instead, this experiment creates patterns suggestive of research as more a democratic attunement to existence; an existence in which humans are permeably sedimented, enfolded and entangled but are not privileged. The image of the researcher in this chronotope is one who both takes part in an apparatus and these relations, and inseparably co-emerges in and through these. Attention is enabled toward these co-emerging effects: Effects in human form, and in other forms of phenomena.

Again, the coral reef is useful in this construction. Our understanding of this ethics rests on our ability to understand ourselves not as an ‘endless multiplicity of singular individuals’, in the world, but as ‘severality that traverses subjectivity’ (Thiele, 2014, p. 211). In the complex phenomena emerging as coral we can see this traversal of severality, the ‘impossibility of not sharing’ (Thiele, 2014, p. 213); the impossibility of acting separately, or on behalf of. There is only the possibility of acting with. The implications of this are that the products of research are neither revelations of external knowledge, nor are they are own subjective creations. They are beyond human ownership or credit, but co-constitutions with which we ourselves co-emerge.

**Research writing apparatuses, coral apparatuses**

...apparatuses produce differences that matter – they are boundary making practices that are formative of matter and meaning.

(Barad, 2007, p. 146)
Barad (2007) explains that uncertainty is not our central ontological issue. The epistemological and ontological implication of agential realism and of quantum theory as elaborated by Bohr, is not uncertainty – that we cannot know reality, or can only know it partially – but is indeterminacy – that reality is itself indeterminate until measured. This means that chronotopes constructing the universe as either fixed and determinate, or as fundamentally uncertain and in flux, are in many ways unhelpful in a quest to re-imagine research which ethically embraces the possibilities of the universe.

To think with agential realism requires rethinking of some of the most fundamental ontological dualisms, as the concept of a universe which is essentially indeterminate is counter to many of our common-sense ideas of what is and is not real, and what is and is not truth. To reimagine the world accommodating this indeterminacy, demands we cultivate an attunement to or perception of different kinds of qualities: those which are unbounded, in potential, on the threshold, undefined, or liminal; those which enable wonder, and a more democratic attunement to the possibilities of the world. We already possess this capacity for indeterminate liminal thought, but the apparatuses of our ontology and education systems do not direct us well to understand the liminal ways we think and experience, to understand and conceive of the universe as indeterminate. We have been taught that these ways of knowing are not valuable.

What is needed is a chronotope for research writing which simultaneously recognises and constructs the world as indeterminate; and recognises its own role as part of the measuring apparatus in creating the possibilities for determinate meaning. In this experiment using chronotopes I have created a ‘method attuned to the entanglement of the apparatuses of production, one that
enables genealogical analyses of how boundaries are produced’ (Barad, 2007, p. 29). I have argued that experimenting with chronotopes – the images of space and time which are concretised in textual apparatuses – does give us some tools for the analysis of how ontological, ontic and research writing boundaries are produced. In the process, I have also attended to patterns suggestive of new possibilities for thinking about and conducting social science research writing, new images of space and time in texts, which might also accommodate a more profound understanding of ontology including our own role in an agential realist world and its creation and change, and in so doing be a more effective and substantial tool for opening the possibilities of ethical research in the complex demands of this world.

I have looked at fiction and at social science writing-as-research as sources of patterns for creating/understanding such an apparatus. I have attended to what these patterns suggest about how research can be understood and conducted as ‘a matter of differential responsiveness...to what matters’ (Barad, 2007, p. 149), and how research might be understood and conducted as part of the process in which ‘part of the world becomes determinately bounded and propertied in its emergent intelligibility to another part of the world’ (Barad, 2007, p. 149).

The patterns of this experiment intensify an image of the researcher as always already participating in research. In my process of developing consciousness of ‘the dormant image(s) inside me’ which I am already ‘giving concrete form to’ (Murakami, 2012, p. 544), I have considered the ice floe, which has been a formative chronotope pattern and image of research throughout. Examining this image of the ice floe provided me a starting point, or maggot image for the research, and enabled me to identify an engrained idea of a chronotope of the heroic path, which existed in my thinking about research: Research as heroic ordeal, a Shackleton-esque trek across the ice. This insight enabled me to shift my attention and to see possibilities of the ice itself, an ice floe chronotope; as a phenomenon with fractures, gaps, spaces of insubstantially; and then also as a phenomenon of wonder, co-emerging in relationship. The horizon of such a chronotope is not home and safety, nor is it inherently in flux and uncertain. In
a chronotope of co-emergence the world’s horizons are indeterminate. From the ice the horizon is indistinguishable from the sky (Senior, personal communication, 2013).

Ice floes and coral reefs share many enabling qualities for agential realism research. New patterns in this chapter in which a coral reef chronotope emerged helped me to attend more closely to the affective epistemology of wonder and indeterminacy, and its co-constitutions and possibilities in the world.

The patterns emerging in this project suggest that a chronotope of agential realism might enable:

- Attention to intra-actions; to relation, as the essential constituting nature of the universe, whereby emergent intelligibility between one part of the universe and another is made possible.

- Responsiveness to wonder at the manifest and latent possibilities of the universe. Wonder is important as it enables the dissolution of consensus ideas that the universe is made up of already determinate things. Wonder recognises that all possibilities do exist at once.

- Attention and responsiveness to the universe, matter and knowledge as porous where porosity is not ‘emptiness’, but teeming with possibility, intra-action, responsiveness, communications, parts of the universe making themselves intelligible to other parts, for example, as in coral. Porosity enables ontological hesitancy, space, stalling, stillness, wonder and intra-actions as open, receptive communications without pre-judgement or pre-established entities. Porosity then enables a spacetime of responsiveness to possibility without determination of meaning, where new, previously undefined relationship can occur.

- Attention to the sedimenting of the world, matter and knowledge as fragile and marked by and enfolded with the entanglements it emerges through, as in coral differentiation, and in coral bleaching.

- Attention to the co-emergence and sedimenting of things in the world as only contingently separated entities. As in coral, where living and
dead, geology and biology are inseparable, life and death, material and immaterial, geology and biology, nature and humans are not stable entities, but co-emerge through boundary making, knowledge making practices. Humans are also contingently separated: a distribution of agency co-emerging in human and non-human forms, inextricable from one another.

- An understanding of ethics as already there in apparatuses of knowing which bring things into being, create contingently separate entities, and enfold past present and future in marks on bodies.
- Responsiveness to ethics by attention to that which co-emerges in intra-actions, makes a difference in the world, and makes marks on bodies. The significance of entities such as social or natural phenomena is not only in their unique individualised forms, but as well, the experimenter’s attention is directed to the co-emerging effects of their relationships.

In such a chronotope, research writing becomes part of an apparatus first for enabling porosity, new responsiveness and new relations. Second, it becomes part of an apparatus for attending to the enfolded sedimentations and effects of co-emerging knowing with the world.
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