

**‘Something else, then something else
again’: neuroscience and
connection-making in contemporary
poetry.**

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Abstract

This thesis establishes a dialogue between neuroscience and contemporary poetry, based on Bakhtin's principle of dialogicality (1981) and presents a novel approach to combining two disciplines usually regarded as separate. The contention of the thesis is that neuroscientists and poets are often concerned with the same questions about human consciousness and seek to explore the same 'mysteries' and that the perspective offered by each field can be greatly enriched by the other (Burke and Troscianko, 2013).

I define and develop the approach I call 'neuropoetics', setting close thematic studies of key poets (including Norman MacCaig, Paul Muldoon and John Burnside) and qualitative data drawn from interviews with contemporary poets in dialogue with texts and ideas from the domain of neuroscience, notably McGilchrist (2009), Ramachandran (2011), Trimble (2007) and Shermer (2011), but also including Libet et al (1983), Turner and Poppel (1983), Rizzolatti (2004), Seung (2013) and others.

In this thesis I relate the work of each of the contemporary poets in my study to key issues in contemporary neuroscience (specifically metaphor, patternicity, negative tropes and free will) according to the dialogical principles established at the start. I then draw the work of all three poets together in relation to the themes of memory and self-identity.

In conclusion, I evaluate this thesis alongside recent fMRI studies of creative writing and consider how the two approaches could be combined in a future enquiry that gives equal weight to poetry and neuroscience.

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Chapter 1: Introduction

In Chapter 7 of his *Biographia Literaria* (ed. Engell & Jackson Bate, 1983) the Romantic poet Samuel Taylor Coleridge asks the reader to consider the mind of a person engaged in an act of composition, or even in a more mundane task like trying to remember a name. He presents an analogy for this kind of thought process:

Most of my readers will have observed a small water-insect on the surface of rivulets...and will have noticed how the little animal wins its way up against the stream, by alternate pulses of active and passive motion, now resisting the current, and now yielding to it in order to gather strength and a momentary fulcrum for a further propulsion. This is no unapt emblem for the mind's self-experience in the act of thinking. There are evidently two powers at work, which relatively to each other are active and passive; and this is not possible without an intermediate faculty, which is at once both active and passive. (Coleridge, 1983: 124-5)

For Coleridge, this intermediary was the imagination, which acts as a synthesising power uniting the spirit and matter, the mind and nature, as part of the total and undivided philosophy he was trying to outline in the *Biographia*. Since art comes from the imagination, the symbols of art represent how the mind perceives itself in relation to nature. Thus art is also part of this constant mediation between man and nature. Coleridge's reference to the 'alternate pulses of active and passive motion' which accompany self-experience implies that the mind both constructs and receives its reality, in partnership with external influences.

Though Coleridge was writing the *Biographia* in 1815, his detailed account of the mind and the imagination remains pertinent in 2014, and alludes to issues at the heart of the twin disciplines examined in this thesis: neuroscience and poetry. Both often focus on the character of what we call 'the mind' and how this relates to the act of perception and to what Coleridge considered to be the realm of matter or nature, distinguishing as he did between subjective self-perception and perceptions of the observable, natural world. In this study, I will frame and develop a dialogue between neuroscience and contemporary poets and will consider the relationship between science and art, the relationship between art and the mind and 'the mind's self-experience' in the act of

thinking and, furthermore, in the act of poetic composition. The Romantic interest in the mind perceiving itself in the act of perception is something which continues to preoccupy the 21st century neuroscientists and poets examined in this thesis.

In this introductory chapter, I will briefly look at popular depictions of both neuroscience and poetry (Section 1.1) before outlining the structure the thesis will take (Section 1.2), the poets included in the study and the reasons for choosing these poets (Section 1.3) and the methodology used (Section 1.4), establishing the framework for a dialogue between neuroscience and contemporary poetry which can enhance our understanding of both disciplines and suggest new points of comparison and overlap between science and literature. My aim throughout is to create the basis for an interdisciplinary conversation between these two different perspectives.

1.1 Popular depictions of neuroscience and poetry

In ‘Secrets of the Brain’, published in *National Geographic* (February 2014), Zimmer observes: ‘Scientists are learning so much about the brain now that it’s easy to forget that for much of history we had no idea at all how it worked or even what it was.’ (Zimmer, 2014: 28) We are, as a BBC article from 2012 noted, living in ‘a golden age of discovery in neuroscience’ (Feilden, 2012) in which it might be easy to forget that this science has only come to prominence in the last three decades.

In contrast to this ‘golden age’, a 2009 Newsnight discussion of contemporary poetry focused on the question ‘does poetry have an image problem?’, with poet contributor Simon Armitage noting:

The answer to the question is, of course, that’s what it’s there for - to have an image problem. Poetry is obstinately not trying to appeal to everybody, it’s disobedient, it's contrary. It doesn’t reach the right hand margin most of the time, it doesn’t even reach the bottom of the page a lot of the time, it simply isn’t there to please...(Armitage, 2009)¹

Thus while popular depictions of neuroscience focus on portraying it as a science which is gradually solving the mysteries of the human condition, popular depictions of contemporary poetry continue to portray it as an art form which is both mysterious and

¹ Simon Armitage, Newsnight Review, 29th May, 2009, cited by Farry, June 2009.

inaccessible even if, as Armitage seems to imply, that mystique and refusal to ‘appeal to everybody’ might be seen as a desirable characteristic, or even a mark of rarity and importance.

The contention of this thesis is that neuroscience and poetry are two very different but ultimately complementary means of uncovering or challenging ‘truths’ about the human condition and, as such, can be used to engage in a meaningful dialogue in which poetry is afforded as much weight and significance as neuroscience (see McGilchrist, 2009) rather than a scenario in which, as Pinker has put it ‘the intrusion of science into the territories of the humanities has been deeply resented’ (Pinker, 2013). This dialogue will recognise the importance of poetry in complementing and tempering the view of humanity offered by neuroscience as well as vice-versa, recognising the limitations of the scientific paradigm. To quote McGilchrist (writing in the *LA Review of Books* in September 2013):

It is hard for science to get beyond the Enlightenment tenets identified by Isaiah Berlin: ‘that all genuine questions can be answered, that if a question cannot be answered it is not a question; that all these answers are knowable, that they can be discovered by means which can be learnt and taught to other persons; and that all the answers must be compatible with one another.’ (McGilchrist, 2013)

This thesis will examine the incompatible ideas poetry encompasses as well as the questions neuroscience asks. It will focus on how poetry often highlights mysteries that neuroscience cannot answer, just as neuroscience suggests solutions to questions that preoccupy poets.

As well as the field of cognitive poetics (discussed in Chapter 2, Sections 2.7 and 2.8) which has already attempted to look at reading processes and literary effects in terms of common psychological and cognitive experiences (see Stockwell, 2002; Gavins and Steen, 2003), focusing on psychology and cognitive science rather than neuroscience, the link between our understanding of poetry and our understanding of human consciousness has been alluded to in literary scholarship by writers such as M.H. Abrams (1953) and poets such as Michael Donaghy (2009). This thesis will draw upon the experiences of poets themselves (as discussed in Section 1.4 of this chapter) and on Donaghy’s discursive writing about brains, minds and poetry, interweaving these different accounts.

In 'Wallflowers' from his posthumously collected essays, *The Shape of the Dance*, Donaghy explores the different ways we try to think of or conceptualise consciousness:

Even in our ordinary use of words like 'introspection' we locate consciousness inside our heads. We imagine a roomy mental arena, which we usually locate inside our brains, though other cultures have placed it in the heart or the guts. (Donaghy, 2009: 8)

The Italian word 'stanza', used to refer to the verses of a poem, means 'room' or 'station' or 'stopping place'. Referring to Frances Yates' *The Art of Memory* (2001) which discusses an Ancient Greek memory system, based on a technique of impressing places and images on the mind (commonly by visualising them as a house or other building) Donaghy writes:

To facilitate this feat of memorization, each part of the building would be equipped with a highly symbolic figure or striking image, to help fix the point for both the speaker and the audience. The individual alcoves or columns were known as the rooms or places, and this comes down to us today in expressions like 'topics' of conversation (from 'topoi', place); a 'commonplace' meaning cliché; or in the stanza – Italian, 'room' – of a poem. (Donaghy, 2009: 9)

He argues that a poem can be seen as a diagram of consciousness, its separate stanzas representing rooms and thus 'the page encourages an illusion and seduces us with its model of the mind.' (2009: 10)

This thesis will explore similarities between some of these 'models of the mind' offered by poetry and by the new models of mind posited by contemporary neuroscience. It will frame and explore a dialogic approach, focusing on the work of three contemporary poets, Norman MacCaig, John Burnside and Paul Muldoon. A discussion of their work and its relevance to issues in neuroscience will suggest new ways of approaching familiar questions about the cognitive and cultural significance of poetry; in particular, the role of metaphor as a bridge between body and world, how far the human (and neural) tendency to 'only connect' (Forster, 1910) informs the way poetry is written and interpreted, and how poetry might reinforce our current conception of memory as a reconstructive process rather than a process of recall. It will suggest that poetry is also a crucial means of broadening and tempering the view of humanity currently implied by neuroscience: as I will argue in Section 2.5, recent attempts by neuroscientists to look at

the significance and appreciation of art seek to emphasise universal 'laws' at the expense of particular experience and, as such, fall short.

The sections that follow (1.2 and 1.3), will summarise the arguments contained in this thesis, chapter by chapter, including an overview of each of the three poets in the study and how their work specifically relates to different issues in contemporary neuroscience, before thesis methodology is discussed in Section 1.4.

1.2 The structure of this thesis.

Chapter 2 will problematise and define both contemporary poetry (Section 2.1) and neuroscience (Section 2.2) and explain what is meant by these terms (particularly 'poetry') in the context of this thesis and in terms of a dialogue between the two. The remaining sections of the chapter form a literature review, discussing attempts to link contemporary literature and issues in neuroscience so far (Sections 2.7 and 2.8) and highlighting some of the limitations inherent in these approaches. I will focus in particular on the work of Turner (1991) and Tsur (2007) in the field of cognitive poetics and examine Tallis' (2011) critique of 'neuromania', his concern that neuroscience may be used artificially to add weight to disciplines in the humanities. Finally, Chapter 2 will suggest an alternative approach, 'neuropoetics' (Section 2.10 and 2.11). Neuropoetics uses a partial and particular definition of neuroscience, recognising its limitations as 'just one particular way of looking at things' (McGilchrist, 2009) and sets it in dialogue with contemporary poetry, since, as M.H. Abrams (1953) noted, in any given era 'theory of mind and the theory of art tend to be integrally related and turn upon similar analogues' (1953: 69). It will be argued that since we are living in the 'golden age' of neuroscience, this kind of consideration of the affinities between issues in neuroscience and issues explored by poets seems timely.

Chapters 3, 4 and 5 will relate the work of each of the contemporary poets in my study – Norman MacCaig, Paul Muldoon and John Burnside – to key issues in contemporary neuroscience, psychology and cognitive science, according to the dialogical principles discussed in Chapter 2. A detailed overview of each of the poets in the study and a chapter breakdown for each can be found in Section 1.3 of this chapter.

Chapter 6 then draws the work of all three poets together in relation to themes of memory and self-identity in their work. Section 6.1 defines 'memory' in terms of discourses in neuroscience and contemporary psychology. Section 6.2 provides an

overview of how poetry may seek to dramatize (and thus re-shape) the memories of writers and readers. Section 6.3 considers John Burnside's poetry in relation to Bartlett's seminal work *Remembering* (1932) and looks at how Burnside's poetry destabilises the notion of memory as simple recall. Section 6.4 focuses on Paul Muldoon's ability to weave 'fact' and mythology together in his many 'histories' and how this alters the relationship between past and future in his work. Section 6.5 relates Norman MacCaig's work to theories of panpsychism and the Extended Mind Hypothesis (Clark and Chalmers, 1998).

Throughout, each chapter will incorporate data gathered from a series of semi-structured, qualitative interviews with contemporary poets. The methodology and justification for these interviews is discussed in depth in Section 1.4 of this chapter.

1.3 The poets

This study is necessarily limited and constrained by my choice of poets – just three writers from an endless choice of contemporary and recent poets. However, these poets have been selected to accord with the theoretical framework underpinning my argument. This thesis is founded upon a principle of dialogicality, an idea that I define and explain fully in Section 2.10. In summary, I argue that neuroscience and poetry can illuminate each other only if they are set in dialogue, in accordance with Bakhtin's principle of dialogism (outlined in *The Dialogic Imagination*, 1981). Ideas must interact with other ideas, other attempts to describe the world so that they engage in a constant process of re-description. Neuroscience and poetry can help to 're-describe' one another when set in dialogue.

The principle of dialogicality has informed my choice of key writers as well as my approach to combining neuroscience and poetry. Each of the three poets has been chosen because their work illustrates an area of particular focus in contemporary neuroscience (metaphor for MacCaig, patternicity for Muldoon and the concept of the 'self' for Burnside) but also, crucially, because the three can be set in conversation with one another around a key theme: as I explore in Chapter 6, the work of each of these poets is especially pertinent to the subject of memory, a constant focus in neuroscientific discourse (see Loftus, 2006, Schacter, 1996). Thus the three poets have a dialogical relationship with each other as well as with some of the most pertinent

issues in neuroscience. Each has been chosen because there are thematic aspects of their work that have a parallel with work in neuroscience, making them appropriate choices. I hope that future studies will seek to extend the approach I illustrate in this thesis with the work of Muldoon, Burnside and MacCaig to other traditions, styles and approaches within contemporary poetry, giving a broader perspective. As my study tries to illustrate the new concept of ‘neuopoetics’, as it is a starting-point, I have confined my choice of poets to three writers whose major themes have some affinity with key areas of enquiry in neuroscience.

Nonetheless, MacCaig, Burnside and Muldoon are also set in dialogue throughout this thesis with the work of other poets, from Richard Wilbur to Andrew Waterhouse. They are also in a discourse with qualitative data gathered from a sample of contemporary poets discussing their own creative processes – the methodology and approach used to gather this data will be discussed in depth in Section 1.4. As such, the study focuses on MacCaig, Muldoon and Burnside as a starting point but it is not exclusively limited to them. This thesis presents a dialogue in which neuroscientists and contemporary poets are in conversation with three poets who are also, in turn, in conversation with each other.

Though MacCaig, Burnside and Muldoon are used in my thesis to exemplify how poets might be set in dialogue with pertinent issues in neuroscience as part of a neuopoetic approach and, as such, my study is not intended to be an exhaustive or even wholly representative survey of contemporary poetry, I have also chosen each writer because they do occupy a significant position in the landscape of contemporary poetry. The work of Norman MacCaig is currently receiving a renewed critical interest since the publication of Andrew Greig’s *At The Loch of The Green Corrie* (2010) and in the wake of the death of Seamus Heaney in 2013, since MacCaig’s influence on Heaney was significant. Heaney is quoted on the cover of *The Poems of Norman MacCaig* as saying: ‘he means poetry to me’ (2005) and remarked that MacCaig seemed to have ‘direct access to the word-hoard’ (2010). Heaney regarded MacCaig, it seems, as a truly ‘lyric poet’ (2010) and, as such, his significance within the lyric tradition should not be underestimated.

Paul Muldoon has received similar approbation from Heaney and was recognised by Potts (2001) as ‘the most significant English-language poet born since the second world

war' and as 'among the few significant poets of our half-century' and his influence on subsequent generations of lyric poets in Britain and the USA has been strong, from Don Paterson to Nick Laird and Frances Leviston. As Sampson (2012) puts it: 'it is impossible to ignore the influence of this tremendous game-player, on...nearly every poet writing in Britain today...exhilarating, dazzling: Muldoon's writing changes what literary language does as cannily as Samuel Beckett did and in analogous ways.' (2012: 226).

John Burnside is one of only two contemporary poets to have won the Forward Prize and the T.S. Eliot Prize for the same collection of poems and Sampson (2012) identifies him as a leading figure in the school of contemporary poetry she calls 'the expanded lyric' (2012: 246), a style which 'has become a flamboyant presence in the centre ground of British poetry' (2012: 246). Contrasting him with 'new formalist' poets like Don Paterson, Sampson argues that Burnside epitomises this expansive tendency in British poetry and suggests that these two divergent styles constitute different responses to globalization - one conservative, one expansive (Sampson, 2012: 227). Whilst Sampson's reductive dichotomy and celebration of Burnside's 'bold and radical' poetry (2012: 246) obscures some of the rhetorical similarities between the work of Burnside and, for example, someone like Paterson, as well as ignoring what may be 'bold and radical' about the conventional lyric, her evaluation of his work does draw attention to Burnside's European and American influences and his distinctive use of stepped verse ('this poetry's central gesture is a kind of topple' – Sampson, 2012: 248). Thus Burnside is an equally significant figure in the landscape of contemporary poetry but his work represents a looser kind of lyric than the work of either MacCaig or Muldoon.

Even given this difference, it would be impossible to argue that my three poets represent a diverse cross-section of contemporary British poetry. Because this study is intended as a starting point, they have partly been chosen for the affinities they share so that the resulting dialogue between the poets and neuroscience is coherent and self-contained, so that links can be established between the work of all three poets. I have chosen three writers who all occupy a significant and influential position within one particular (and crucial) strand of contemporary poetry – the lyric tradition – by way of illustrating the form a dialogue between poetry and neuroscience might take. I hope that

future studies will be able to apply this approach to a consideration of different writers and schools of contemporary poetry, giving a more varied perspective.

The following sections introduce the work of each of the key writers in my study in greater detail.

1.3.1 Norman MacCaig

Norman MacCaig (1910-1996) was born in Edinburgh and worked as a primary school teacher as well as a poet. A contemporary of George Mackay Brown, Hugh MacDiarmid and Robert Garioch, he was rare among his generation in writing virtually nothing but poems. MacCaig divided his time between Edinburgh and the West Highlands. His evocations of the natural world (particularly the landscape of Assynt) draw attention to the different ways people see and talk about that world and problematise the ways in which we use language. A poem like 'Instrument and Agent' is a good example of MacCaig's yearning to be closer to the 'true' nature of things before thought itself distorts them:

INSTRUMENT AND AGENT

In my eye I've no apple: every object
Enters in there with hands in pockets.
I welcome them all, just as they are,
Everyone equal, none a stranger.

Yet in the short journey they make
To my skull's back, each takes a look
From another, or a gesture, or
A special way of saying *Sir*.

So tree is partly girl; moon
And wit slide through the sky together;
And which is star – what's come a million
Miles or gone those inches further?

(MacCaig, 2005: 4)

MacCaig's narrator wants to apprehend objects from the world around him just as they are – the phrase 'hands in pockets' seems to stand for a desire to catch the natural world off guard (the use of this metaphor for nonchalance becoming slightly ironic in its context). Yet something alters in the act of apprehension, in the 'short journey' to the 'skull's back'. Our ways of seeing introduce a change, perhaps even a kind of contamination (MacCaig's use of the word 'equal' suggests that objects enter the narrator's head in a state which is somehow pure or desirable). The metaphoric conceit of the second stanza is one of a menagerie (or perhaps a classroom) where pure objects are influenced by their relationship to others. This process of change finds a parallel in descriptions of neural activation: Feldman (2008) has written at length about how proper nouns are represented neurally, suggesting that concepts are probably represented in the brain by clusters of 10-100 neurons. Thus it is not true that each concept has its own neuron, but neither is it true that a given concept is represented in all areas of the brain (2008: 216), concepts are recognised through patterns of activation. In a different way, MacCaig's work explores a similar idea to this scientific concept through a subtle analogy of reflection. Each item 'takes a look' from another and is changed in doing so, in a similar way to how Feldman describes activations working across the brain, arguing that language is a way of connecting form and meaning and this is demonstrated by the case of metaphors which map across domains, activating novel conceptual linkages. In an unscientific, poetic analogy, we might say that neurons 'take a look' from another in the process of activation.

By ending 'Instrument and Agent' with a question, MacCaig dances around his subject, characteristically resisting the urge to attempt an authoritative conclusion: how can we 'conclude' when we have two competing versions of reality; the world we apprehend through our immediate senses and the world we represent mentally? It is a question which MacCaig frames again and again in his work, using it to interrogate his narrators' use of language itself. Chapter 3 of this thesis will explore the different ways in which he does so.

Sections 3.2 and 3.3 explore MacCaig's ambivalent relationship with metaphor, the

‘exactness and inadequacy’ of it that he describes in his poem ‘No Choice’, looking at how his work both distrusts and utilises metaphor. In Section 3.4, MacCaig’s use of metaphor is related to the ambivalent position that metaphor also occupies in many neuroscientific discourses, with particular reference to the work of Ramachandran (2011), McGilchrist (2009) and to Mithen’s (2005) theories about the mimetic origins of language. Section 3.5 compares MacCaig’s use of language and his distrust of metaphor to theories of embodied cognition (Gibbs, 2006; Fuchs, 2009; Anderson, 2003). Section 3.7 relates MacCaig’s poetry to McGilchrist’s (2009) conception of the right hemisphere and, in particular, to Gestaltism and the acceptance of uncertainty and paradox.

Thus MacCaig’s ambivalent relationship with metaphor and his suspicion of anthropocentrism makes him an interesting writer to set in dialogue with neuroscientists trying to unwrap the ‘mysteries’ of metaphor (Ramachandran, 2011) and with proponents of the Extended Mind Hypothesis (Clark and Chalmers, 1998) as well as with contemporary poets discussing their own relationship with metaphor during the writing process.

1.3.2 Paul Muldoon

Paul Muldoon (1951-), the subject of Chapter 4, is from County Armagh in Northern Ireland. He read English at Queen’s University, Belfast, where he came into contact with Seamus Heaney and associated with the ‘Belfast Group’ of poets, including Michael Longley, Ciaran Carson and Medbh McGuckian. He is a writer renowned for his ability to show the connections between seemingly unrelated things and his work is often considered to display a profound duality (see Kendall, 1996; McDonald, 2004), which finds interesting parallels in the neuroscientific literature on functional asymmetry. In ‘Something Else’ (from *Meeting The British*, 1987), Muldoon riffs on the theme of connection itself:

SOMETHING ELSE

When your lobster was lifted out of the tank
to be weighed
I thought of woad,

of madders, of fugitive, indigo inks,

of how Nerval
was given to promenade
a lobster on a gossamer thread,
how, when a decent interval

had passed
(son front rouge encore du baiser la reine)
and his hopes of Adrienne

proved false,
he hanged himself from a lamp-post
with a length of chain, which made me think

of something else, then something else again.

(Muldoon, 2001: 173)

This poem (which might be read as an off-kilter sonnet with the final, self-conscious line as a crucial addendum) makes a show of its own connectivity: the narrator links ideas endlessly and the ‘something else’ of their content matters less than the connection itself. The dark humour of the solitary last line is reinforced by the strong rhyme of ‘again’ with the starkness of the ‘chain’, Nerval’s chosen method of suicide. Here, ‘chain’ also makes us think of a chain of ideas, the chain of linkages that Muldoon has established in his short poem as well as length of chain used by Nerval.

Though the last line seems to imply that connections are casual - arbitrary almost - the comparison between the lobster and the death of Nerval is far from throwaway. As Kendall (1996) has noted, the poem ‘begins by trying to blot out the lobster’s imminent death but finds itself, through a process of analogic association, headed fatally towards another death.’ (Kendall, 1996: 133)

Thus the poem itself has a double life. It is both a strange meditation on death and ‘an inquisition into the nature of memory and the creative impulse.’ (Kendall, 1996: 133). This is typical of the work of Muldoon which is, as Brearton says, characterised by ‘lexicographical obsessions, dabbling in symbolic and actual (sometimes magic) mushrooms, fascination with circular patterning.’ (Brearton, 2004: 45)

Chapter 4 will suggest that this ‘circular patterning’ often mimics something of the nature of thought itself and that one of the dualities explored indirectly in Muldoon’s work is the relationship between the two hemispheres of the brain, a fundamental duality of thought. Section 4.2 will discuss how literary critics have represented duality as a theme in Muldoon’s work, particularly in relation to politics (see Wills, 1998; O’Brien, 1998) and will suggest that some of these interpretations amount to a mis-reading, an excessive willingness to ascribe political overtones to a Northern Irish poet. Section 4.3 will suggest that these dualities might signify a preoccupation with a more fundamental doubling (that of the hemispheres and their two different attitudinal modes – see McGilchrist, 2009). Sections 4.5 and 4.6 will look at connection (and hyper-connection) in Muldoon’s work, relating this to Shermer’s *The Believing Brain* (2011) and the notion of ‘patternicity’. Section 4.7 will examine the exaggerated tendency towards hyper-connection in Muldoon’s later work and relate this to Seung’s *Connectome* (2013).

As I demonstrate in Chapter 4, the ways in which Muldoon is often read by critics and the ways he encourages others to read poems (see *The End of the Poem*, 2006) make his work well suited to a dialogue with neuroscientists looking at the ‘connectome’ (Seung, 2013) and patternicity (Shermer, 2010) as much as the poems themselves do. Muldoon’s poetry and critical writing can also be usefully set in dialogue with contemporary poets talking about connection-making in their writing processes.

1.3.3 John Burnside

John Burnside (1955-) was born in Dunfermline, Scotland but grew up in Corby, Northamptonshire. He has written about his early life – particularly his father’s violence and the early death of his mother - in three memoirs, which are discussed alongside his poetry in Chapter 5 of this thesis. He is one of only two poets to have won both the

T.S. Eliot Prize and the Forward Prize for the same collection (*Black Cat Bone*, 2011). His poetry is often characterised in terms of its liminality and its concern with a world before or beyond naming. Brown (2011) has called the space that Burnside's work occupies a 'lit space', dwelling in the gap between the self and the other, the internal and the external, the imaginary and the real, between culture and nature. As Borthwick (2011) suggests, this liminality seems deliberate: 'Burnside is perfectly conscious of his tendency towards irresolution...he purposefully avoids limitation and definition' (Borthwick, 2011: 96)

In Chapter 5, I will argue that this notion of liminality in Burnside's work can be differently conceived as a result of apophenia: the tendency to see meaningful patterns in arbitrary data, a condition which Burnside has self-diagnosed (Burnside, 2010) and an issue of relevance to neuroscience and those studying connection-making (particularly patternicity – see Shermer, 2011). As such, what critics often identify as the 'elusive' or 'mysterious' in Burnside's work actually stems from a kind of hyper-connectivity. A poem like 'Documentary' from his collection *The Hunt in the Forest* (2009) illustrates Burnside's preference for what Sampson (2011) has called 'chain-link imagery', or a 'daisy-chain of descriptive logic' (Sampson, 2011: 117)

DOCUMENTARY

I keep imagining another place:

somewhere from one of those slightly too plausible films
where the street is a parallel street in a parallel world

and everything is altered slightly, though not that much,
only another version of what we know

going about its business, our parallel selves
brighter and more successful than we seem,

but touched, still, with a possibility:
the parallel, we're led to guess

of *us*.
So it continues, one world feeding the next
with minor variations, like the days

we pass so calmly, unaware of all this
business: quarks

and singularities,
and everything coming to light in a fold of time

where something that never was, or might have been,
occurs, at last, in some infinity,

to people much like us, though not quite us,
who think of us more fondly than we know.

(Burnside, 2009: 25)

A poem like 'Documentary' might be seen as a product of the apophenic tendency in Burnside's work. Typically of Burnside, this poem is concerned with parallel lives: 'one world feeding into the next' endlessly. The poet creates a hall of mirrors in which everything is both similar and different to what we know, or think we know. These parallel lines stretch towards an ethereal conclusion: our destination is not a place but a 'fold of time' where 'something that never was, or might have been' occurs infinitely.

Chapter 5 will argue that this kind of slippery philosophy, always resisting the material world and its confines, is not the product of what Richardson (2002) characterises as a 'sentimentalised unknowing' in Burnside's poetry, the result of the poet himself being 'a mystagogue, the quack who lives by refusing to emerge from mystery' (Richardson, 2002). It is not that Burnside hides in mystery because he dares not interrogate it, rather he refers to these absent, parallel worlds so much because of his apophenic tendency towards the 'unmotivated seeing of connections (accompanied by) a specific feeling of abnormal meaningfulness.' (Hubscher, 2007). When the world seems infinitely and

intricately connected, it can only be escaped by the construction of what Burnside has described in *Poetry Review* as an ‘autre-monde’. (2005: Vol. 95:60)

Section 5.1 will outline the critical reception of Burnside’s work in depth, focusing on representations of liminality. Section 5.2 will make an argument for poetry as a ‘diagram of consciousness’ (Donaghy, 2009) and this argument will be extended in Section 5.3 to show how Burnside’s experiences of apophenia are represented in his creative output. Section 5.4 will examine the role of parallel worlds and negative tropes in Burnside’s work (with reference to Hidalgo Downing, 2000) and Section 5.5 will suggest that the negative serves a very particular psychological function in Burnside’s poetry, protecting against the over-connective tendencies that those who have experienced apophenia report suffering from. Section 5.6 will explore representations of past, present and future in Burnside’s oeuvre and will relate this to Libet et al’s (1983) work on free will and to Turner and Poppel’s (1983) concept of ‘The Neural Lyre’, suggesting that Burnside’s notion of the self as a transient phenomenon has a parallel in neuroscience and further illustrating how Burnside’s poetry can be usefully set in dialogue with the work of neuroscientists as well as with a range of contemporary poets.

1.4 Methodology: ‘no intimacy without reciprocity’

My analysis and the work of the three chosen poets will be supported throughout by data from qualitative interviews with contemporary poets about their own writing processes: a methodology that seems particularly appropriate to a study founded on the importance of dialogicality and dialogue, framed by Mishler’s defence of the interview as a reciprocal process in which ‘...interviewers and respondents, through repeated reformulations of questions and responses, strive to arrive together at meanings that both can understand.’ (1986: 65). In its focus on the interaction between interviewer and interviewee, my methodology accords with data-collections techniques currently utilised by sociolinguists seeking to examine the nature and context of people’s utterances (Hymes, 2001; Tagliamonte, 2006), as I will outline in the paragraphs that follow.

This investigation will draw on anonymous data gathered from a series of qualitative, semi-structured interviews with fourteen practising poets which were carried out throughout 2013. Where appropriate, it will also draw on a similar series of interviews

undertaken between 2006-7 with 10 other poets as part of an investigation into social representations of poetry as creative writing (from my undergraduate BA dissertation, *Social Representations of Poetry as Creative Writing*, 2007). As a practising poet myself, known to many of the poets in the study, these interviews were carried out from a position 'inside' the group being studied. Before detailing the process used, it is necessary to justify the use of these qualitative methods in general and interviews in particular in relation to this study, focusing on the position of the interviewer as poet.

The aim of the interviews was to gather subjective testimonies from poets about their own practice as writers and to ascertain whether neuroscience and cognitive science might be of any relevance to them in terms of understanding (or indeed expressing) their writing processes. Interviews and group interviews are often criticised as a rather unsystematic, unreliable means of gathering evidence: as Seidman (2006) acknowledges, 'to suggest that stories are a way to knowledge and understanding may not seem scholarly' (2006:1). In a survey attempting to gather large amounts of statistical data with the aim of analysing causal patterns, interviewing might indeed prove unsystematic and unhelpful. However, as a means of understanding representations and impressions of a phenomenon as diverse as poetry, interpersonal interaction should be seen as a positive element rather than a potential problem. As Seidman also notes (citing Vygotsky):

Every word that people use in telling their stories is a microcosm of their consciousness (Vygotsky, 1987 p. 236-237). Individuals' consciousness gives access to the most complicated social and educational issues... At the very heart of what it means to be human is the ability of people to symbolize their experience through language. To understand human behaviour means to understand the use of language... Recounting narratives of experience has been the major way throughout recorded history that humans have made sense of their experience. (Seidman, 2006: 7)

Sociolinguistics research also emphasises the value of studying how particular groups articulate their own experiences. Hymes (2001) summarises how sociolinguistics research seeks to observe and record communication within groups, attempting the 'study of situations, exchanges and events' (2001: 5) in order to create an 'ethnography

of communication' (2001: 8) or an 'ethnography of speaking' (2001: 9). Sociolinguistic approaches recognise that 'the communicative event is the metaphor, or perspective, basic to rendering experience intelligible' (2001: 16) – surely this is particularly pertinent to a group like poets who are professionally engaged in the process of rendering experience through language. Hymes notes that language is a device which people use to categorize their experience in a variety of contexts and can be best studied by participant observation methods, in which a knowledge of appropriate context and group 'norms' is an advantage. Thus sociolinguistics is twofold – it is 'the study of the organisation of verbal means and the ends they serve, while bearing in mind the ultimate integration of these means and ends with communicative means and ends generally' (Hymes, 2001: 8). Discussing research methods in sociolinguistics, Tagliamonte (2006) acknowledges that 'a well-developed ethnographic approach has become a component to any research studying 'language in its social context'' (2006: 20) since it 'puts the sociolinguist in touch with the cultural context of the speech communication so that the linguistic reflections of that community can be interpreted and explained' (Tagliamonte, 2006: 20). It also gives the researcher lucid indications of what might prove important to analyse.

As Hymes (2001) notes, these sociolinguistic approaches to participant observation have an affinity with traditions of research in sociology and anthropology. Oakley (1981) makes a strong defence of subjectivity as a desirable element in sociological investigation. She argues that it is important to make the ideas of the interviewee significant in the research process and to follow them up. Importantly, she does not see the interaction between subject and researcher that all interviews necessarily involve to be a problem. On the contrary, Oakley found that in her own interviews with new mothers, she was frequently asked questions by her interviewees as someone perceived as being 'inside the culture' she was looking at. Such an exchange, however, might make the interviewing process richer. In Oakley's words, 'no intimacy without reciprocity'. (Oakley, 1981: 49). Reciprocity is fundamental to an understanding of how poets perceive their own art form.

Such ideas are echoed by social scientist Mirza (1992) who argues that familiarity with the group or culture being studied introduces positive aspects of access and confidentiality which far outweigh any complications of internal validity. In her study

Young, Female and Black, she argues that it may in fact be necessary for the researcher to be a 'competent member of the culture he or she is writing about' (1992: 8) in order to relate effectively to the research participants and reflect the quality of their experience. So the fact that I am a poet myself and that this was known by many of the participants in my research need not necessarily be seen as an issue compromising validity. Rather, the poets' knowledge of my own writing experience might have enabled them to speak more freely in my presence and to raise issues they might feel would not be understood by a non-writer; intimacy was enabled by a degree of assumed reciprocity and an element of shared culture. Within interviews, the influence of interaction between participants can thus be seen as inevitable to the phenomena being studied. As Mirza (1992) states, the validity of personal experience is often submerged in the social sciences by a quest for 'objectivity', when in fact it should be central to any qualitative investigation.

Accessing the personal experiences and impressions of a group of people to whom you are known as a fellow practitioner is not without problems, though. The model for my methodology was partly based on another 'insider' investigation: folk singer Fay Hield's (2010) study of folk musicians in Sheffield. Throughout her research, (which included participant observation and focus groups as well as semi-structured interviews) Hield recognised that her own involvement as a folk singer for 30 years had given her 'a deep but narrow perspective on the subject.' (2010: 21). Familiarity with the 'scene' she was examining meant she knew what was usual, and that she was able to recognise idiosyncrasies and compare people's responses to her own knowledge of the culture. She has also suggested that her status as performer gave her a kind of authority within the field that made access to participants less problematic. However, Hield also found she could not easily separate her personal opinions and behaviours from her role as a researcher, so the two were not clearly defined - she attended some folk events as a participant and some to collect data, confusing the two roles. Her status as a researcher also caused her some personal problems with members of the folk community because they perceived that she thought she was 'better' than them in her changed role.

My methodology was both constrained and enabled by a similar 'deep but narrow' (Hield, 2010: 21) perspective. Poets in the sample were all known to me and vice-versa through my ten years involvement with the poetry 'scene'. Some of the interviews were

carried out after or before poetry events that I was attending as an audience member or, in one case, after a reading that I and the interviewee had jointly given. This perpetuates the problem Hield identifies in relation to different roles not always being clearly defined. Similarly, some of the poets interviewed may have been aware of articles or other pieces of writing that I have published in poetry magazines and as a result could potentially have tried to second-guess my preferred responses to questions. But it could be argued that this is not much different from the usual response bias that all experiments suffer from, where respondents answer questions in ways they think the researcher wants them to answer rather than according to their true beliefs. Conversely, my own status as a poet may have made participants more comfortable talking to me about certain topics and, in particular, more comfortable making references and using technical language that they knew I would understand as a fellow poet. Like Hield, I also had unprecedented access to my sample group as someone known to them as a writer.

When selecting the interview sample, a list of twenty-five poets was compiled with an emphasis on writers who had published work on their own creative processes or publically demonstrated an interest in issues relating to cognition. All the poets on the list were approached via an e-mail outlining the aims, methods and nature of the research (including the anonymity of responses) and invited to ask questions. Of the twenty-five approached, fourteen responded, of whom five were female and eleven male. Face-to-face interviews were then arranged at locations chosen by the respondents. The interviews were semi-structured: a series of pre-determined questions were used as prompts, but other issues raised by the poets were then followed up with ad hoc questions. The aim of the questions was to form a scaffolding for semi-structured interviews framed around the issues identified by the poets as being significant. Thus the aim was to encourage participants to speak discursively around the key themes of my research. The questions were piloted in several 'test' interviews with poets in Sheffield and led to changes to the wording of some interview questions: for example, including quotes from other writers as illustration.

Semi-structured interview questions included the following:

- In Norman MacCaig's poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?
- I'm also interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena. Do you think poets are people who connect more than others?
- Do you ever find you have to be in a particular 'mental state' or 'state of mind' in order to write poetry, or is that a reductive way of thinking about the writing process?
- Do you think knowledge of the neural or cognitive processes that might underlie creativity could ever be useful, or do you think knowing about these aspects of process would diminish the mystery of the creative process too much?

These questions formed the starting point for interviews and other spontaneous questions were introduced as and when they became relevant.

Extracts from participant responses are used anonymously in this thesis – instead of names, poets have been allocated a letter (Poet A, Poet B, Poet C, etc) and the interviews were conducted and consented to on the basis of this principle of anonymity. In Hield's research (2010), she preserved real names because she believed that: 'anonymity is not possible in this close-knit context where individual cases are easily identifiable' (2010: 34). This might be true of individual experiences recounted by poets too, but I felt that the principle of anonymity was still important in enabling and encouraging participants to speak freely and that not having anonymity might compromise the comprehensiveness and frankness of the responses given.

Where relevant, this thesis also quotes from anonymous data gathered from another sample of poets between 2006-7 in London and Cambridge from a similar series of

qualitative, semi-structured interviews looking at poets' impressions of the significance and meaning of their art, both in terms of how poetry is seen by poets and how it is seen by the public. In this study, twelve poets were selected at random from the Poetry Society's London database on the basis of their responses to an advert circulated via the Society's lists describing the purpose and nature of my research and requesting participants. The database provides a comprehensive list of all those writers registered with poetry's largest national organisation, The Poetry Society, and very few of those involved with both the organisation and practice of poetry are not listed on it. All poets who replied to the request and who were available for interview within a suitable timescale were approached for interview. Four of the twelve writers were female and the remainder were male, and all were based in either London or Cambridge. A framework of questions was drawn up, structured around three key areas: definitions of poets and poetry, perceptions of audience, and impressions of poetry's public image. Such questions, however, were to form a scaffolding for semi-structured interviews addressing the issues identified by the poets as being significant, similar to the aims of the 2013 interviews. I have drawn on these earlier interviews whenever a contribution seemed relevant to the exploration of cognitive writing processes undertaken in this thesis. All the poets anonymously quoted from were approached in 2013 to gain their permission for their words to be used anonymously as part of this research.

1.5 Summary

In this introductory chapter I have briefly outlined the aim of my thesis - to frame and construct a limited dialogue between neuroscience and contemporary poetry with the aim of deepening our understanding of both - and listed the issues that dialogue will explore in subsequent chapters (Sections 1.1 and 1.2). I have introduced the three poets who form the centre of my argument and explained their unique relevance to this dialogical enquiry (Section 1.3). Furthermore, I have explained how these three poets will also be set in dialogue with qualitative data drawn from anonymous interviews with contemporary poets and outlined and justified the methodology used (Section 1.4).

This introduction has also referred to the context which makes this inquiry pertinent: a culture in which neuroscience is flourishing but poetry continues to be seen as a mysterious and even inaccessible art form (Section 1.1). This context will now be

explored in detail in Chapter 2, which critiques existing attempts to combine neuroscience and literature and shows how my dialogical approach constitutes an original contribution to knowledge in the field.

Chapter 2: Literature Review

The mind is not a landscape, but if it were... – Richard Wilbur, 'The Mind Reader'.

This chapter will review key attempts that have been made so far to establish a dialogical relationship (or indeed any connection) between literature and neuroscience and establish how the approach taken in this thesis differs from these. In Section 2.1, I will discuss the relationship between lyric poetry and the 'I', showing how the lyric is often assumed to be a 'diagram of consciousness' (Donaghy, 2009). In Section 2.2 I will define neuroscience and introduce one of the key texts this thesis will draw upon, McGilchrist's *The Master and His Emissary* (2009), before going on to examine the growth of neuroscience in popular discourse in Section 2.5. Sections 2.7 and 2.8 will review and examine the limitations inherent in some recent attempts to connect literature (particularly poetry) and cognitive science. Section 2.4 will review existing literary scholarship on literature and science more generally and Section 2.6 will survey existing work on the neuroscience of creativity. Section 2.9 will further problematise some definitions of neuroscience and poetry and suggest how this might have limited the discourse so far. Finally, in Section 2.10 and 2.11, I will expand on the approach I call 'neuropoetics', explaining the significance of giving poetry as much weight as neuroscience in any dialogue constructed between the two.

2.1 Lyric poetry and the implied presence of a consciousness

What we call 'poetry' is notoriously difficult to define. T.S. Eliot resists circumscribing it in his lectures on *The Use of Poetry and The Use of Criticism* (1964). Whilst believing that an enquiry into what poetry is underlies much criticism, he argues that 'criticism, of course, never does find out what poetry is, in the sense of arriving at an adequate definition, but I do not know of what use such a definition would be if it were found.' (1964: 16)

As I will argue in Section 2.9, this thesis will concern itself with the broad category of 'lyric' poetry, because the lyric is traditionally associated with the presence of an 'I' (see Rhys, 1913), a perceiver, a consciousness at work which may or may not correspond with the consciousness of the poet. Indeed, the lyric 'I' often seems to capture a mind in the process of apprehending or perceiving something (see Section 2.11 and my discussion of this process at work in Wilbur's 'The Mind Reader'). The assumption that

the poem represents certain perceptions underpins many quotes that attempt to define what poetry is:

Poetry is a thief that comes in the middle of a new day, while the critics are still studying by night light. - James Liddy (in O'Driscoll, 2006)

A poem is a smuggling of something back from the otherworld, a prime bit of shoplifting where you get something out the door before the buzzer goes off. – Nuala Ní Dhomhnaill (in O'Driscoll, 2006)

Poetry is a sort of trick, whereby an awareness of the textures of signs puts us in mind of the textures of actual things. - Terry Eagleton (in O'Driscoll, 2006)

Liddy's quote foregrounds the notion that poetry is something that defies attempts to pin it down – a thief slipping out of the door while those who seek to understand and dissect it are 'still studying'. Ní Dhomhnaill's quote echoes the image of stealing, implying that poets are 'getting away with it' in some sense, sneaking their lines past the filter of the conscious mind, perhaps. Eagleton's description of the poem as a 'kind of trick' reinforces these ideas of stealth and alchemy and implies that poetry is a kind of 'magic' which can alter our perception of the world. All three quotes imply the importance of perception (the perception of the writer who facilitates the 'smuggling' and the perception of an assumed audience of critics and others) and poetry's ability to change it, by almost devious means.

From my own position as a practising poet, I conducted a series of in-depth qualitative interviews in 2007 with ten of my contemporaries about their own perceptions of poetry and their ideas about how poetry is more generally perceived. These conversations suggested that poets conceptualise their art form as an intrinsic form of human expression, the expression of a human consciousness. In the words of Poet C from these 2007 interviews: 'Poetry explains what it is to be human in our time. That strikes me as a sensible over-arching definition...a poem chimes something in you that you can't necessarily put a finger on.' (see Mort, 2007)

A more systematic attempt to explore poetry's fundamental significance was made by the Scottish poet Don Paterson in 2007. Paterson's essays, 'The Lyric Principle' (first published in *Poetry Review*, 2007, 97: 2 and 97: 3), also put forward an account of poetry as an inevitable and vital form of expression with a singular relationship to

consciousness. In his first essay 'The Sense of Sound', Paterson states that he hopes to demonstrate that: '...language itself has a lyric basis and is itself a poetic system, and that what we call the 'lyric' in poetry is merely the result of language placed under certain kinds of formal pressure and emotional urgency.' (2007: 56)

The resulting argument in his essay is a speculative attempt to connect poetry to evolutionary psychology. In the first of his essays, 'The Sense of Sound', Paterson (2007) suggests it has a role in mnemonic information storage and was 'an aspirant form...which sought to transcend human limitations of memory' – Paterson, 2007: 58), to music and song and to emotional urgency, since 'the sum total of poetry's forms and tropes are no more or less than the natural tendencies and predilections of emotional language made manifest – and hardened up into a set of rules' (2007: 60). Paterson's arguments are interesting, but his essays are presented as pieces of rhetoric with almost no referencing: his argument appears to draw on evolutionary psychology, neuroscience and psychology, but he does not reference a single study to back up his assertions. As such, his essays are couched in the language of speculation and assumption: 'I have the suspicion that as language developed, the emergent property of broad and systematic iconicity reified...' (2007: 69); 'it seems safe enough to assume that poetry was compelled into being...' (2007: 56); 'That 'words seem to sound like the thing they mean' is something long understood instinctively...yet it is difficult to prove' (2007: 67). Thus whilst his essays raise interesting possibilities and propose plausible theories about, for example, the evolutionary purpose of poetry, it is difficult to critically engage with an argument that is so sparsely referenced.

Underpinning Paterson's whole argument, however, is the assumption that the lyric poem represents a perceiving 'I'. To argue that we look for a lyric 'I' when reading poetry is not to assume that this is the voice of the poet. In her essay 'Lyric Possession', Susan Stewart (1995) explores the relationship between poets and the 'voice' at work in their poems. She cites *The Republic* and some of its concerns about poetry and influence on thought: 'poetry can corrupt the concept of beauty by promoting what is merely crowd pleasing (6.493D), and it can corrupt the crowd by providing a substitute for thought (10.595B-C).' (Stewart, 1995: 34).

Plato distinguishes between having and possessing knowledge and argues that the poet is really a vehicle for expressing words that come from God, his knowledge is therefore something external. 'The poet is both the agent and vessel of sense perception' (1995:

35). Poetry is thus seen as a kind of ventriloquism – creating a strange paradox of ‘willed possession’.

Thus Stewart argues that there is often a kind of ‘dissassociated ventriloquism’ (1995: 47) at play in the lyric poem, a voice that is seemingly being conveyed from somewhere else (Stewart describes Keats’ account of the creative process in these terms, almost like a visitation) but we still read this voice as if it represents a particular consciousness, a speaker, whoever they may be.

This idea is echoed by Denise Riley (2000) in *The Words of Selves*, where she challenges the idea of the lyric ‘I’ being outmoded in contemporary poetry:

Is the lyric ‘I’ an irretrievably outdated form as some would argue, a poetic version of that overthrown omniscient narrator we used to hear such a lot about and shouldn’t much like to meet? But you can also have an impersonal lyric ‘I’, not at all confessional or self-aggrandising. ...The less that the poetic work is taken to be only consciously generated by its author, and the more archaic and dubious aspirations to technical control begin to sound then, paradoxically, the more important the actual figure of the poet may become. (Riley, 2000: 94)

The impersonal lyric ‘I’, then, is also assumed to relate to a particular perceiver or consciousness, even if it does not necessarily indicate the presence of some ‘omniscient narrator’ and even if it doesn’t presume superior knowledge on the part of this ‘I’ but rather offers a more impartial or, as Riley puts it, ‘impersonal’ commentary.

Gregerson (2006) argues that the presumption of a ‘presence’ in the lyric poem comes from the ‘rhetorical contract’ between reader and writer, the fact that all poems seek to persuade:

...the poem may affect the contours of solitary meditation or unfiltered mimesis, the recklessness of outburst or the abstraction of music, but it always also seeks to convince, or coerce, or seduce a reader; it is never disinterested, never pure; it has designs on the one who listens or reads. (Gregerson, 2006: 166)

Discussing the sonnet form, Gregerson suggests that Shakespeare and his contemporaries were influenced by Latin handbooks on rhetoric which emphasised how ‘the speaker must construct a self of words in order to suggest a presence behind

the words, a presence that secures the efficacy of words' (Gregerson, 2006: 171). A link exists between rhetorical persuasion and idea of present and coherent self. Some of Gregerson's ideas echo Paterson's exploration of the origins of poetry in 'The Lyric Principle, Part 1: The Sense of Sound' and its link to 'emotional urgency', itself a particular kind of poetic rhetoric (Paterson, 2007: 56).

Thus most definitions of lyric poetry – the type of poetry which this thesis concerns itself with – are founded on the assumption that the poem represents a particular consciousness and in some way dramatizes the act of perception. Like Coleridge's water beetle analogy explored in Chapter 1, this consciousness may at once be active and passive, influenced by the external world and influencing it in turn. As Riley (2000) notes, the particular consciousness represented by the poem need not be omniscient and all-seeing, but its presence is assumed all the same. If the lyric poem is presumed to represent a particular kind of perception, then lyric poems offer an ideal point of comparison to theories in neuroscience which seek to illustrate aspects of consciousness and perception differently.

2.2 Why neuroscience?

To define neuroscience simply, we could say it is the study of the nervous system including the brain, the spinal cord, and networks of sensory nerve cells, or neurons, throughout the body. To quote Purves (2004): 'neuroscience encompasses a broad range of questions about how nervous systems are organised and how they function to generate behaviour' (2004: 1).

As the latter part of this quote suggests, the implications of neuroscience reach beyond purely biological analysis. As McGilchrist (2009) observes, it has been accepted since the days of the anatomist John Hunter that structure is at some level an expression of function (2009: Kindle Location 677). As LeDoux (2002) notes, neuroscience has traditionally 'focused on how specific processes, like perception, memory or emotion, work in the brain, but much less on how our brains make us who we are' (2002: 1).

However, the implications of neuroscientific research are beginning to reach beyond this level of analysis too, since the study of the nervous system is assumed to influence how we understand human behaviour: As Ramachandran (2011) puts it:

The sciences of the mind – psychiatry, neurology, psychology – languished for centuries... For most of the twentieth century, all we had to offer in the way of explaining human behaviour was two theoretical edifices – Freudianism and behaviourism – both of which would be dramatically eclipsed in the 1980s and 1990s, when neuroscience finally managed to advance beyond the Bronze Age (Ramachandran, 2011: xi)

To quote Bear et al (2006):

The word ‘neuroscience’ is young. The Society of Neuroscience, an association of professional neuroscientists, was founded as recently as 1970. The study of the brain, however, is as old as science itself. Historically, the scientists who devoted themselves to an understanding of the nervous system came from different scientific disciplines: medicine, biology, psychology, physics, chemistry, mathematics. The neuroscience revolution occurred when these scientists realised that the best hope of understanding the workings of the brain comes from an interdisciplinary approach. (Bear, 2006: 4)

Neuroscience now has status as a more far-reaching discipline, widely accepted to have implications not just for how we understand behaviour but even some aspects of culture too. The new orthodoxy is summarised in an introduction to the Wellcome Trust’s 2012 exhibition *Brains: The Mind as Matter*:

From this bewilderingly mysterious organ [the brain] emerges the totality of our experiences, feelings, ideas and understandings. Memories are made and stored there, habits formed and broken, personalities shaped and shattered. Little wonder then that the investigation of this most precious thing has been so central in attempts to fathom the essence of the human condition. (2012: 6)

Similarly, Gazzaniga et al (2000) have suggested that we are experiencing ‘the Century of the Brain’ (2000: xiii). They suggests that in recent decades ‘...our aspirations have expanded, our know-how has been refined, and our will to tackle the central mysteries of mind/brain relationships has been energised’ (Gazzaniga et al, 2000: xiii).

Thus when we think about neuroscience as a *discourse* as well as neuroscience as a strictly-defined discipline, it is apparent that the brain rather than the whole nervous system has become the focus of discussion (so much so that critic Roger Scruton argues

that the brain has come to replace the soul in a new homunculus fallacy – see Scruton, *The Spectator*, March 2012).

The potential relevance of neuroscientific discourse to the arts, and specifically poetry, has been suggested in recent publications by researchers such as McGilchrist (2009) and Trimble (2007) that focus on hemispheric lateralisation: the functional division of the brain into two halves. These accounts particularly focus on the asymmetric aspects of language and expression and imply that poetry has a unique involvement with the right hemisphere.

McGilchrist believes that the most striking feature of the brain's structure is its division into two hemispheres, left and right, with the left hemisphere being larger. The dividing band of neural tissue called the corpus callosum contains an estimated 300-800 million fibres connecting topologically similar areas of either hemisphere, but the function of many of these is actually to inhibit – as McGilchrist put it, to 'stop the other hemisphere interfering.' (2009: 17).

McGilchrist outlines how that separation has fascinated mankind for more than two millennia. In the third century BC, Greek physicians believed that the right hemisphere was specialised for perception and the left for understanding. More recently, in 1844, physician Arthur Wigan (see McGilchrist, 2009: Kindle Location 511) published a study of patients who had suffered damage to one hemisphere through disease but continued to function quite normally – Wigan took this as evidence that we have 'two minds' and 'two brains'.

These early speculations prefigure a more contemporary interest in lateralisation. The left hemisphere and the right hemisphere have been popularly caricatured as (respectively) gritty and rationalistic and vague and impressionistic. These generalisations obscure the extent to which both hemispheres are differentially involved in *all* aspects of cognition, but also the subtle ways in which they do differ. In fact, McGilchrist argues that the hemispheres can be metaphorically represented as two different attentional modes:

...for us as human beings there are two fundamentally opposed realities, two different modes of experience; that each is of ultimate importance in bringing

about the recognisably human world; and that their difference is rooted in the bihemispheric structure of the brain. (McGilchrist, 2009: 3)

The key differences between the two hemispheres can thus be characterised in terms of the kind of attention they pay to the world rather than what they ‘do’ and can be broadly summarised as follows: the left hemisphere specialises in a kind of narrow attention or ‘spotlight’, seeking to divide the world into static, discrete entities whereas the right specialises in broad attention, seeing the world as a ‘Gestalt’ in which entities have imprecisely defined boundaries; the left hemisphere helps us to abstract whilst the right helps us to contextualise. The left hemisphere appreciates certainties whilst the right hemisphere has a primary role in confronting new experiences (McGilchrist, 2009: 32-93). This is a summary of arguments which McGilchrist develops in depth over some 60 pages and, even then, he is always careful to note that even these necessary generalisations about function may obscure the subtle ways in which both hemispheres are involved in all aspects of cognition, albeit in subtly different ways.

Trimble (2007) summarises a key shift in the neuroscientific study of hemispheric asymmetry in his book *The Soul in the Brain*. As he observes, ‘the left hemisphere came to be referred to as ‘dominant’ for language function, and for a century it reigned over its apparently silent counterpart, the right hemisphere’ (2007: 63) – largely due to the discovery of Broca’s and Wernicke’s language-related areas in the left hemisphere of the brain. However, the notion that language could be so discretely localised was challenged from the 1980s onwards by evidence from lesion studies and functional magnetic resonance imaging (fMRI) which demonstrated the right hemisphere’s preferential involvement in certain aspects of speech, notably prosody (the musical aspects of language), paralinguistic features of communication, and metaphor processing. As one would expect from McGilchrist’s taxonomy, the right hemisphere has a more holistic approach to language. In particular: ‘the right temporal region appears to be essential for the integration of two seemingly unrelated concepts into a meaningful metaphoric expression’ (McGilchrist, 2009: 51).

Trimble develops this to argue there are two main ways of using language, one which corresponds most closely to prose and one that corresponds most closely to poetry. In short, poetry is the language of the right hemisphere. Or to put it otherwise:

...the language of the right hemisphere is that of uncertainty, metaphor, prosody and emotional tone. It is the language of music. The language of the right hemisphere involves features recognised as poetic that have been used, since the early religious invocations of almost preverbal humankind, to express human feelings. (Trimble, 2007: 178)

Some of Trimble’s arguments are echoed in the populist book *Imagine* by neuroscientist Jonah Lehrer in which he differentiates between two types of creativity, divergent and convergent thinking, before linking the former to the right hemisphere and the latter to the left. Lehrer was accused and found guilty of plagiarism in 2012 and the title has subsequently been withdrawn from publication, but I will argue as Clark (2012) and Voytek (2012) have done that this discreditation does not negate some of the questions he poses about creativity and the models he puts forward, as long as they are subject to appropriate critical enquiry. As a popular writer on neuroscience and creativity, Lehrer has still made a significant contribution to these debates and, as such, his work cannot be wholly ignored. In particular, Voytek (2012) has drawn attention to the ways in which some of Lehrer’s errors may be connected to the ways in which neuroscientists publicise their findings, reminding us of the importance of interrogating every source, journalistic or scientific.

In the now-withdrawn *Imagine*, Lehrer (2012) sets divergent thinking (in particular, the ability to forge connections between unrelated concepts) against convergence: a heightened state of attention in which ideas are meshed in something akin to what Heidegger called an ‘unconcealing process’. Lehrer’s characterisation of these two different styles of thinking can be summarised thus (the following table is my summary of Lehrer’s arguments, not a table reproduced from his book):

<u>DIVERGENT THINKING</u>	<u>CONVERGENT THINKING</u>
Happens in a relaxed state.	Happens in a state of focused concentration.
Characterised by remote associations: making new connections between previously unrelated ideas (ideas which ‘diverge’).	Characterised by close attention, ability to refine and focus ideas (e.g. redrafting a piece of writing).

Connected with the RH: emphasis on connotative meanings of words.	Connected with the LH: emphasis on literal meanings of words.
Can be artificially enhanced by alcohol.	Can be artificially enhanced by amphetamines.

Thus when we daydream, we are more likely to think divergently. Though relatively simplistic (we might substitute the word ‘divergent’ with ‘creative’ and ‘convergent’ with ‘concentrated’), Lehrer’s categories do offer a useful way of thinking in detail about the different states of mind a writer might need to deploy when working on a new poem, for example, compared to editing the poem. Thus far, his analysis has been purely psychological. But Lehrer goes as far as to suggest the existence of a ‘neural correlate of insight’ (2012: 17), the anterior superior temporal gyrus, located on the surface of the RH just above the ear, which is closely involved with divergent thought. In convergent thinking, by contrast, our spotlight of attention is more closely trained. Convergent thinking is regulated by dopamine release and is moderated by the pre-frontal cortex: rewarding connections are processed by dopamine neurons and enter working memory. This is why taking some stimulants (such as amphetamines) which stimulate dopamine production can assist with this kind of concentration – Lehrer describes in detail how W.H. Auden relied heavily on Benzedrine to help him focus some of his writing (2012: 53-83). This postulated ‘neural correlate of insight’ should be considered with Voytek’s (2012) arguments in mind: Voytek points out that attempts to identify specific brain areas connected with behaviours or traits often depend on significant assumptions made in the laboratory. To ask where a certain trait or behaviour (such as ‘insight’) happens in the brain assumes that insight can be isolated and separated from other behaviours or emotions in the laboratory. Neuroimaging relies on comparing the behaviour of interest against some other baseline state (a principle that Voytek refers to as ‘cognitive subtraction’). But correlation may not always equal causation and other variables may still influence the behaviour. As Voytek puts it in his online article: ‘As cognitive neuroscientists, instead of asking, “where in the brain does this fuzzy concept occur?” we should be asking, “how can neurons give rise to behavioral phenomena that look like what we call creativity?”’ (Voytek, 2012).

Without considering these possible limitations, Lehrer (2012) extends his argument to connect divergent and convergent thinking with mood and, furthermore, with mental health (2012: 54-80). He suggests that whereas divergent thinking and moments of insight are correlated with positive, almost euphoric states, convergent thinking is associated with melancholy, which serves to sharpen the spotlight of attention (2012: 78). This links to empirical and biographical research by Redfield Jamison (1993) into the associations between bipolar disorder and poetry in which she suggests that the euphoric states she and other sufferers experience can generate periods of intense creative output. Similarly, Lehrer suggests that:

The necessary interplay of...different creative modes – the elation of the insight and the melancholy of the unconcealing – begins to explain why bipolar disorder, an illness in which people oscillate between intense sadness and extreme euphoria, is so closely associated with creativity... The exuberant ideas of the manic period are refined during the depression (2012: 79)

Whilst this relationship shouldn't be taken to imply that people can only create when manic or sad, it does support the significant correlations found between bipolar disorder and artistic achievement, such as Andreason's finding (cited in Redfield Jamison, 1993) that creative writers were twice as likely to suffer from the illness than the rest of the population (these findings will be discussed in greater depth in Chapter 5, Section 5.2). However, Lehrer's simplistic statement is misleading, implying that there's something 'necessary' about this interplay for creativity and seemingly suggesting that all manic and depressive phases experienced by artists will result in divergent and convergent states respectively. As Lewis (2008) has written in an autobiographical essay for the volume *Poets on Prozac*, many writers find themselves unable to think about creative projects at all – whether in convergent or divergent terms – whilst they are experiencing depression. Lehrer's reference to the 'refining' process of depression is reductive and risks misrepresenting experiences of depression. I will discuss some more nuanced and balanced attempts to explore the relationship between creativity and mental illness in Chapter 5.

Nonetheless, Lehrer's exploration of the opposing styles of creativity implied in divergent and convergent thinking is indicative of a greater widespread cultural interest

in the nature and potential of poetic creativity and how it might be linked to brain activity. Like McGilchrist and Trimble, however, he has little to say about works of art themselves. It is also important to distinguish between ‘creativity’ per se and specific linguistic creativity, the focus of this thesis – Lehrer uses the term in the former sense much more than the latter. Whilst all three theorists attempt to explain the neuroscientific basis for certain kinds of creative expression and poetry’s status as a unique way of using language, they do not attempt to link their ideas directly to poetic texts.

2.3 The convergence of the twain?

That neuroscience can provide us with certain objective, provable truths about the function of the brain seems relatively uncontroversial: even one famous example, the case of brain-damaged Phineas Gage and how his injuries led researchers to discover the crucial role of the frontal cortex in higher order functions such as reasoning, language, and social cognition, indicates the impact neuroscientific findings can have (see Damasio, 2006: 3-20 for a full discussion of the Phineas Gage case). Likewise, the Aristotelian view that poetry can offer us truths about the subjective nature of the human condition is one few would contest. However, the notion that neuroscience can illuminate our understanding of the creative process in a non-reductive way and that, reciprocally, the truths of poetry are useful and indeed necessary to neuroscience is more contentious, since the work of McGilchrist and Trimble is largely theoretical and references poetry only in conceptual terms. It seems to take us back to Shelley’s argument that poetry is ‘that which comprehends all science and that to which all science must be referred’ (Shelley, 1821).

In 2006, novelist A.S. Byatt published an article on embodied consciousness and John Donne in the *Times Literary Supplement* which made use of the discovery of mirror neurons to explain how we almost seem to ‘feel’ the words of certain writers and react to them in particular, determined ways. In the piece, Byatt states: ‘I do not imagine that we are yet within reach of a neuroscientific approach to poetic intricacy.’ (Byatt, 2006)

In 2013, a special issue of the *Journal of Literary Semantics* considered possible cross-fertilisation between literary studies and cognitive science (of which neuroscience was

considered a sub-discipline). In their editorial, Burke and Troscianko (2013) argue that cognitive science can benefit from a dialogue with literature as much as vice versa: for example, literary structures may be understood as cognitive structures, so that analysis of the former might help understanding of the latter. They describe ‘cognitive literary studies’ as a growing discipline, but question whether it will develop into a mutually-beneficial exchange between disciplines rather than a case of literary theorists constantly looking at how cognitive neuroscience can be used to test hypotheses from the humanities. They acknowledge that

...(good) interdisciplinary research is difficult. Even within the sciences or the humanities, it is difficult, and between the sciences and the humanities, there are such significant differences in how we learn to think and reason, in epistemology more generally (what counts as evidence, for example, or in what terms truth or truths are conceived of), in technical language, and in the practicalities of research training, that it is unsurprising if we fear being misunderstood or judged by the other community, and often do not manage to overcome these numerous hurdles to collaboration. (Burke and Troscianko, 2013: 145)

Burke and Troscianko suggest that the interaction between cognitive science and literature ‘needs time to mature into confidence in its own position and role, and to progress from self-effacing infatuation (science can solve all our problems) to a healthier enthusiasm tempered with self-assertion (let’s help each other solve problems on both sides).’ (2013: 146) Elsewhere in the issue, Colm Hogan (2013) attempts to illustrate how interaction between cognitive science and literary studies might be two-way process in an article discussing Joyce’s *Ulysses* as a novel which evinces parallel rather than serial processing. He argues that reading Joyce’s novel might help neuroscientists think differently about neural parallelism. Neuroscientist Willems (2013) applauds Colm Hogan’s approach and suggests that engaging with literary studies might help experimental neuroscientists realise the benefit of staying closer to actual language use in their work rather than relying so heavily on experimentally controlled language, with its context removed. (2013: 218)

This issue is a welcome and unusual contribution to what Burke and Troscianko hope will become a growing area of study. Even so, none of the articles in the issue make extensive reference to poetry, the concern of this thesis. Most attempts to combine

neuroscience and poetry so far have given insufficient weight to one or other component, either co-opting cognitive research out of context on the one hand or making reference to poetry in poorly-defined or reductionist terms on the other, as I will discuss in the sections that follow. In this, Byatt's assertion is correct. But defining such an approach is the challenge which partly underlies what I call 'neuopoetics', along with a belief that poetic intricacy can enhance (and counterbalance) our understanding of recent developments in neuroscience. Sections 2.10 and 2.11 will demonstrate the rationale for such an approach. First, I will explore the growth of neuroscience in the last two decades (Section 2.5) and review recent developments in linguistics that have attempted to link poetry and neuroscience (Section 2.7 and Section 2.8).

2.4 Existing literary scholarship on literature and science.

Though the precedents for a dialogue between neuroscience and poetry are few (as I will discuss in sections 2.7 and 2.8, many authors have surveyed the relationship between literature and science more generally and it is necessary to summarise some of their findings before continuing to debate the specific interaction between poetry and neuroscience. In particular, Coleman (2007) and Clarke (2010) have examined science in relation to literature, whilst Midgely (2001), Brown (2001), Crawford (2006) and Holmes (2012) have focussed their interdisciplinary discussions on poetry rather than literature per se. However, whatever the focus, all of these core texts seem to debate similar themes and reach overlapping conclusions: in short, they argue that literature and science are not fundamentally opposed and need not have an antagonistic relationship, but that they have often been portrayed as enemies in our Post-Enlightenment society. This view is perhaps best summarised by Hawthorne Dening in her essay in Brown's *The Measured Word: On Poetry and Science* (2001):

...The view from either side of the disciplinary divide seems to be that poetry and science are fundamentally opposed, if not hostile, to one another. Scientists are seekers of fact, poets revellers in sensation. Scientists seek a clear, verifiable, and elegant theory; contemporary poets, as critic Helen Vendler recently put it, create objects that are less and less like well-wrought urns, and more and more like the misty collisions and diffusions that take place in a cloud chamber. The popular view demonises us both...But none of this divided thinking rings true to my experience as a poet. (Hawthorne Dening, 2001: 183)

In the introduction to *The Measured Word*, Brown (2001) argues that science and poetry have enjoyed a more convivial relationship in the past. He cites Wordsworth who once stated that men of letters should be quick to follow men of science (Brown, 2001: x). When we read the work of the English Romantics, then, we get a sense of partnership between literature and science. Yet by 1827, at a meeting with scientist Humphrey Davy, it was clear to Wordsworth that scientists and artists were speaking different languages (2001: x) and the early twentieth century saw C. P. Snow's 'Two Cultures' emerging, a gulf opening between the two fields. In *Contemporary Poetry and Contemporary Science*, Crawford (2006) echoes Brown, arguing that a lot of early twentieth century poets demonstrated a keen interest in the work of scientists such as Einstein: 'it is evident with hindsight that early last century poetry and science were intertwined. Many people suppose that nowadays this has ceased to be so.' (2006: 3). Likewise, in *Science in Modern Poetry*, Holmes (2012) notes that Yeats and Bishop responded to the discoveries of Charles Darwin in their poetry. Holmes supports Midgely's (2001) observation that poetry has often been a vehicle for disseminating scientific knowledge: Lucretius' poem 'On The Nature of the Universe' was the main channel through which atomic theory reached Renaissance Europe.

Yet despite these examples of concord between the two disciplines, Midgely believes a fundamental and deep-rooted gulf exists between science and poetry. She argues that there is a 'strange, imperialistic, isolating ideology about science' (2001: 1) which makes a connection between it and poetry seem impossible. These are 'a set of imaginative habits that have been associated with modern science since its dawn in the seventeenth century' (2001: 2). The problem, she believes, is deeply philosophical and ideological rather than the result of a simple lack of communication between scientists and poets. Midgely suggests that this is particularly apparent in disciplines like neuroscience and psychiatry and the ideological divide stems from the very definition of the mind. Science, she argues, faces a problem when it comes to the mind as a concept: how can we fit the idea of first-person consciousness into conceptual schemes in science that were never meant to accommodate it? Scientists are now pursuing a 'science of consciousness' as 'a last frontier' when it may, in fact, not be the most relevant means of exploration. This problem has its roots in Cartesian dualism. By setting up the idea of 'matter' in contrast to mind, Descartes created a concept which cannot be extended to

take in its opposite without losing its meaning. (2001: 17). Midgely argues the dichotomy is a false one:

The words mind and body do not name two separate kinds of stuff, nor two forms of a single stuff. The word mind is there to indicate something quite different – namely, ourselves as subjects, beings who mind about things. The two words name points of view – the inner and the outer. And these are aspects of the whole person. (Midgely, 2001: 15)

Thus Midgely believes that Descartes set up a battle between mind and matter and ‘today a vague impression exists that materialism has won this battle’ (2001: 15). To Midgely, ‘it has become clear that both these solutions are equally unworkable. We have to avoid dividing ourselves up as Descartes did in the first place.’ (2001: 15). Her belief that we must ‘avoid dividing ourselves up’ is echoed by the other authors who have written on the topic. Crawford’s *Contemporary Poetry and Contemporary Science*, for example, aims to show through practice as well as principle that collaborations between scientists and poets can yield interesting results – the volume contains accounts of encounters between scientists and poets as well as essays on interdisciplinary themes, including an encounter between Paul Muldoon and scientist Warren S. Warren. Crawford’s book attempts to bring together scientists and poets in a ‘sympathetic’ way and explore ways in which they may overlap, but it does so on the premise that a divide continues to exist. The book presents ‘samplings, juxtapositions and provocations, rather than aiming to suggest that all poets and scientists are in covert, let alone overt, agreement about some master narrative to which they all conform in suspect unison’ (2006: 8). Crawford describes the essays in the book as ‘instances’, and the word ‘instance’ implies isolation. Nonetheless, he optimistically concludes that ‘contemporary poetry and contemporary science are often interested in each other’ (2006: 10).

Hawthorne Dening (2001) goes further, suggesting why this mutual interest between the disciplines does (and indeed should) exist. She believes that there are fundamental similarities between how scientists and poets approach aspects of knowledge, arguing that, for example, many people underestimate how well scientists appreciate mystery: ‘what science bashers fail to appreciate is that scientists, in their unflagging attraction to the unknown, love what they don’t know. It guides and motivates their work.’ (2001: 185) There may be similarities in intention too, since ‘both disciplines share the attempt

to find a language for the unknown' (2001: 188) and 'both employ language in a manner more distilled than ordinary conversation' (2001: 188). Equally, both scientists and poets may rely on intuition in their working methods and processes. However, 'science and poetry, when each discipline is practiced with integrity, use language in a fundamentally different manner' (2001: 188). The difference, according to Hawthorne Dening, is that science uses words as a tool, as if language was another form of definitive measurement whereas poets treat language as if it is itself the object (2001: 188) whilst poetry 'counts on the imprecision of words to create accidental meanings and resonances.' (2001: 188). As she summarises:

Clearly a divide separates the disciplines of poetry and science. In many respects we cannot enter one another's territory. The divide is as real as a rift separating tectonic plates or a border separating nations. But a border is both a zone of exclusion and a point of contact where we can exchange some aspects of our difference and, like neighbouring tribes who exchange seashells and obsidian, obtain something that is lacking in our own locality. (Hawthorne Dening, 2001: 191)

Scientists and poets may share similar aims and interests, then, but they remain divided by their methodology. This seems to echo Midgely's discussion of the Cartesian divide and the problem of trying to adequately distinguish between 'mind' and 'matter' as if they are completely distinct. Collaborative projects like Crawford's (2006) may attempt to forge links across the divide, but Hawthorne Dening's use of the word 'tribes' is telling and reflects an assumption of fundamental and deep-rooted historical opposition.

The implication of all of these discussions is that the divide between science and the literary arts is not an inevitable one, but it remains a contemporary reality. Though Midgely centres her analysis of the gulf between science and poetry on the problem of defining the mind and consciousness, this thesis will suggest that the study of the mind is also the area where areas of science may most closely converge with the work of poets, that this contested ground can also unite different approaches in pursuit of common mysteries. As Hawthorne Dening notes, scientists might be interested to reflect on the possible advantage that writers have when it comes to exploring and depicting mental processes:

Because the medium of poetry is language, no art (or science) can get closer to embodying the uniqueness of a human consciousness. While neuroscientists studying human consciousness may feel hampered by their methodology because they can never separate the subject and object of their study, the poet works at representing both subject and object in a seamless whole and, therefore, writes a science of the mind. (Hawthorne Denning, 2001: 191)

The approach that I will develop in this thesis will echo Hawthorne Denning's suggestion that poetry can write a 'science of the mind'. Historically, there seems to have been a focus on what science can give to poetry (in terms of new concepts to explore through creative writing, for example) and an implicit assumption – challenged by writers like Crawford (2006) – that poetry has little to offer in return.

2.5 The neuroscientific revolution

There can be no doubt that neuroscience has enjoyed a *naissance* in the last decade, a fact recognised and reflected in popular culture by the unprecedented amount of media coverage current research is now given - Radio 4's 'brain season' in 2011 was a case in point, as was the Wellcome Collection's decision in 2012 to devote an exhibition to *The Mind as Matter*. This has wider implications beyond the field. As Ramachandran (2011) has observed:

Until the last quarter of the twentieth century, rigorous theories of perception, emotion, cognition and intelligence were nowhere to be found [...] In the last decade we have seen neuroscience becoming self-confident enough to start offering ideas to disciplines that have traditionally been claimed by the humanities.

(Ramachandran, 2011: xi)

Some critics believe neuroscience oversteps its limits in doing so. Most notably, scientist and polymath Raymond Tallis has warned against 'neuromania' – the idea that everything that makes us who we are can be explained by patterns of brain activity. Tallis sees neuroscience's application to the humanities as a trespass and argues that the relationship between brain activity and psychological states is too complicated for any real cultural inferences to be made from the former. As he puts it: 'to seek the fabric of contemporary humanity inside the brain is as mistaken as to try to detect the sound of a

gust passing through a billion-leaved wood by applying a stethoscope to isolated seeds.’ (2011: 7)

Nonetheless, the impact neuroscience and cognitive psychology have already had on the arts and, specifically, the study of literature, makes this ‘trespass’ difficult to ignore. It is a source of concern to Tallis, who believes such neuro-humanities ‘...minimize the non-biological reality of persons, societies and institutions’ (2011: 278) and any literary criticism based on neuroscience is a ‘simplifying discourse’ (2011: 295) which diminishes the work it purports to examine.

In *Cognitive Science, Literature and The Arts: A Guide for Humanists*, Colm Hogan (2003) outlines the ways in which cognitive science has reconfigured literary studies and, in contrast to Tallis, offers a new framework in which neuroscientific ideas can be used to illuminate the perception of art. He suggests that it would be short-sighted for literary researchers to ignore developments in fields such as neuroscience which bear directly on our understanding of perception. Freeman (2010) has argued that cognitive poetics helps to resolve the separation between ‘two cultures’, the arts and the sciences, lamented by C.P.Snow in his famous 1959 Rede lecture. As such, it must match its focus on poetics (the realm of literary theory) with an equal emphasis on cognition (the realm of scientific approaches) if it truly does offer ‘the promise of restoring qualia, the moral and aesthetic dimensions to our intellectual, emotional and professional lives’ (2005: 32). This echoes Colm Hogan’s argument that literary studies must incorporate scientific approaches if they are to have continued validity.

This thesis will not adopt a cognitive poetic approach which, to date, has concentrated mainly on the application of cognitive-psychological and cognitive-linguistic ideas to literature. My focus is neuroscience and, as I will discuss, the focus of cognitive poetics usually lies elsewhere. The term was first used by Tsur (1982: 1) and denotes a field of literary study informed principally by the disciplines of cognitive linguistics and cognitive psychology with the aim of exploring the presumed or observed psychological effects that literature has on its readers. Stockwell (2002) has described it as ‘a way of thinking about literature’ (2002: 6) and it might be added that it is also a way of thinking about thoughts about literature. The field contains multiple disciplines and Gavins and Steen (2003) identify two key strands: approaches which are oriented more towards

social psychology and approaches which are oriented more towards cognitive linguistics (eg. Stockwell, 2002, 2003).

Theorists such as Mark Turner (1991) and Reuven Tsur (2007) represent a smaller strand in cognitive poetics, interested in neuroscience and the study of perception (though it must be noted that only a limited portion of Turner's work has this focus). Turner has argued that contemporary criticism needs to be anchored in an appreciation of how the mind works, since 'culture, society and language are patterns in brains' (Turner, 1991: 30) and, as such, we should look at how the conceptual apparatus we use to understand the world is expressed and appreciated through language.

Thus cognitive poetics, underpinned by the assumption that the cognitive processes we use to read literature are the same as those we use in everyday cognition, focuses on the mind and role of universal mental processes in reading and interpreting texts. However, even though Colm Hogan and others emphasise the importance of referencing science, cognitive poetics deals mainly with research from the fields of cognitive psychology and cognitive linguistics rather than neuroscience, the focus of this thesis. There have been few attempts to apply findings and theories from neuroscience to cognitive poetic interpretations and, as I will argue in Section 2.7, these attempts (notably by Turner, 1991 and Tsur, 2007) largely fail. As such, this thesis will not discuss cognitive poetics in great length but focus on approaches within this discipline which have explicitly referenced neuroscience - I will only make reference to cognitive poetics where the work in question overlaps with the topic being discussed in a given chapter. My approach differs from a cognitive poetic stance in its primary focus on neuroscience and in its concentration on writing processes over reading process (though this is not to suggest that cognitive poetics ignores writers, or that this thesis will not occasionally consider aspects of how literature is read).

Neuroscience, then, has already had an influence on the arts, but its contribution has not always been entirely illuminating. I will outline Tallis' objections to 'neuro lit crit' (see Tallis, 2011) in more detail in section 2.8 and argue that the problem Tallis perceives is not due to the engagement between neuroscience and the arts *per se*, but rather the terms of that engagement so far on both sides.

2.6 Existing work on the neuroscience of creativity

As implied in Section 2.5, there have been few attempts to directly engage neuroscience with contemporary poetry (and vice versa). Furthermore, existing attempts to combine the two have proved problematic. However, there is a growing body of scientific literature examining neuroscience and creativity which deserves attention, since it marks an increased interest in operationalising and defining creative processes in general. In particular, Dietrich (2004a, 2004b) and Jung et al (2010, 2013) have attempted to isolate processes in the brain which may correlate to different kinds of creativity, while Vartanian et al (2013) have attempted to suggest a range of areas in which findings from neuroscience may illuminate our understanding of creative thought processes. Whilst much of this work is not specific to creative writing, let alone poetry, it forms a crucial backdrop to any discussion of the connections between neuroscience and poetry.

Most neuroscientists interested in creativity use a definition of the latter that assumes a creative idea is one that is both novel and useful (see Dietrich, 2004a; Vartanian and Kaufman, 2013; Gabora and Ranjan, 2013). They use this definition to make predictions about what sorts of process might result in insights that are original and context-appropriate. However, Boden (2013) provides a useful caveat. Rather than thinking of a single kind of ‘creativity’, she notes that

...There are several different types of creativity, involving distinct sorts of information processing. A satisfactory neuroscience of creativity would have to illuminate each one of these. “Illumination” here means significantly more than locating the brain areas involved. (2013: Kindle Location 192)

Boden suggests that creativity may be combinatorial (unfamiliar combinations of ideas), exploratory (using existing stylistic rules to generate new structures) or transformational (altering styles so radically you produce new styles). The last of these is relatively rare. Boden argues that neuroscience can help to show us how combinatorial creativity is possible but has little to say about the other two types she identifies. Furthermore, the neuroscience of combinatorial creativity still has a long way to go because challenging problems remain concerning how we make judgements of relevance when engaging in or appreciating combinatorial creativity (Boden, 2013: Kindle Location 192)

One such attempt to examine an aspect of ‘combinatorial creativity’ is Dietrich’s (2004a) work on the role of the prefrontal cortex in moments of creative insight.

Dietrich criticises the tendency to focus on hemispheric differences when studying creative processes in the brain and argues that a more holistic, systematic approach is needed. Dietrich reasons that, as the seat of higher cognitive functions, the prefrontal cortex is involved in all creativity:

However, no suggestion is made here that the prefrontal cortex is the “seat of creativity.” Rather, the prefrontal cortex contributes highly integrative computations to the conscious experience, which enables novel combinations of information to be recognized as such and then appropriately applied to works of art and science.’ (Dietrich, 2004a: 1012).

The prefrontal cortex unites emotional and cognitive processing: ‘At all levels of the functional hierarchy, neural structures have direct access to activating the motor system, but behavior that is based on prefrontal activation is most sophisticated.’ (2004a: 1012) She infers from this that the prefrontal cortex must be the central structure involved in creative thinking. More precisely, we can infer that since creativity depends on cognitive abilities like working memory, sustained attention, cognitive flexibility, and judgment of appropriateness, and since these abilities are typically ascribed to the prefrontal cortex, the prefrontal cortex is bound to have a crucial role in creativity overall (2004a: 1014). Specifically, Dietrich suggests the role of the prefrontal cortex in creativity is threefold: becoming conscious of a novel insight (in working memory), bringing higher cognitive functions to bear on the insight and implementing expression of the insight (2004a: 1015). He suggests insights can occur in both spontaneous and deliberate modes: the main difference between these is the way that the novel insight is presented in working memory.

Elsewhere, in ‘Neurocognitive mechanisms underlying the experience of flow’ Dietrich (2004b) has distinguished between these kinds of creative insights and experiences of ‘flow’ states (see Csikszentmihaly) which, he believes, occur when the explicit control of the prefrontal cortex is suspended. Dietrich suggests that the brain has implicit and explicit systems. The former are skill or experience based and the latter are rule-based and can be expressed by verbal communication (2004b: 749). Implicit systems are not accessed by conscious awareness. He argues that states of ‘flow’ are associated with transient frontal hypofunction in the brain: ‘optimal performance involving a real-time sensory-motor integration task is associated with maximal implicitness of the task’s execution. Given that the explicit system is subserved by prefrontal regions, it follows

from this proposal that a flow experience must occur during a state of transient hypofrontality that can bring about the inhibition of the explicit system.’ (2004: 757) Thus ‘flow’ recruits different brain systems to creativity because it involves a kind of suspension of some of the explicit functions of the prefrontal cortex. These implicit flow states generate ideas and the prefrontal cortex then ‘decides’ whether these novel combinations are creative and useful. Dietrich’s work on transient frontal hypofunction is supported by Jung et al (2013) who combine evidence from MRI and lesion studies to suggest that disinhibitory brain features are crucial to creative cognition (2013: 10).

Dietrich’s work on creative insight and the distinction between this kind of creativity and ‘flow’ states is particularly interesting when read alongside Gabora and Ranjan’s theory of ‘neurds’ (2013) which seeks to explain how these insights might be caused by specific patterns of neuronal activity within the prefrontal cortex. Gabora and Ranjan take as their premise Dual Process Theory, the idea (also expressed by Dietrich) that our brains store implicit as well as explicit information and that each concept in the brain is represented by assemblies of neurons (rather than, for example, each concept having its own neuron). Thus, in terms of memory: ‘not only does a given neuron participate in the encoding of many memories, but each memory is encoded in many neurons’ (2013: Kindle Location 541). Representations that share features are therefore encoded in overlapping distributions of neurons. This helps us to make implicit assumptions about things we encounter, to make inferences. Because of these overlapping distributions, similar representations can interfere with each other and create ‘crosstalk’. This may happen when a memory is reconstructed and can lead to factual errors of recall (see Loftus et al) but it is also beneficial – it can relate to creative insights. One’s brain naturally brings to mind items that are similar to current experience in ways that may be unexpected but useful. Thus ‘reconstructive interference allows us to generate novelty without having to try out lots of possibilities’ (2013: Kindle Location 610). Gabora and Ranjan believe, therefore, that an explanation for creative insight can be found at a level midway between brain regions and neurons, in what they call ‘neurds’: neuronal ‘cliques’ that respond to microfeatures of marginal relevance to the thought. These would not normally be included in a neuronal assembly during analytic thought but they are recruited during more associative thinking.

Whilst Dietrich (2004a, 2004b) and Gabora and Ranjan (2013) have focussed on identifying the patterns of neural activation and areas of the brain that might be

connected to different creative states, Jung et al (2010) have explored the link between cortical thickness measurements and measures of creativity. The thickness of the cerebral cortex can be measured using Magnetic Resonance Imaging. Jung et al found that there was an inverse relationship between cortical thickness and psychometric measures of creativity and they suggest that this points to the importance of cognitive control of information flow between areas of the brain in creative thinking. The inverse relationships between cortical thickness and the creativity measures in the present study speak to the possible importance of efficient information flow among brain areas....the generation of novel, original ideas is associated with less cortical thickness within frontal and (certain) posterior cortical regions, requiring higher functional activation to initiate cognitive control.' (2010: 404)

These studies represent a keen interest amongst neuroscientists in correlating brain structure and activity to creativity and moments of insight, and discussions of 'flow' states in particular might have relevance to the experiences of creative writers, even if this connection is never explicitly made by scientists like Dietrich (2004). However, it is important to question the definition of creativity used by any scientific study, in particular, the repeated tendency to assume that creativity is just characterised by something 'novel' and 'useful' (see Vartanian et al: most contributors to *Neuroscience of Creativity* begin with this definition), particularly in relation to Boden's reservations (2013) and her distinction between combinatory, exploratory and transformational creativity. Equally, as Fink and Benedek (2013) note, the way creativity is tested in the laboratory may prove problematic:

the employed creativity tasks used in neuroscientific studies on creative cognition are essentially basic types of tasks, which had to be modified in order to be reasonably applicable in EEG or fMRI measurements. In this particular context it can be argued that the employed tasks are too simple to be generalizable to "real-life" creative achievements. (2013: Kindle Location 4603).

2.7 Conversations in cognition

When neuroscientists try to connect directly with the arts, they risk accusations of reductionism. Such charges may not be unfounded. In 1999, Ramachandran and

Hirstein published *The Science of Art*, their attempt to establish ‘a theory of human artistic experience and the neural mechanisms that mediate it’ (1999: 15), subsequently developed by Ramachandran in his later work (see Ramachandran, 2011).

Neuroaesthetic approaches propose that:

...any theory of art (or, indeed, any aspect of human nature) has to ideally have three components. (a) The logic of art: whether there are universal rules or principles; (b) The evolutionary rationale: why did these rules evolve and why do they have the form that they do; (c) What is the brain circuitry involved? (Ramachandran and Hirstein, 1999: 15)

Addressing each of these aspects, Ramachandran and Hirstein propose key ‘universal laws’ of artistic experience that explain the pleasure we derive from art in terms of evolutionary neuroscience. For example, the ‘peak shift effect’ predisposes us to enjoy exaggerated instances of category types: our enjoyment of a bold Picasso may be related to this tendency. The principle of peak shift comes from observations of animals (Blanco et al, 2006) being trained to recognise stimuli and has been extrapolated to humans. For example, if a rat is trained to discriminate a square from a rectangle by being rewarded for recognizing the rectangle, the rat will respond more frequently to the object for which it is being rewarded to the point that a rat will respond to a rectangle that is longer and more narrow with a higher frequency than the original with which it was trained. It is suggested that exaggerated effects may be used in art to create these ‘super’ categories of familiar objects (see Ramachandran and Hirstein, 1999: 18). Like many of Ramachandran and Hirstein’s examples, the problems of extrapolating directly from animal learning behaviour to human aesthetic appreciation, conditioned by centuries of evolution and exposure to art, are never considered.

Zeki and Stutters (2011) have gone further still, arguing that works of art stimulate very specific areas of the brain and derive their effect directly from this. All neuroaesthetic approaches agree that, in the words of Ramachandran and Hirstein: ‘artists either consciously or unconsciously deploy certain rules or principles...to titillate the visual areas of the brain.’ (1999: 17)

This research contains the assumption that art always gives pleasure in some way and, indeed, implies that art is uplifting. It does not attempt to consider art work which may deliberately distort, disorientate or depress the viewer. Tallis (2011) offers a convincing rebuttal of neuroaesthetics, accusing it of taking works of art entirely out of their social, historical and personal contexts, thus reducing our highly complex responses to art to principles that are at best little more than common-sense and at worst, misleading. In particular, it is difficult to reconcile the idea that our artistic tastes were forged in the Pleistocene era with the continuing evolution of art. Likewise, the notion that the production of art itself derives from a kind of sexual display (cited in Ramachandran, 2011: 241) seems unconvincing in view of the ways in which the pursuit of art may go against the pursuit of reproductive 'success' (as Tallis puts it succinctly: 'great artists are more often biological losers than they are alpha semen spreaders' – Tallis, 2011: 288).

Whilst neuroscientists have not attempted to explain literature in the systematic and detailed way that they have approached visual art and music (Ramachandran's references to metaphor are highly simplistic, and he admits that 'we don't have the foggiest idea of how metaphors work or how they are represented in the brain', 2011: 79), some studies that have looked at differential hemispheric involvement in metaphor processing illustrate the partial nature of the conclusion that can be drawn from fMRI studies in particular. For example, scientists such as Stringaris (2005) have argued that many fMRI studies of metaphor use very familiar metaphors (such as 'broken heart'), or focus on word-pairings rather than sentence contexts. As such, their conclusions about differential hemispheric involvement in metaphor processing may simplify a complex process. Beeman's (1994) coarse coding model suggests that differences between the hemispheres can be better explained in terms of differences in coarse versus fine coding: the former involves broader meanings and is the domain of the right hemisphere whereas the latter involves fine distinctions and close semantic relationships, the specialism of the left hemisphere. Over time, conceptual or familiar metaphors can become so familiar through frequent encounters that they are stored as 'alternate meanings', and their interpretation then recruits fine rather than coarse coding (Bowdle and Gentner, 2005).

It is particularly unfortunate that one of the most extensive reviews of right hemisphere involvement in language – written by a poet, Julie Kane – fails to recognise the partial nature of this evidence. For example, evidence that the RH has a capability for

processing abstract nouns is used by Kane to assert that the RH has superior image-processing capabilities in poetry. Her interpretation also takes a surprisingly reductive view of what a poem is. Kane argues that the degree of RH involvement is what separates 'poetic' language from referential language, ignoring as she does the fact that poetry is also a social, cultural, symbolic construction, a genre associated with particular expectations in addition to a particular use of language. Kane concludes: 'assuming that genuine, professional poets...could be conditioned over time to produce poems despite the presence of neural imaging equipment, the foregoing ideas could be verified or disproven.' (Kane, 2004: 50) The possibility of a poem genuinely being created in such circumstances suggests a lack of familiarity with the varied nature of the writing process, which is surprising from a poet. As with Ramamchandran and Hirstein (1999), context is neglected and the validity of the laboratory overestimated.

The apparent utility of neuroscientific research has certainly been co-opted by literary theory in ways that may prove problematic. Using neuroscience to support literary critique can be a highly speculative enterprise and, as such, risks misleading its audience, as I will discuss in relation to Turner (1991) and Tsur (2007), examples of a small number of cognitive poetic approaches that have drawn from neuroscience rather than psychology.

A case in point is Turner's discussion of symmetry and the brain in *Reading Minds* (1991). Turner is interested in how we appear to value symmetry in literary works and looks for a physiological basis for this. Offering his ideas as 'a conjecture', Turner proceeds to outline a view of hemispheric function in the brain in which 'each half-brain projects to the other a copy of the sensory world it observes' (1991: 96) in a kind of mirroring, which results in an 'embodied understanding of symmetry'. Whilst referencing Gazzaniga (1970) and Endelman (1987), Turner's theory is expressed in mystifying language that bears little relation to a scientific appreciation of functional asymmetry, as evidenced by this clumsy attempt to outline what happens when we sense something:

...one half-brain projects a mirror-image copy of a pattern upon a topographic map to the other half-brain. When we focus on the midline of that image, then a half brain has at its disposal both one half of the image and the mirror image of

the other half and can check, through some as yet unknown mechanism to see if they are the same. (Turner, 1991: 97)

Leaving aside the unscientific use of terms like ‘half-brain’ and the evasive reference to some ‘as yet unknown mechanism’, this passage shows a fundamental misconception of the nature of visual perception and hemispheric lateralization. As McGilchrist demonstrates in his review of research from fMRI, lesion studies and other sources on lateralisation, the hemispheres do not simply ‘mirror’ each other, but display significant, meaningful differences in processing style and the nature of interhemispheric communication is often inhibitory.

Postulating an ‘unknown mechanism’ as Turner does has limited explanatory power. Furthermore, even if the relationship between the hemispheres were as simple and symmetrical as Turner describes, to demonstrate that this ‘cross-modal sense of bilateral symmetry’ must have a bearing on our appreciation of symmetry in texts would require further explication, in several intermediary steps. The chapter closes without any detailed reference to texts or reading, but with an admission that:

I do not know what in the brain might correspond to a generic-level metaphoric projection of this multimodal and embodied understanding of symmetry, but a guess is not out of order: the networked activity of neuronal group patterns that corresponds to our specific sense of embodied bilateral symmetry contains, inhering within it, a skeletal pattern that corresponds to the generic-level projection of symmetry. (Turner, 1991: 97)

Here we have detail without specificity: the terms ‘generic-level’ and ‘neuronal group patterns’ sound precise, but do not correspond to specific and identifiable phenomena which could be supported by data from neuroscience. By ‘neuronal group patterns’, for example, does Turner mean patterns of activity, patterns of arrangement or something else? The earlier reference to ‘networked activity’ adds a further confusion – he seems to imply this is the activity of ‘patterns’, yet it isn’t clear how the ‘networks’ and ‘patterns’ he refers to are distinct, or what these terms actually refer to in the brain. This passage also evinces a contradiction: Turner claims he does not know ‘what in the brain might correspond’ to a generic appreciation of symmetry, where previously he has

argued that he knows exactly what in the brain corresponds to this: the capacity for ‘interhemispheric transfer’. Is his argument about our appreciation of literary symmetry based on an assumption about the brain, or is it based on the supposed existence of ‘generic level metaphoric projection’? Even if Turner is justified in his observation that ‘a guess is not out of order’, he does not make it clear what he is guessing about. Thus Turner’s argument is both confused and confusing, yet his vague reference to the hemispheres is used to give his arguments about literary interpretation a quasi-scientific weight and authority.

The work of Reuven Tsur occasionally shows the same tendencies, using neuroscientific data selectively to support his view that poetry ‘exploits’ cognitive processes evolved for non-aesthetic purposes for aesthetic effect. In a piece on ‘literary synaesthesia’, Tsur’s definition of synaesthesia is vague and he makes a leap from describing the cross-sensory activations typical of synaesthetic experiences to an argument that:

Literary synaesthesia typically contributes to some undifferentiated emotional quality characteristic of certain altered states of consciousness – ‘vague, dreamy, or uncanny hallucinatory moods’ (Stanford) – or a strange, magical experience or heightened mystery. (Tsur, 2007: 1)

For much of the piece, all Tsur actually seems to be referring to is the fact that poems typically invoke different sensory images through their metaphors and similes. This is a linguistic phenomenon very different from the actual experience of synaesthesia, but passing reference to ‘neuropsychological’ research (without any mention of data) lends his analysis superficial weight. At the start of his argument, synaesthesia is defined as an ‘anomalous sensory perception’. This notion of ‘anomaly’ does not correspond to the way synaesthesia is generally defined in neuroscientific research. As Brang and Ramachandran (2011) define it:

Synaesthesia is a perceptual experience in which stimuli presented through one modality will spontaneously evoke sensations in an unrelated modality. The condition occurs from increased communication between sensory regions and is involuntary, automatic, and stable over time. (Brang and Ramachandran, 2011: 1)

Where Tsur's assumption of 'anomaly' comes from is unclear. Can something be 'anomalous' in sensory terms if it is genuinely experienced? At the least, one might expect that an article which purports to draw on neuroscience in its discussion of a phenomenon might take neuroscientific literature as the starting point for its definition of that phenomenon. Even if we were to accept Tsur's willingness to equate synaesthesia with anomalous experience, we might question his assumption that synaesthesia in literature is represented by an 'undifferentiated emotional quality' and that this necessarily has a parallel with the 'anomalies' of genuine cross-sensory experience. Later, Tsur seems to use the term 'synaesthesia' to stand for the way in which poets may deliberately yoke together discordant elements: synaesthesia becomes a synonym for metaphor. He does not distinguish clearly between his references to synaesthesia as a neuroscientific phenomenon, a literary device, and as a shorthand for any kind of 'blending', perhaps because he never defines these different uses of the term in the first place.

2.8 Outcomes of the conversation

We should question, then, what neuroscience has so far added to our appreciation of literature and vice versa. It is clear that the approaches of Turner (1993) and Tsur (2007) are based on a flawed understanding of certain neuroscientific terms and a tendency to co-opt them for effect. The case for a broader, theoretical objection to using a framework drawn from neuroscience to illuminate literary texts is made by Tallis (2011). Considering A.S. Byatt's analysis of John Donne in terms of an 'appeal' to mirror neurons, Tallis observes that 'by adopting a neurophysiological approach, Byatt loses a rather large number of important distinctions' so that:

What we have in essence is a mode of literary criticism that addresses the most complex and rich of human discourses, not with an attention that aims to reflect, or at least respect, that complexity and richness, but with a simplifying discourse whose elements are blobs of the brain. (Tallis, 2011: 295)

Therefore, what is unique about a particular writer and a particular text (and thus the experience of reading it) is diminished. In showing how ordinary cognitive processes

underpin literary readings neuro lit-crit may sometimes under-emphasise what is extraordinary about certain texts and, in particular, certain poems.

Likewise, in trying to examine the neural basis for our appreciation of different kinds of art, neuroscientists are attempting to show the significance of art to the human brain. But, as even a brief survey of neuroaesthetic approaches suggests, attempts to look at the science of art have severe limitations. I suggest that these problems are particularly acute when it comes to exploring poetry, that most elusive literary art, and that much of this is due to a misunderstanding about poetry and the nature of language use in poems, as well as a more general misconception about what neuroscience can do.

2.9 The view from nowhere: what is neuroscience and what is a poem?

How we see the world depends on the theoretical lens we are looking through. As McGilchrist notes: ‘the kind of attention we pay actually alters the world: we are, literally, partners in creation.’ (2009: 5)

I would argue that what Tallis calls ‘neuromania’ is the result of defining neuroscience, whether we do so explicitly or implicitly, as an all-encompassing form of truth, the result of adhering to the doctrine that ‘we are our brains’ (the kind of argument David Eagleman puts forward in his 2011 book *Incognito*). By contrast, I define it thus:

Neuroscience is one particular source of knowledge about the human condition which privileges the electrical activity of the brain as a means of understanding some aspects of human activity and culture. It is therefore a partial source of knowledge, one which values particular ways of understanding over others. Its techniques are equally partial and produce specific, limited results. Neuroscience seeks to use these techniques to make conjectures about biologically determined, hard-wired aspects of human life and thus generates a speculative discourse, addressing philosophical questions about human experience from its specific standpoint.

By defining neuroscience in these partial and particular terms, I recognise Tallis’s objection that neuroscience struggles to explain aspects of our experience such as unity of perception, the sense of the self and the sense of the past. But by referring to the

discourse it generates (and separating this discourse from the act of neuroscientific research itself) I am also recognising that neuroscience offers hypotheses about human subjective experience which are often no more or less objectively valid than the hypotheses offered by philosophers or other theorists. As McGilchrist says of science more generally, it is not value-free or a 'view from nowhere' (to quote Nagel) but rather 'just one particular way of looking at things, a way which privileges detachment, a lack of commitment of the viewer to the object viewed... (this) does not make it truer or more real, closer to the nature of things.' (2009: 805)

Poetry is another means of trying to get closer to the 'true' nature of things, albeit from a different and equally partial standpoint. Poetry is notoriously difficult to define because a poem is many things at once. It is, as Paterson (2004) has suggested, 'a little machine for remembering itself' (Paterson, 2004). It is also often seen as a particularly condensed, powerful form of expression.

In recognition of T.S.Eliot's observation that, when we generalise about poetry 'we are generalising from the poetry we know and best like' (1964:139), it is important to reiterate that the 'poetry' this thesis is primarily concerned with is lyric poetry, as discussed in Section 2.1. Though a definition of 'lyric poetry' is only marginally less problematic than a definition of poetry per se, the term is used here to refer to a tradition in English verse which Ernest Rhys traces back to Anglo Saxon verse and the influence of Greek tradition and which became the dominant poetic idiom in English 17th century poetry (Rhys, 1913). When applied to poetry, the term 'lyric' '...implies a form of musical utterance in words governed by overmastering emotion and set free by powerfully concordant rhythm.' (1913: vi)

Thus we expect from the lyric poet a certain 'power of kindling thought by musical suggestion' (1913: v). Rhys argues that the lyric is in evidence in Anglo Saxon epic verse when the movement is quickened and 'the narrator grows invocative, under stress of memory and personal emotion' (1913: 1). In his history of Romantic theory and the critical tradition, M.H. Abrams (1953) associates the popularity of the lyric from the 17th century onwards with a fundamental movement in the history of poetic criticism away from mimetic theories of art (the poem as a mirror, representing the world or some

notion of abstract beauty) towards expressive theories of art (the poem as overflow, as a lamp).

Thus Abrams suggests that critical interest shifted away from the objects being represented and towards the figure of the poet. This shift went hand in hand with ‘a corresponding change in popular epistemology – that is, in the concept of the role played by the mind in perception which was current among romantic poets and critics’ : the mind was increasingly seen as active rather than passive. The Romantic poets helped to effect this shift in the way they portrayed the mind in their poetry. Since the lyric is made up mostly of thoughts and feelings uttered in the first person, it has ‘long been connected by critics to the state of mind of its author’. Thus, from the Romantic period ‘...much of the major poetry like almost all of the major criticism circles out from the poet as centre’ (1953: 99).

The lyric poem – traditionally and historically defined – has an inherently psychological component, inferred by its readers and critics, an idea already discussed at length in Section 2.1. Lyric poetry is ideally placed, then, for consideration alongside theories of the mind and brain. Indeed, as Abrams notes: ‘in any period, the theory of mind and the theory of art tend to be integrally related and turn upon similar analogues, explicit or submerged.’ (1953: 69) Thus an exploration of how the work of poets such as Norman MacCaig, Paul Muldoon and John Burnside (all considered to be working within the ‘lyric tradition’) interacts with the paradigms of contemporary cognitive science seems timely.

Having established that the term ‘poetry’ here stands for ‘lyric poetry’, I must emphasise that as far as this thesis is concerned there are two important aspects of the lyric poem that should be considered in defining what makes it unique in the context of other kinds of discourse. The first of these is that the poem is a form of brief expression, identified partly by absence (by the ‘white field’ of the page that surrounds it) or by the silence that precedes and follows it. Because it is so relatively brief, it is assumed that the elements of the poem have connotative rather than merely denotative meaning. From this follows Culler’s ‘rule of significance’ (1975), the idea that the reader assumes a poem’s elements are all intentional, freighted with meaning. Poetry’s connotative nature has implications for how readers interpret images, sounds and structure and for how

poets write. Toolan (2012) has framed this in terms of repetition in poetry (something he sees as the defining characteristic of poems) and the ways in which readers are primed to find these repetitive links and assume they are meaningful (Toolan, 2012: 17). These ideas will be developed in more detail elsewhere but, for now, it is the idea of the lyric poem as brief and therefore connotative language that is important to defining what is meant by a poem.

This principle of connotation relates to Roman Jakobson's famous structuralist definition of poetry in terms of its emphasis on the message of a given verbal utterance for its own sake. Poetry emphasises the message itself rather than the semantic content of the message. Therefore: 'the poetic function projects the principle of equivalence from the axis of selection into the axis of combination' (1960: 17) 'The poetic function of language is a focus on the message for its own sake (in other words, a focus on how something is expressed). A poem deliberately draws attention to the way in which its ideas are expressed and we assume significance in each element of its expression. From this follow all of poetry's parallelisms (such as the assumption that words similar in sound are drawn together in meaning). In assuming equivalence, Jakobson depicts poetry as a kind of sound symbolism. As Attridge (1988) puts it:

The language of poetic utterance, Jakobson asserts, is oriented not towards the world it refers to, not towards the one who utters or the one who reads or hears, not towards the code or channel of communication being used but toward 'the message as such'.... (Attridge, 1988: 38)

Attridge has developed Jakobson's structuralist argument to take greater account of the role of readers and the cultural context in which they read poems. Though Jakobson's attempt to establish a text's poetic status as an inherent property which survives movement in time and space is crucially important in drawing our attention to the phenomenon of projection, it ignores the role of the reader who undertakes this projection and the fact that the expectation of reading a poem can be produced in other ways. Something may be classified by the reader as a poem before the special empirical qualities it possesses have been observed. As Attridge argues, it is more that the poetic function *invites* the reader to read things as equivalent within the poem. Attridge's own definition of the poetic states that poetry is

...a discourse in which the reader is encouraged by the text itself and by the cultural matrix within which it is presented to derive meaning...from a number of linguistic features over and above the usual operations of lexis and syntax. (Attridge, 1988: 43)

Attridge's definition incorporates both the role of structural properties of the text and cultural context on the reader, the interpreter of the poem. The reader's role in connotative interpretation is thus established.

A second and related point following from the principle of connotation is that language use in a poem has a complicated relationship to language use in real life. It is not the same, but nor is it entirely 'other'. This point seems obvious, yet many tentative neuroaesthetic approaches seem to founder precisely because of a failure fully to realise this: hence Ramachandran's mystification when facing poetic metaphor. To appreciate the nature of language use in a poem, Searle's (1985) distinction between different kinds of illocutionary acts is useful, along with his observation that the same utterance can fall into more than one category. In fictional discourse (including poetry), therefore, the relationship between 'fact' and 'fiction' is by no means straightforward and often 'serious illocutionary intentions are conveyed by pretended illocutions.' (1985: 75). Poet Peter Robinson (2002) has expanded on Searle's work in his analysis of poems as 'pretended speech acts' (interestingly, he illustrates his point by observing that the word 'act' has a 'curious double life' in English because it means both to mimic doing something and to actually do it). Addressing Auden's famous remark 'poetry makes nothing happen', Robinson looks at the ways in which this both is and is not so, arguing that, in poems, writers are often doing something by pretending to do something else. To quote Searle: '...the author conveys a serious speech act through the performance of the pretended speech acts which constitute the work of fiction.' (Searle, 1985: 332).

We have to respond simultaneously to a poem as if it is and is not a pretended speech act. If we don't respond to poems as real speech acts, we can't understand them. If we don't respond to them as constructs, we can't understand them as art. This recognises something inherent in Irving Massey's broader philosophical assertion that 'as we use language to subdivide experience and our thoughts about experience, we produce

entities that do not lend themselves to secure definition but that we still somehow have to deal with' (Massey, 2009: 26).

Along with the principle of connotation, then, a fundamental duality of language use (which I would like to propose be termed the 'principle of duality') is crucial to the definition of a poem. Taken together, these two principles establish the poem as something distinct from prose and distinct from 'functional' discourse. This very basic conception of poetry highlights two important features of the poem that are often overlooked when the poem is located within a wider field of enquiry.

As Scarry (1999) points out, poems are unique in literature in terms of the imaginative experience they provoke, because unlike prose, they have a more direct sensory aspect as well as being a set of imaginative instructions: because of the relationship between its words and the blank space around them, the way a poem looks on the page is significant and conveys information. As Scarry puts it, the poem 'has its metrical feet in the material world' (1999: 10). This sensory aspect should make poetry a more fitting target for ideas taken from neuroscience than other forms of writing. Poems, by definition of their physical presentation, their relationship to silence, their place on the 'white field' of the page, invite specific ways of reading them. Reading a poem is an over-signifying enterprise in which the reader is constantly engaged in the process of linking ideas.

Having established the partial and particular nature of neuroscience and poetry, and the problematic nature of some previous attempts to align texts and brains, we can turn to the question of what form a mutually illuminating dialogue between neuroscience and poetry might take.

2.10 The dialogic alternative

If neuroscience and poetry are to have anything useful to say to one other, theirs must be a true dialogue, not a one-sided conversation. Bakhtin's principle of dialogism (*The Dialogic Imagination*, 1981) frames all natural and human sciences in relation to interactions with other ideas; indeed, Bakhtin believed that all language and even all thought is dialogical. Dialogicality is a feature of language itself so that all words are in dialogue with other words. Bakhtin uses the term heteroglossia (the presence of two or

more expressed viewpoints in a text) to capture this. Thus every time an utterance is made: ‘...the utterance not only answers the requirements of its own language as an individualized embodiment of a speech act, but it answers the requirements heteroglossia as well; it is in fact an active participant in such speech diversity.’ (Bakhtin, 1981: 272)

Our enquiries and utterances are engaged in a process of endless re-description of the world and interact with the enquiries and utterances of other people as well as our own previous utterances. All meanings have the potential to condition others. This stems from the fact that a notion of ‘other’ is necessary to accomplish the construction of the self – the very essence of man is profound communication and to live is to engage in dialogue: Bakhtin believes that ‘verbal discourse is a social phenomenon – social throughout its entire range’ (1981: 259). Thus all human endeavours bear the mark of dialogism; literature, for example, engages in a dialogue with the world it comes from, partly responding and partly adding to the context in which it was written: ‘the authentic environment of an utterance, the environment in which it lives and takes shape, is dialogized heteroglossia, anonymous and social as language, but simultaneously concrete, filled with specific content and accented as individual utterance.’ (1981 :272)

This finds an echo in Eliot’s essay on ‘Tradition and the Individual Talent’ (1932) in which he argues that works of art are shaped by those that precede them and, in turn, change our relationship to artworks of the past:

No poet, no artist of any art, has his complete meaning alone...what happens when a new work of art is created is something that happens simultaneously to all the works of art which preceded it. The existing monuments form an ideal order among themselves, which is modified by the introduction of the new... Whoever has approved this idea of order, of the form of European, of English Literature will not find it preposterous that the past should be altered by the present as much as the present is directed by the past. (Eliot, 1932: 15)

It is Bakhtin’s principle of dialogism that should underpin a conversation between neuroscience and poetry. Ideas from neuroscience may inform our appreciation of particular poetic works, not by aiming to pinpoint specific neurons that help us

appreciate them (in the manner of Zeki's 'beauty spot') but by suggesting new frameworks through which we may conceptualise certain aspects of them – new metaphors, perhaps. Conversely, poetic works and the work of poets suggest different ways of framing some of the difficult questions neuroscience highlights about the nature of our experience. It is this latter approach that has been most neglected. In his book *Proust Was a Neuroscientist*, Lehrer (2007) highlights its importance, suggesting that art enables us to understand consciousness 'from the inside' in a way that science cannot: 'by expressing our actual experience, the artist reminds us that our science is incomplete, that no map of matter will ever explain the immateriality of our consciousness.' (Lehrer, 2007: Kindle Location 97)

Artists throughout history, Lehrer suggests, have anticipated developments in neuroscience, a key example being Marcel Proust's intuitive grasp of memory as a process of construction rather than recollection, exhibited in *A La Recherche du Temps Perdu* and later investigated empirically by scientists such as Benjamin Libet et al. As such, art and science are both partial means of enquiry into the enduring mysteries of the human condition which can be brought together to give a fuller picture. Thus 'the experiment and the poem complete each other. The mind is made whole' (Lehrer, 2007). Here, I would replace the word 'complete' with the word 'complement'. Rather than saying 'the mind is made whole' I would say 'our understanding of the mind is deepened'. But Lehrer's far neater phrase highlights the important contribution art can make to science as well as vice-versa. Again, Lehrer's approach should be subject to critical and careful reading given his discreditation, but his overall argument about the reciprocal relationship between science and art seems broad enough to be unproblematic.

Setting neuroscience and the work of poets in a dialogic relationship might make an important contribution to the burgeoning field of creativity studies (see Amabile and Hennessy, 2010; McLoughlin, 2012; and McLoughlin and Lee Brien, 2013 for an extensive review of the field) because it also helps to re-define the boundary between products and processes. In the preface to *Discourse and Creativity*, Jones (2012) outlines how creativity has conventionally been studied either in terms of its artefacts (such as literary texts, the province of literary criticism) or its processes (with a focus on everyday language use, the province of social and cognitive sciences and, perhaps,

neuroscience). Whilst this reinforces a crucial distinction between creativity in action and creativity as a product, it also obscures the fact that both the processes and products of creativity are also interrelated and part of a wider social discourse. Jones outlines the notion of a 'Discourse', arguing that

'Discourses' are not fixed. They are vulnerable to being compromised, undermined or transformed as they interact with other 'Discourses'. As Candlin and Maley (1997: 204) note, 'Discourses' consist of 'internally heterogeneous discursive practices whose boundaries are in flux', so as they come into contact with other 'Discourses', 'not only are novel (inter)texts constructed but novel (inter)discourses arise.' (Jones, 2012: 8)

A dialogic relationship between neuroscience and poetry (and, indeed, between the poets in the study) recognises this kind of fluid interaction. Such an approach presents a challenge. By its discursive nature, dialogue is sprawling and cannot always be contained in straightforward ways. Applying neuroscience to poetry in ways that may prove metaphorical seems unscientific. Applying poetry to neuroscience might appear highly unsystematic. But the nature of our experience is messy and often unsystematic. Systematic enquiries into the nature of human experience are just as problematic as more humanistic ones. Jaynes (1976) highlights this in an interesting way in his speculative discussion of the origins of consciousness in the breakdown of the bicameral mind. Challenging key assumptions that we often make about consciousness, Jaynes shows that what we understand by conscious awareness itself is a kind of metaphor, an operation rather than something quantifiable. The 'subjective conscious mind is an analog of what is called the real world' (Jaynes, 1976: 55).

Paul Broks (2003) similarly problematizes the idea of neuroscience providing us with straightforward answers about complicated aspects of human experience in his poetic book *Into The Silent Land*. A neuropsychologist by training, Broks found his clinical experiences inadequate to the task of understanding the philosophical questions that his work seemed to pose (what is the mind? What do we understand by the 'soul?') and his book calls on music, poetry and personal memory to bolster his clinical understanding. As Broks reflects:

What became clear was that the brain could not be fully understood if you treated it as an isolated object. I had underestimated how tightly the brain's functions are bound to the rest of the body and, at the same time, how deeply they are embedded in the wider physical and social landscape. No brain is an island. (Broks, 2003: 49)

Thus, as Massey points out, it would be difficult for neuroscience and the arts to merge in the way some critics believe they can, since aesthetic and scientific approaches to describing the arts 'represent two different kinds of thinking'. What we can reasonably assume, however, is that neuroscience can provide us with 'a substantially expanded vocabulary for discussing the arts' (2003: 17) and vice versa, as endeavours like *Into The Silent Land* demonstrate. In applying this expanded vocabulary, Massey argues we must bear in mind the fact that neurobiological universals that may contribute to our general experience of art should not overshadow the particularity of an individual work of art. For the purposes of this research, what is unique about the poem must be kept in mind. Massey is correct to argue that neuroscience and art are 'two kinds of truth' and as such 'one is not meant to be measured by the other' (2003:184). We cannot use neuroscience to measure poetry, or the other way round. But we can set them in dialogue.

Interestingly, Massey believes that the 'proper' relationship between neuroscience and poetry is embodied by Keats' poem 'Ode to Psyche' in which the narrator addresses the goddess Psyche, concluding:

Yes, I will be thy priest, and build a fane
In some untrodden region of my mind,
Where branchèd thoughts, new grown with pleasant pain,
Instead of pines shall murmur in the wind:
Far, far around shall those dark-cluster'd trees
Fledge the wild-ridgèd mountains steep by steep;
And there by zephyrs, streams, and birds, and bees,
The moss-lain Dryads shall be lull'd to sleep;
And in the midst of this wide quietness
A rosy sanctuary will I dress
With the wreath'd trellis of a working brain,

With buds, and bells, and stars without a name,
With all the gardener Fancy e'er could feign,
Who breeding flowers, will never breed the same;
And there shall be for thee all soft delight
That shadowy thought can win,
A bright torch, and a casement open at night,
To let the warm Love in!

(see Massey, 2003: 186-188)

Here, Massey suggests, lies a balanced approach to these two different ways of conceptualising the world. The convergence is apparent in the rhyming of 'a working brain' with the disparate 'stars without a name'. The two are considered to serve the same purpose. By concluding his analysis with a poem, Massey seems to appreciate the dialogic aspect that underlies this thesis, Lehrer's contention that we need to recognise the duality of our experience, the fact that 'we are such stuff as dreams are made on, but we are also just stuff.' (Lehrer, 2009: Kindle Location 99)

2.11 Towards neuropoetics

The central proposal to be put forward by this thesis is what I call 'neuropoetics', an approach which emphasises poetics as much as neuroscience. It is an attempt to reconceptualise the work of specific poets and the practice of contemporary poets in terms of ideas drawn from neuroscience and vice versa. To this end, this thesis will focus on a close study of contemporary poets as well as the ideas of creative practitioners, framed chiefly by recent developments in neuroscience (McGilchrist, 2009; Ramachandran, 2011; Shermer, 2011; Seung, 2013). Through a study of the poets Paul Muldoon, Norman MacCaig and John Burnside, I hope to demonstrate that a broader and deeper neurological understanding of the process of connection-making can offer a useful way of framing the art of poetry, whilst poetry in turn frames issues and enduring problems relevant to neuroscientific research. These ideas can shape our appreciation of 'poetic intricacy' without being reductive.

This study will draw on the work of a range of influential neuroscientists, including McGilchrist whose book *The Master and His Emissary* marks an attempt to reconfigure our understanding of functional asymmetry in the brain and its implications for culture. McGilchrist's work itself embodies what I consider the starting point for a neuropoetic approach, drawing widely on the arts and humanities to put limited neuroscientific findings into context, even though it does not engage with poetic texts. Nevertheless, it offers new metaphors for understanding the nature of connection-making in both neurological and poetic terms.

The poets whose work I will be focusing on have been selected because their poetry has an affinity with certain issues relevant to neuroscientific research. By setting the poetry of Norman MacCaig, Paul Muldoon and John Burnside in dialogue with the theoretical work of neuroscientists such as McGilchrist, and with qualitative data gathered from interviews with contemporary writers, I hope to suggest new ways of appreciating the unique thematic concerns of the three poets as well as broadening and deepening the theoretical framework suggested by writers like McGilchrist (2009), Trimble (2007) and others.

The resulting approach will set neuroscience, contemporary poetry and poets in dialogue with one another and lead to new paradigms for understanding each. The quote from Richard Wilbur at the beginning of this chapter comes from his poem 'The Mind Reader'. In the piece, the narrator – a man burdened with the gift of entering 'the stony oubliette / of someone else's head' – confides in us:

The mind is not a landscape, but if it were
There would in such case be a tilted moon
Wheeling beyond the wood through which you groped,
Its fine spokes breaking in the tangled thickets...

(Wilbur, 2005: 207)

The path is then described in rich detail, a maze of 'hemlocks' and 'dilapidated cairns' that eventually lead to where some lost object is shining, stored in the 'dream-cache' of the mind, since 'nothing can be forgotten, as I am / not permitted to forget.' Thus a

familiar conceptual metaphor (the notion that the mind is a landscape or terrain, illustrated by Gerard Manley Hopkins' 'O the mind, mind has mountains') is first denied by Wilbur, then extended. The poem is also distinctive in the way it describes a *process* of remembering, the way it attempts to capture the imagination and memory at work. The poem becomes a way of remembering in itself.

The opening of 'The Mind Reader' seems an appropriate motif for the nature of the dialogue between neuroscience and poetry that a neuropoetic approach strives towards. New metaphors (in this case, from the world of science) help us conceptualise things differently: they both are and are not so. This study will aim to navigate a new path through the landscape of the mind, whilst recognising the path itself can vanish even as it is forged.

2.12 Summary

In this chapter I have explored the lyric poem as a 'diagram of consciousness' (Donaghy, 2009) and looked at the role of neuroscience in contemporary culture, focusing in particular on the work of McGilchrist (2009) and Trimble (2007) and on other scientists such as Lehrer (2009, 2012) who are interested in the relationship between the arts and neuroscience. I have surveyed attempts to link neuroscience and poetry made by neuroaesthetics (Sections 2.5 and 2.7) and by one particular strand of Cognitive poetics (Section 2.7) and highlighted the weaknesses inherent in these. I have shown how the approach I call 'neuropoetics' differs and how a dialogical approach, guided by the arguments in Bakhtin's *The Dialogic Imagination* (1981), gives equal weight to neuroscience and poetry respectively (Section 2.10). In Chapter 3, I will apply this approach to a close reading of the work of Norman MacCaig, setting his poetry in dialogue with neuroscientific studies of metaphor and work on embodied cognition.

Chapter 3: MacCaig and Mistrust

Every object has a different meaning to every single person who looks at it. So have words.
– Norman MacCaig, 1994

This chapter is about paradox, metaphor and embodiment in both the work of Norman MacCaig and in certain neuroscientific discourses. Section 3.1 will outline the fundamental paradox at the heart of Norman MacCaig's poetry – a facility for metaphor combined with an inherent mistrust of language. Section 3.2 will relate this to his dislike of anthropocentrism. Section 3.3 will explore MacCaig's notion that language is often 'inadequate' and relate this to the work of Tallis (1995) and others. In Section 3.4, the position of metaphor in linguistic studies and in neuroscience will be briefly surveyed and MacCaig's attitude to metaphor will be connected to theories about the mimetic origins of language (see Donald, 1991). In Section 3.5, I will extend this to look at embodiment more generally in MacCaig's work (relating it to the work of Gibbs, 2006) and, in Section 3.7, this will be connected to McGilchrist's (2009) depiction of the right hemisphere.

3.1 Exact and inadequate

Norman MacCaig (1910-1996) would almost certainly have disapproved of this and any other endeavour to examine his work in an academic context. In his poem 'An academic' (from *A Man in my Position*, 1968)², MacCaig expresses his mistrust of critical and intellectual writing, seeking as it often does to abstract and rationalise:

What a job this is, to measure
lightning with a footrule, the heart's
turbulence with a pair of calipers.
And what a magician, who can
dismantle Juliet, Ahab, Agamemnon
into a do-it-yourself kit of semantic gestures.

² Whilst poems in this chapter are sometimes referred to by the date they were first published, all quotations are taken from *The Poems of Norman MacCaig* (2005).

(MacCaig, 2005: 221)

It's a sentiment echoed elsewhere: in 'Trapped' (1981), human enterprises contain their own undoing (man has 'invented hygiene, which turned into / interesting new diseases'), thoughts are 'shaped / like a boomerang' and take us nowhere (MacCaig, 2005: 407). MacCaig's dislike of over-intellectualising is part of a wider attitude that typifies his work: a suspicion of ownership. To 'measure' the unmeasurables that MacCaig lists in 'An academic' is to assume a power over them – to 'dismantle' is to play God, perhaps, rather than to be a magician. This suspicion of man's power over his surroundings is articulated differently in MacCaig's poems about Assynt, Scotland, the landscape he loved and in which he spent his summers. In the poem 'A Man in Assynt' (1968), MacCaig questions: 'Who owns this landscape? / Has owning anything to do with love?', and soon answers himself:

This landscape is
masterless
and intractable in any terms
that are human.

(MacCaig, 2005: 221)

The phrase 'in any terms / that are human' is crucial here – MacCaig's poems often express suspicion of anything imposed by man and display an awareness that the world stretches beyond the limits of the human imagination. This mistrust finds further expression in his poems about language and its relationship to the external world, his suspicion of what might become little more than that 'do-it-yourself kit of semantic gestures'. Specifically, Norman MacCaig claims to doubt metaphor, its capacity to stand for the things he wants to say through poetry. In his poem, 'No Choice' (1965), the narrator is thinking about someone 'in as many ways as rain falls' and adds the aside:

(I am growing, as I get older,
to hate metaphors – their exactness
and their inadequacy.)

(MacCaig, 2005: 185)

There's an interesting contradiction at play here. Metaphors are at once 'exact', suggesting useful precision, and 'inadequate', suggesting that they don't live up to what the poet expects of them. 'Inadequate' might imply that, even though a metaphor is a trope of comparison, it contains an inherent lie – one thing can never really become the other thing it is compared to (see Hartman, 1982). But 'inadequacy' is still quite an ambiguous word in this context, making the reader question by what standards a metaphor should be found 'inadequate'. And even the word 'exact' is not always positive in MacCaig's vocabulary – recall his dismissiveness of the precision he describes in 'An academic'. Presenting the contemporary poets I interviewed with MacCaig's description of metaphor in 'No Choice', some instinctively agreed with him. Poet B said: 'I feel that the available vocabulary (of metaphor) is like a net, with many holes in it.... Often, it's as if the phrase I want just doesn't exist'. Yet others challenged the statement's ambiguity:

Inadequate to what....? My practice as a writer is fundamentally exploratory. So I could understand an idea of the inadequacy of language if I had a sense that there was some experience I wanted to capture in vivid detail and I knew what the experience was and I was just trying to find the language that would create a vessel to carry it into the mind of a reader. But that's not the way I write. I don't have a preconceived sense of what I want a poem to contain....you make something rather than express it. – Poet A

These contrasting opinions belie the conflict inherent in MacCaig's poem. Despite the complexity and doubt expressed in MacCaig's statement about metaphor in 'No Choice', any reader of MacCaig's work will quickly notice his gift for precise, illuminating metaphorical comparisons. In a poem like 'Traffic Stop' (from *Measures*, 1965), a couple halt at traffic lights and the woman's brief caress of the man's leg with her hand becomes 'a glove black scorpion perched on one bright knee'. In 'Toad' (1978), the creature is transformed into an unexpected object ('Stop looking like a purse...') with a confidence that makes the likeness seem obvious (MacCaig, 2005: 365). His poem 'Movements' is structured wholly around metaphor. As Whyte (1990) suggests in his essay 'This Trash of Metaphor: On the Poetry of Norman MacCaig': 'It

may be that MacCaig looks on metaphor with such suspicion precisely because of his outstanding gift for it and only this innate scepticism can prevent him slithering into facility.’ (1990: 90)

It is this paradox, MacCaig’s suspicion of metaphor and his ‘outstanding gift’ for it, that this chapter will explore. Rather than a fear of ‘slithering into facility’, I will suggest that MacCaig’s ambivalent relationship with metaphor belies some of his opinions about the problems inherent in a poet’s use of language itself (Section 3.3), and that these ideas in turn connect to dialogues within neuroscience (Section 3.4) about the origins, development and nature of language. In Section 3.5 I will relate this to a shift towards theories of embodied cognition within cognitive science and neuroscience.

3.2 Norman MacCaig’s poetry

The poetry of Norman MacCaig being discussed in this chapter is confined to his work published after 1955³ and marked by the release of *Riding Lights* (1955), followed by *The Sinai Sort* (1957), *A Common Grace* (1960), *A Round of Applause* (1962), *Measures* (1965), *Surroundings* (1966), *Rings on a Tree* (1968), *A Man in my Position* (1969), *The White Bird* (1973), *The World’s Room* (1974), *Tree of Strings* (1977), *The Equal Skies* (1980), *A World of Difference* (1983) and *Voiceover* (1988). Though MacCaig published two volumes prior to 1955, *Far Cry* (1943) and *The Inward Eye* (1946), he disowned them, rejecting the surrealist style of the movement of young poets, known as The New Apocalypse⁴, of which he had been considered part. MacCaig later reflected on this early poetry:

Poem after poem was a splurge of hardly related images, sloppily bound together....I was rescued by the only critical remark that was ever any use to me, when my second book came out and a friend, having read it, handed it back to me, saying: “When are you publishing the answers?” (MacCaig, 1979: 85)

What he describes as the ensuing ‘long haul to lucidity’ (1979: 85) saw his work become increasingly metaphysical, whilst remaining strongly anchored in the physical world,

³ In this chapter, poems are usually referenced by the year in which the individual poem was written, which may differ from the publication year.

⁴ The New Apocalyptics were a poetry grouping in the UK in the 1940s, who took their name from their anthology *The New Apocalypse* (1939), edited by J. F. Hendry and Henry Treece.

often concerned with the landscape of Edinburgh (where he lived for much of his life) and Assynt (where he was a frequent visitor). As Thom Nairn puts it, the work in *Riding Lights* (1955) marks ‘the genesis of a poetry rooted in the Edinburgh streets, diverse landscapes, the elements rather than the largely cerebral scenarios that preceded it’ (Nairn, 1990: 76).

Riding Lights opens with ‘Instrument and Agent’, briefly considered in the section above (and in more depth in Chapter 1, Section 1.3.1), a poem which examines how objects in the world around us are changed by the very act of considering them:

...in the short journey they make
To my skull’s back, each takes a look
From another, or a gesture, or
A special way of saying *Sir*.

(MacCaig, 2005: 4)

Denotary labels in the poem (‘apple’, ‘tree’, ‘star’) are contrasted with objects in an ‘unadulterated’ state, or rather the idea that objects can have a ‘life’ before they are named. In the first stanza of the poem, MacCaig describes the act of ‘seeing’ as somehow value-free:

In my eye I’ve no apple; every object
Enters in there with hands in pockets.
I welcome them all, just as they are,
Every one equal, none a stranger.

(MacCaig, 2005: 4)

The pun – ‘in my eye I’ve no apple’ – is used to express the notion that the eye does not ‘know’ what it sees, that perception precedes awareness. This echoes Ramachandran’s description of visual perception in *The Telltale Brain* (2011). He emphasises that the images we ‘see’ are transformed into ‘symbolic descriptions’ (2011: 47) by the brain rather than simply being relayed:

In order to understand perception, you need first to get rid of the notion that the image at the back of your eye simply gets ‘relayed’ back to your brain to be displayed on a screen. Instead, you must understand that as soon as the rays of light are converted into neural impulses at the back of your eye, it no longer makes any sense to think of the visual information as being an image. We must think instead of symbolic descriptions that *represent* the scenes and objects that had been in the image. (2011: 47)

In the final stanza of ‘Instrument and Agent’, the narrator is left wondering which is more authentic, the object as it is perceived by the eye or the object that has made the journey ‘to my skull’s back’:

And which is star – what’s come a million
Miles or gone those inches further?

(MacCaig, 2005: 4)

As Whyte reads it:

This poem is about metaphor – it would be better to have a verb, to talk about attributing metaphor or ‘metaphorising’, the process by which something is perceived, or described, in terms of something else... The star on its enormous journey through space remains virginal. Once human consciousness starts working on it, however, it is transformed, even perverted or contaminated into something very different. (Whyte, 1990: 89)

Whyte is using ‘virginal’ here to imply that the star is somehow untainted by contact with the human world. Yet MacCaig is careful to emphasise that the star is already old, having ‘come a million / miles’. Though it may not have been changed yet by the act of the narrator thinking about it, it has surely been altered by its million-mile journey. Perhaps ‘virginal’ is not quite the right word. The poem is a nuanced reflection on perception itself, the act of seeing, a process described in different terms by neuroscientists like Ramachandran (2011) and Zeki (1993). Whyte also overlooks the

way that MacCaig characteristically ends 'Instrument and Agent' with a question, resisting easy resolution. He asks the reader 'which is star'? He does not offer a neat conclusion to his own, posed dilemma about the process of human cognition. To say 'this poem is about metaphor' and little else risks reductivity. 'Instrument and Agent' is a question to the reader, an invitation to think in a particular way about cognition, to question the ways in which the thought process changes the object being apprehended, to think about what Ramachandran calls 'symbolic descriptions' (2011: 48) – the way our brains do not reproduce original images just as they are but represent the features of these images through an 'alphabet of nerve impulses' (2011: 47).

Nonetheless, Whyte's identification of the contrast in 'Instrument and Agent' between objects as they are perceived and objects as they are thought about is an important one. In his poetry and in interviews, MacCaig often seems to suggest that images in poetry, particularly images applied to the 'natural' world, are little better than a human imposition. As he said in one interview: 'I loathe the pathetic fallacy. Makes it rain when you feel sad; makes it sunny when you feel gay. I loathe burdening outside objects with human feelings, making them some kind of sympathetic translator for my tiny, small self.' (cited in MacCaig, Ewen, 2005: xli)

'Birds All Singing' is a poem within which the reader might connect this dislike of the pathetic fallacy to MacCaig's contempt for anthropocentrism. Opening with our human interpretation of birdsong ('Something to do with territory makes them sing, / Or so we are told'), the poem quickly moves to diminish that judgement as a 'myth'.

The human figure underneath the boughs
Takes strictly down, as false as a machine,
The elements of the seen or the half-seen,
And with the miracle of his ear notes all
The singing bird allows,
And feels it innocent, calls it pastoral.

(MacCaig, 2005: 36)

MacCaig's poem is, in a sense, an 'anti-pastoral' (Whyte, 1990: 94) and the narrative moves from man's misconstrual of the purpose of birdsong to a misunderstanding of human creativity. Man 'strolls in his Bedlam transfiguring every fact' and is estranged from his own nature, possessed only with 'the power of being not himself'. The condensed phrase 'miracle of his ear' suggests how little mankind is given to interrogating such wonders – the way this image is not developed implies that the person described in 'Birds All Singing' does not even consider how remarkable it is that he is able to listen and identify something as complex as birdsong. In this, he is 'as false as a machine' that does not know its own workings. Interestingly, the unthinking apprehension described in the poem contrasts with the approach that Ramachandran (2011) has to describing acts of perception, looking at each aspect of these 'miracles' in turn in an attempt to understand how such daily feats are enabled by neural mechanisms as well as by apparently mysterious processes. Unlike the person described in MacCaig's poem, neuroscientists are not content to take these everyday 'miracles' for granted: in Zeki's *A Vision of the Brain* (1993), eight pages of discussion are devoted to the description of the human retina alone.

Thus in 'Birds All Singing' MacCaig is preoccupied with the impossible task of conveying the world as it truly is, not the world as it seems to humans. It is a theme which pervades the many poems he wrote throughout his life about encounters with the natural world. In 'Goat' (1956), he wants 'the nothing like him goat, goat-in-itself, / idea of goatishness made flesh, pure essence...' (MacCaig, 2005: 74). In 'Heron' (1963), the bird stands simply 'wrapped in heron':

....It makes
An absolute exclusion of everything else
By disappearing in itself, yet is the presence
Of hidden pools and secret, ready lakes.

(MacCaig, 2005: 143)

There's an interesting transformation at work here – the essence of the heron turning into 'presence'. Again, there's a paradox: it is only by 'disappearing into itself' that the heron can become what MacCaig considers the essence of a heron to be. At the same

time, in this disappearing act (which is also an appearing act, since this is how the bird makes ‘an absolute exclusion of everything else’) the heron seems to take on something of its habitual surroundings – it is also ‘the presence / Of hidden pools and secret, ready lakes’). MacCaig is creating a strange, almost contradictory image of something that is stubbornly itself but also redolent of the landscapes it lives in. The heron seems to be both blending in and standing out.

‘Humanism’ (1965) is both contrast and complement to these earlier poems. In it, MacCaig condemns the tendency to liken natural phenomena to human forms. He begins by comparing the retreat of a glacier in Scotland to an army which ‘limped off / to the East’, then immediately counters:

What a human lie is this. What greed and what
Arrogance, not to allow
A glacier to be a glacier –
To humanise into metaphor
That long slither of ice...

(MacCaig, 2005: 184)

It is interesting to contrast MacCaig’s glacier with Shelley’s ‘Mont Blanc’ (1816) in which the mountain and its features are compared to the power of the human imagination. ‘Mont Blanc’ suggests that the mountain’s forbidding power comes from the status we as humans ascribe to it. It seems great and terrifying because the human imagination has made it so. In MacCaig’s poem, such an assumption is a ‘human lie’, evidence of a tendency towards anthropocentrism. ‘Humanism’ implies that the glacier has a life of its own which has nothing to do with human impressions of it, to the tendency to ‘humanise’. The poem’s sinister conclusion ascribes no such dominating guile to the natural world, even though the landscape has ultimate power over mankind:

I defend the glacier that
When it absorbs a man
Preserves his image
Intact.

(MacCaig, 2005: 184)

Likewise in 'Ego' (1954), the elements that make up the scene the narrator is looking at (stars, water, tree, rose, frost) prefigure their own articulation – they exist before the narrator considers them and decides to talk about them, they pre-empt 'categories only of a human kind' (see Ramachandran, 2011:47). 'The observer might as well be 'myself a metaphor / that's noticed in the researches of a rose...'' (MacCaig, 2005: 55) Here MacCaig presents the interesting idea that non-human objects might have the ability to perceive humans as well as vice versa – this is an idea that I will consider in greater depth in Chapter 6 Section 6.5 in a discussion of MacCaig and the Extended Mind Hypothesis and Panpsychism (Clark and Chalmers, 1998).

By contrast, in 'Movements' (1963) each animal's way of moving has a lively, human parallel:

Lark drives invisible pitons in the air
And hauls itself up the face of space.
Mouse stops being comma and clockworks on the floor.
Cats spill from walls. Swans undulate through clouds.
Eel drills through darkness his malignant face.

Fox, smouldering through the heather bushes, bursts
A bomb of grouse. A speck of air grows thick
And is a hornet. When a gannet dives
It's a white anchor falling. And when it lands
Umbrella heron becomes walking stick.

(MacCaig, 2005: 153)

The anthropomorphism of the eel having a 'malignant face' is particularly striking, anthropocentric, even. It's interesting to note, however, that MacCaig has structured the line in a way that runs counter to natural expression ('eel drills his malignant face

through darkness’) to put the ‘malignant face’ of the creature last. The eel and its movement comes first, the human image is secondary.

Thus the poem is structured as a list of metaphors until, in the final stanza, the presence of its human narrator becomes apparent:

I think these movements and become them, here,
In this room’s stillness, none of them about,
And relish them all – until I think of where,
Thrashed by a crook, the cursive adder writes
Quick V’s and Q’s in the dust and rubs them out.

(MacCaig, 2005: 153)

The movement in this last stanza complicates a poem that has previously been a straightforward layering of listed images. There seems a sympathetic relationship between man and animal and, indeed, between man and metaphor – it is only through these vivid comparisons that the narrator can ‘become’ the movements he thinks about and thus ‘relish’ them. Yet the adder ‘thrashed by a crook’ stands for a darker aspect of man’s relationship to the natural. The image of the hurt snake rubbing out its own marks suggests an undoing, as if man has chosen to impose himself even on the creature’s agonies, no mark left behind. MacCaig’s use of metaphor in a poem like this seems strident rather than wary. At times, the metaphors in ‘Movements’ are even celebratory (the relentless progress of the lark, in particular). Thus metaphor seems alternately a tool and a barrier in MacCaig’s work, unifying and dividing. Despite his questioning of it, MacCaig remains a poet best known for the clear-sighted, inventive imagery displayed in animal poems like ‘Movements’ and ‘Frogs’ (the latter described precisely in mid-leap as ‘parachutists falling...’).

Even in ‘Double Life’ (1950) where the narrator surveys Edinburgh and longs for an ideal of straightforward representation (‘If these cold stones / Could be stones only...’) the writing is richly imagistic. The wind from Fife has ‘cruel fingers, scooping / The heat from streets’. Trams ‘lower themselves like bugs on a branch down / The elbow of the Mound’ (MacCaig, 2005: 27). As the plea in ‘Double Life’ for a kind of ‘existence

without category' suggests, and as Whyte argues in *Modern Scottish Poetry* (2004), MacCaig is suspicious of those aspects of a poem which foreground it as poetry. In a sense, there's something post-structuralist about this aesthetic, about his interrogation of the 'linguistic' aspects of the poem: 'At times, MacCaig's lyrics put up a hopeless fight against their own status as poetry, against what is considered to be poetic.' (Whyte, 2004: 106). The qualification 'hopeless' seems crucial here. MacCaig cannot escape the lyric poem. Indeed, he often accepts that he's only able to express himself through metaphors and images, through poetry, even as he sometimes questions the value of his endeavour (see Section 3.3).

A good example of this complexity is 'Explicit Snow' (1958) in which MacCaig seeks to evoke the phenomenon of snowfall in its own terms ('as though a newness had but just begun'), but recognises that he can only do so through human analogy. The 'pure' and the familiar have a strangely reciprocal relationship, as do observer and observed. Despite its dissimilarity to anything else, snow seems to fall 'from a place we feel we could go to'. MacCaig likens it to a 'great actor' who steps 'not from the wings but from the play's extension'. But this human image serves, paradoxically, to finally restore the snow to something intractable in mere human terms:

And the hill we've looked out of existence comes
Vivid in its own language; and this tree
Stands self-explained, its own soliloquy.

(MacCaig, 2005: 81)

Whyte is correct to describe MacCaig's resistance to what he deems 'the poetic' as 'hopeless'. Only through the 'tricks' and images that poetry allows is MacCaig able to evoke a landscape before language, a place where a tree can just be a tree, where a hill can be 'looked out of existence'.

3.3 Our inadequate language

Whyte (1990) proposes that the central questions which come to dominate MacCaig's work and which a poem like 'Explicit Snow' contains are already established in *Riding*

Lights (1955). Chiefly: ‘Can we see anything as it really is, or do we merely perceive our reflection in things? Does language bring us closer to objects, allow us to denote them, or does it (particularly through the process of metaphorisation) merely muffle them in clothing not their own?’ (1990: 93)

MacCaig’s interest in expressing the limitations of language through language itself is by no means new or unfamiliar. There’s a certain irony in the proliferation of poems that take language’s inadequacy as their theme. Whyte argues that MacCaig shares his suspicion of metaphor with Hugh MacDiarmid (1892-1978), whose work influenced his, that ‘both poets undermine the notion that language merely denotes, encapsulates or represents the world’ (2004: 101). MacCaig’s contemporary, Thom Gunn, also explored the theme of words and their limitation, as captured by his poem ‘For a Birthday’ (from *Collected Poems*, 1993). The narrator has ‘reached a time when words no longer help’ and meaning evades ‘the intellectual habit’ of the eyes:

Description and analysis degrade,
Limit, delay, slipped land from what has been...

(Gunn, 1993: 32)

Possible redemption can only be found in silence, in ‘the dark before of truth’. It seems more truthful not to speak at all. Just as in MacCaig’s ‘Double Life’, Gunn’s ‘For a Birthday’ is verbose in its rejection of language. In Gunn’s poem, words are likened to ‘gravel stones, or tiny dogs which yelp / Biting my trousers, running round my legs’. This kind of fluent exploration of language’s limitations contrasts with approaches that evoke it by a kind of mimicry. Gilles DeLeuze, for example, has written about how Samuel Beckett attempts a kind of aphasia in his writing (particularly in a play such as ‘Not I’) to signify the difficulties of speaking clearly and being properly understood (DeLeuze, 1998).

The poem ‘Growing Down’ (1954) is perhaps MacCaig’s most extended and direct reflection on the inadequacy of representation. It begins with a curious, bracketed epigraph, informing the reader ‘there is a theory which finds language more and more metaphorical as it is traced back in the past’ without attributing this ‘theory’ to a source.

The poem expands on this idea through an sustained description of Edinburgh to suggest that metaphor is linked to primitivism, to an 'ancient ancestor / Pendulous in his emblematic tree', to something language should have grown out of.

Throughout the poem, the narrator's brain is referred to as something distant, cold and inaccessible: it is an 'antiseptic room' in the skull, 'a place you don't inhabit, though you visit there.' In it, representations of the external world are distorted (in the same way as objects are changed by the act of perception in 'Instrument and Agent') - in the fifth stanza, the narrator strives to imagine the 'you' who recurs in the poem by ransacking the 'little room' of his brain:

I search its pigeon holes for something dull
That might mean you, but even its cold air
Is so transfigured by you that I gaze
At glittering row on row of images.

(MacCaig, 2005: 57)

In 'Growing Down', MacCaig seems to subvert William Carlos Williams' 'no ideas but in things' (1927). Here, there are no things but in ideas. Though MacCaig's narrator mistrusts the apparently primitive, inaccurate nature of these images, he also recognises that communication is only possible because of their imposition.

.....What
Can we communicate except by these
Accumulations of ourselves which led
To our now separateness, from the common dead?

And the poem finishes by moving towards a surprising entreaty:

So, image, come and with your human hand
Call up the past, whose echo we partly are
- Make even me an image to understand

(MacCaig, 2005: 57)

A poem like 'Growing Down' provides some support, perhaps, for Christopher Whyte's suggestion that readers might trace the influence of Derrida in Norman MacCaig's work (Whyte, 2004). Questioning the relationship between signifier and signified, between the literal and the metaphorical, MacCaig resists simple conclusions: the narrator in 'Growing Down' is simultaneously seeking an 'elsewhere gloom' where a star might shine directly, without the intermediary of human consciousness (recalling MacCaig's question about the star in 'Instrument and Agent'), but cannot even discuss these ideas beyond the self-contained world of language: 'with a simian hand I pin some phrase / Upon your seeming'. Towards the end of the poem, MacCaig suggests that maturity lies in the recognition that we must live within the net of language – to be an 'adult' to be 'image among images, / Phenomenon among phenomena' (MacCaig, 2005: 57). As in deconstructive analyses, his work challenges aspects of structural meaning, whilst never offering a neat conclusion with which to replace these approaches.

The relationship between subject and object is never straightforward but rather hopelessly entangled: we are returned to the dilemma at the end of 'Instrument and Agent' – 'which is star?' To MacCaig, representation is a problematic enterprise and so are our discussions of it. Like Derrida and his concept that 'there is nothing outside the text' (from *Of Grammatology*, 1997), MacCaig questions the idea that we can establish a systematic, scientific knowledge of the world around us and through language, with its chain of signs, representations of representations, yet, at the same time, language is all we have to attempt this. In a discussion of Marvell's 'To His Coy Mistress', Bennett and Royle (2004) suggest that Derrida's famously quoted remark from *Of Grammatology* should be better rendered as 'there is no outside-text' (2004: 30).

When Derrida makes this statement he is talking about reading. His point is not that there is no such thing as a 'real world' but that there is no access to the real world of, for example, Marvell's poem, except through the language of the poem....But Derrida is also making a larger, more difficult claim, arguing that there is no way to conceive, imagine or even perceive 'the world' without stubbing our toes on the question of language.... 'Language' here need not be

simply verbal, but may include everything that works as a system of signs.
(Bennett and Royle, 2004: 30)

Some of these Derridean preoccupations were echoed by Poet H in interview. He said of language:

I don't believe in it to the extent that I could think it's letting me down. I don't believe that there's a world of thought and feeling out there waiting to be captured through language, and I'm struggling with language to get it down on paper. Who's the 'I' distinct from language that might be doing this, for instance? Similarly, I never write down ideas for poems, not because I'm a complete believer in Mallarmé's statement that poems are not made with ideas but with words; rather, I think ideas in poems have to come from words, not the other way round. You find the ideas coming out of the words. Veronica Forrest-Thomson took Wittgenstein's notion that 'the limits of my language are the limits of my world' and, like other poets, saw her job as getting beyond those limits.... But I'm not sure Wittgenstein meant that. I think he meant there is no other side, there are no thoughts or feelings I could have that are separate from language, waiting for me to find words to capture them; there is no 'beyond' or other side to be on. - Poet H

Here, Poet H is accepting that there is no 'pure' world which words organically signify, but rather meaning is contingent on values ascribed to words. He implies that the thoughts and feelings that we have are partly enabled by the language we have to express them rather than vice versa. This is something different from the longing implicit in some of MacCaig's poems for a world before language, though equally MacCaig accepts that it is only through language (and particularly metaphor) he is able to express his ideas about the 'natural' world.

In his poem 'Linguist', MacCaig directly challenges the notion that speech can represent feelings or even thoughts, echoing Derrida's interest in the limitations of both writing and, crucially, speech as representation of an external reality:

If we lived in a world where bells

Truly say 'ding-dong' and where 'moo'
Is a rather neat thing
Said by a cow,
I could believe you could believe
That these sounds I make in the air
And these shapes with which I blacken white paper
Have some reference
To the thoughts in my mind
And the feelings in the thoughts

(MacCaig, 2005: 177)

Since deconstructionism is associated with a challenge to scientific structuralism and since MacCaig shares some of these Derridean preoccupations, it might seem surprising to posit a link between his poetry and themes from within the discourse of neuroscience.

In fact, however (and as even the few examples of MacCaig's poetry this chapter has considered so far suggest) Whyte's likening of MacCaig's preoccupations to Derrida's is simplistic and discounts much of the contradiction inherent in his oeuvre. There is a more interesting parallel, in fact, to be found between MacCaig and Raymond Tallis' *Not Saussure* – a critique of what Tallis calls post-Saussurean linguistics. Though there is no question of influence on MacCaig here (Tallis' book was first published in 1995), the ideological parallel seems more appropriate and calls into question Whyte's alignment of MacCaig and deconstruction.

Tallis' criticisms of post-Saussurian linguistics centre on two tenets he finds particularly problematic, the notion that there is no extra-linguistic reality and the notion that texts do not refer to things outside of other texts (inter-textuality). Though Tallis accepts that 'becoming situated in the world is in part the acquisition of a verbally mediated world picture' (1995:50) and is far from suggesting that language functions as a mirror of a separate reality, he believes post-Saussurians fail to distinguish between thought and consciousness – more specifically, the idea that thought may be linguistic but consciousness is not. As such, Tallis reasons 'language is one of the elements that

contribute towards the constitution of reality. It is not, however, the only one and there is no incontrovertible evidence that it is the most fundamental one.’ (1998: 64)

He illustrates his case with a critique of Terence Hawkes’ claim (in *Structuralism and Semiotics*, 2003) that ‘dark’ is defined principally by our sense of its opposition to ‘light’:

There is a kind of confusing half-truth in this: of course ‘dark’ and ‘light’ refer to opposing experiences and to this extent are in part defined by their opposition to one another....Nevertheless, dark and light are not themselves defined exclusively or even principally in terms of this relation.the experience of light has a content over and above its formal opposition to the experience of dark. Indeed, without two kinds of experience there would be no basis for the opposition – and there would be no more grounds for seeing ‘light’ and ‘dark’ as an opposed pair as there would be for seeing ‘light’ and ‘custard’ or ‘prime number’ and ‘Roland Barthes’ as opposed pairs....It is experience rather than language that underwrites the opposition between the two terms. (Tallis, 1998: 74)

Post-Saussurean theorists conflate ‘meaning’ and ‘reference’. In Tallis’ opinion, there is a double dissociation between the sense of an object and its physical properties.

Language may capture the former without directly mimicing the latter. Words can thus encompass a sense of an object as opposed to the ‘essence’ or entirety of the object itself. Given this dissociation: ‘an adequate philosophy of language must neither aim to correlate words with pre-existing natural kinds....nor ignore the very real constraints that are placed by extra-linguistic reality upon the manner in which things are linguistically classified.’ (1998: 102)

Applied to literature, Tallis believes that literary texts use linguistic meaning to refer us to experiences that go beyond or lie beneath language: ‘a verbal account of a piece of physical reality does not need to be shaped or structured like reality in order to be true to it, for what gets expressed....are not lumps of raw matter but the senses of material objects as they appear in situations.’ (1998: 110)

Tallis' arguments are not beyond criticism either – his assertion, for example, that it is knowledge of extra-linguistic reality and not the internal rules of grammar that enables someone to recognise a statement like 'Golf plays John' as ill-formed (1998: 73) ignores the fact that it is surely both, that learned rules of grammar also come to constitute part of the realities of language-users. But his position has more affinity with the contradictory attitudes towards language evinced in MacCaig's poetry and the poet's 'fluent' doubt of language. Ultimately, Tallis' argument defends this fluent and contradictory approach to questioning language through literature: 'since we cannot yet comprehend how a sculptured puff of air can refer to some object or state of affairs an indefinite distance away, one rather natural response is to deny that the distance is crossed.' (1998: 124) MacCaig, we must recall, continues to cross the distance even as he questions language's ability to do so. He continues to write poems. More specifically, he continues to write poems rich in metaphor.

Interestingly, some of Tallis' use of neural parallels in *Not Saussure* challenge his damning critique of neuroscience offered in *Aping Mankind*. Referring to the brain, Tallis says:

It is no exaggeration to say that it is the very structure of the nervous system that creates the condition for their being explicit outsiders, a consciousness of extra-cerebral reality. Instead of blocking access to or genuine openness to the environment, the structure permits the events provoked in the brain by the environment to become the basis of the body's being explicitly environed.
(Tallis, 1998: 77)

Though Tallis goes on to extend this point, arguing that just because this structure exists it would be ludicrous to say that the brain simply reflects or replicates reality, this seems an interesting admission in view of his critique of McGilchrist, in particular McGilchrist's suggestion that the brain may 'generate' the mind or 'mediate' it. If the brain creates the conditions for 'outsideness', why should McGilchrist's argument that the modes of attention typical of the left and right hemispheres are reflected in the world humans have built and occupy prove so controversial, so reductive in Tallis' eyes? Tallis is always keen to argue that the brain is a necessary but not sufficient basis for consciousness, but there seems nothing in McGilchrist's book that contradicts this – the

brain is framed as a necessary and important structure which has given rise to two distinct attentional modes, themselves reflected both literally and metaphorically in culture and society.

Throughout *Not Saussure*, Tallis is quick to identify tautologies in post-Saussurean theory and is sensitive to ‘pragmatic self-refutation’ (where the act of stating something provides the best counter-example of what is being said. It’s interesting, then, that he responded in 2013 to a discussion with Iain McGilchrist’s at the RSA by saying: ‘He may argue that he is talking only metaphorically but the metaphors are often presented as literal truth and they are necessary to carry his argument.’ (Tallis, RSA, 2013)

One wonders how something presented metaphorically can simultaneously be presented as a literal truth? *Not Saussure* is a book which reveals traps in critical writing that Tallis may not be above himself. As I have demonstrated in this section, Whyte’s attempt to compare MacCaig to Derrida is of limited utility. In Section 3.4, I will suggest that his work can more usefully be set in dialogue with the work of neuroscientists. Rather than trying to impose a structured linguistic framework on the complexity of experience, some neuroscientific theory is also concerned with challenging the notion of language as an adequate container. The work of scientists like McGilchrist (2009) shares MacCaig’s concern with the inadequacy of language, whilst the work of theorists such as Mithen (2005) and Donald (1991) points towards the origins and development of these inadequacies.

3.4 The neuroscientific parallel

I will argue that metaphor occupies just as ambivalent and mysterious a position within much neuroscientific discourse as it does within MacCaig’s poetry, particularly with reference to the work of Ramachandran (2011), McGilchrist (2009) and Mithen (2005). As such, an interesting parallel can be drawn between the treatment of metaphor as a symbol of both language’s possibilities and its limitations in Norman MacCaig’s work and the ‘special’ status it has been afforded in neuroscientific discourses.

Within literary criticism, the very concept of metaphor has been problematized – a tradition that extends back to Aristotle and Plato and which it would be impossible to survey in all its complexity here. In 1982, Hartman suggested that each working ‘literary’

definition of metaphor gives rise to a specific problem. The notion that metaphor is a kind of condensed simile ('A is like B' becomes 'A is B') found in Aristotle's *Poetics* only seems to suggest, if taken to its logical conclusion, that everything in the Universe is like everything else on some level. If metaphor is assumed to imply that one thing really is another thing, however, rather than merely resembling it, we encounter difficulties of literal truth – metaphors must then surely be lies. Likewise, definitions of metaphor as 'category mistakes' at the cognitive level only serve to undermine them:

Despite a tradition of imagery, if I treat my guitar as a woman I am insane. And if I realize that my guitar is not a woman, how can I learn anything from speaking as though it were? I think I do learn something, but this view of metaphor mystifies the process. Why, in short, in questing for knowledge (or attempting to communicate it), should we begin by pretending that the object is something it clearly is not? (Hartman, 1982: 328-9)

Accurate definitions of metaphor continue to be debated within literary studies, cognitive linguistics and cognitive poetics: theorists such as Bowdle and Gentner (2005) propose an evolutionary 'career' of metaphor which considers how some metaphors come to be fundamental categories of thought rather than novel cross-domain mappings. There is growing interest in the distinction between 'dead' metaphors (metaphors which are not cognitively processed as such) and what we might recognise as obvious metaphor within the domain of the poem. Bowdle and Gentner postulate a shift in mode of mapping from comparison to categorisation as metaphors are conventionalised and argue that this shift is reflected in the language that people use to make figurative statements (2005: 193).

Since the 1980s, metaphor research has encompassed two main axes, one focussing on the cognitive basis of metaphorical thinking and the other focussing on accurate metaphor identification in natural discourse. The former approach has its basis in the work of Lakoff and Johnson (1980) and their description of conceptual metaphor. According to Lakoff and Johnson, whilst metaphor has often been assumed to be purely ornamental, poetic and rhetorical, it is in fact part of our everyday conceptual system. Often, these pervasive metaphors have an embodied logic (orientational metaphors are an example, where being depressed is being 'down'). Various forms of metaphor helps us understand or categorise the world more easily – for example,

personification enables us to deal with non-human things in terms of characterisations and motivations we are more familiar with. Most ‘ordinary’ language is metaphoric to some degree. Crisp (2003) extends this argument, suggesting that cognitive poetics has shown that ‘metaphor is not a matter of mere language but a means of extending our cognitive facility with basic categories to non-basic ones’ (2003: 101). In conceptual metaphor, a cross domain mapping takes place from a source to a target domain and this forms the basis of a comparison.

The notion of conceptual metaphor has also been extended by Fauconnier and Turner’s Conceptual Integration Theory (2002) which focuses on the ubiquitous, subconscious processes of conceptual integration which underlie metaphorical thinking. Fauconnier and Turner are interested in how people construct a ‘mental space’ when they talk about or imagine a perceived situation and about the emergent properties of the processes involved. Instead of two domains (target and source), blending theory posits 4: two input sources, a generic space and a blend space, which contrasts with the unidirectional model suggested in Conceptual Metaphor Theory. The main stages of blending are composition (where input from the two sources is placed in the blend space), completion (establishing the pattern in the blend, drawing on long term memory structures to do so) and elaboration (performing the event of the blend). Crucially, Conceptual Integration Theory emphasises that there is usually material from the input sources that must be ignored in the blending process, since what Lakoff and Johnson refer to as the ‘source’ and ‘target’ of the metaphor are often incompatible in some ways – metaphoric thinking proceeds by salience of features and the input spaces do not have equal status as topics, since we are usually more interested in finding out about the target element than the source. In Conceptual Integration Theory, some of the conventional conceptual metaphors analysed by Lakoff and Johnson may act as inputs or constraints on the dynamic conceptual networks posited within blending theory. Thus, the two theories are complementary rather than incompatible.

Meanwhile, metaphor identification has been made more systematic by theorists working on corpus linguistic projects, particularly the ‘Pragglejaz’ group (Steen et al, 2010) which aims to establish a uniform criteria for metaphor identification within natural discourse rather than looking at ‘the typically decontextualized and constructed examples of metaphor’ used in other research (2010: 165). The Metaphor Identification

Procedure (MIP) deployed by Steen et al of the ‘Pragglejaz’ group involves an initial, full reading of the text under consideration. From this reading, lexical units in the text are identified and their contextual meaning within the discourse established. For each lexical unit, it must then be decided whether the unit has any other more basic meaning. If yes, and if the basic meaning and the contextual meaning contrast with each other (and can be understood in comparison), the lexical unit is considered to be metaphorical.

Thus linguistic definitions and conceptualisations of metaphor vary in their emphases and have developed significantly and built on the crucial work of Lakoff and Johnson in the 1980s. These different approaches continue to challenge what we mean by metaphor and what aspects of it should be considered most salient. Nonetheless, within neuroscience a working, shared, cultural definition of metaphor is often assumed and the definition is seldom interrogated. Ramachandran likens it to synaesthesia, which makes links between seemingly unrelated perceptual entities: ‘just as synaesthesia involves making arbitrary links between seemingly unrelated perceptual entities like colors and numbers, metaphor involves making nonarbitrary links between seemingly unrelated conceptual realms.’ (2011: 104)

Neuroscientific discussions of metaphor usually take for granted the assertion at the heart of the work of Lakoff and Johnson (1980) that metaphor is a fundamental conceptual and cognitive tool. Interestingly, the contemporary poets I interviewed seemed to share that assumption too, describing it as ‘conceptual thinking’ (Poet E) or ‘a more fundamental role of thought’ (Poet G).

Though neuroscientific discourse (and, indeed, practitioners of poetry) may not problematise the definition of metaphor in the same way that literary studies often do, it is still treated as something both ‘special’ and mysterious – both a tool for understanding and a conceptual barrier between ourselves and the world. McGilchrist is particularly interested in metaphor’s status as go-between, as a bridge between perception and experience:

Language functions like money. It is only an intermediary. But like money it takes on some of the life of the things it represents. It begins in the world of

experience and returns to the world of experience – and it does so via metaphor....language is the money of thought. (McGilchrist, 2009: Kindle Location 3214)

Poet J echoed this notion of metaphor as an intermediary by describing it as ‘a conduit rather than a final destination’. Successful poems, she believes, use metaphor to recreate something of an experience that a writer has had in the mind of the reader:

It’s a very complex geometry and the effect you’re hoping to convey (to yourself as much as any reader) is not just any one image or word but somehow that collection of things. You’re not even sure how you’re doing it, but when you’re doing it successfully you’re a conduit, you’re directing the reader to some territory that you’ve experienced for yourself.

There may be something problematic in the implication inherent in McGilchrist’s money comparison that language is somehow separate from that ‘world of experience’ in itself. McGilchrist’s description of metaphor is more lucid. Since he argues that metaphor is primarily ‘a function of the right hemisphere’ (actually, McGilchrist is oversimplifying here, since both hemispheres are involved in metaphor processing – see Stringaris et al, 2005) which has a crucial role in embodied perception, metaphor is an embodied phenomenon: ‘metaphoric thinking is fundamental to our understanding of the world, because it is the only way in which understanding can reach outside the system of signs to life itself. It is what links language to life’. (McGilchrist, 2009: Kindle Location 3219)

Here, then, McGilchrist better acknowledges the status of language as a system of signs which partly constitutes our experience too. It is not language per se that directs us back to the ‘world of experience’, but a specific use of language: metaphor. This idea was echoed by Poet G in interview:

Things are not ‘like’ other things in the sense of being identical to them, they’re just dissimilarly ‘like’... there’s often an emotional attunement between the two elements....It’s not just an act of recognition in the way you might recognise someone and say they look like someone else, that’s not what you’re aiming for

with metaphor, you're actually performing a kind of act of translation that has to go in both directions. For me, metaphor is a movement between one language and another language. You've got the language of the world I'm talking about and the language of poetry which is trying to talk about both that world and the process by which you talk about that world... - Poet G

Poet D also seemed to ascribe a particular, more straightforward kind of communicative power to metaphor, contrasting with other uses of language:

(Metaphor) has become quite a self-conscious activity within poetry. In fact, I know people who practice certain types of poetry who wouldn't go near a metaphor. It's like you're an avant garde musician playing middle C on the piano – you just wouldn't do it, it's considered a bit old school. But I think it's a device which can be an incredibly effective element of communication. It has an immediacy and a sort of humane touch about it. And as someone who is interested in communicating rather than trying to explain the nature of language, I'm attracted to it as a device. - Poet D

The McGilchristian notion of metaphor connecting body to language is echoed by Ramachandran's attempt to suggest a neural basis for our metaphoric capacity in *The Telltale Brain* (2011). The angular gyrus is the brain's centre for sensory convergence and integration and Ramachandran suggests that this may have evolved for making cross-sensory connections important to survival, but in humans it has been co-opted for the enablement of metaphorical understanding (2011: 106). Metaphors are thus types of 'subpathological cross-modal interactions' (2011:108) and it's possible that some particularly gifted writers, like synaesthetes, have excess connection between some areas of the brain (in this case, word and language). Conversely, in some neurological and psychological disorders, the ability to interpret or use metaphors may be lost.

If metaphor is positioned within these neuroscientific discourses as a bridge between body and world, surely it connects us more strongly to our environments, rather than acting as the distancing, abstracting mechanism Norman MacCaig portrays it as in poems such as 'Humanism'? McGilchrist certainly makes grand claims for the embodied significance of metaphor in *The Master and His Emissary* (2009), making it the specialism of a right hemisphere more strongly connected to the natural world than the

rationalising, abstracting left hemisphere. But metaphor is still a property of language and the comparisons it contains are still expressed linguistically. And language *itself* is seen as putting distance between the observer and the natural world in McGilchrist's work: 'the belief that one cannot think without language is...another fallacy of the process, whereby thinking in words about language only serves to confirm the importance of the verbal process.'(McGilchrist, 2009: Kindle Location 2967)

Language thus has 'imperial aspirations' (McGilchrist, 2009: Kindle Location 3192):

Naming things gives us power over them, so that we can use them; when Adam was given the beasts for his use and to 'have dominion' over them, he was also given the power to name them. And category formation provides clearer boundaries to the landscape of the world, giving a certain view of it greater solidity and permanence. (McGilchrist, 2009: Kindle Location 3181)

In MacCaig's poem 'Names' (1967), he explores the power of naming objects, drawing attention to the importance of the process and its arbitrary nature at the same time:

In that shallow water
Swim extraordinary little fish
With extraordinary names
They don't know they've been given.

(MacCaig, 2005: 213)

Naming is a process we hardly question. It is 'easy / to point and say buckthorn, / tamarisk, purple rocket', yet the object exists in a world beyond the nouns we ascribe to it. This message is echoed exactly in one of Don Paterson's contemporary aphorisms: 'Every morning the writer should go to the window, look out and remind himself of this fact: aside from his own species, not one thing he sees – not one bird, tree or stone – has in its possession the name he gives it.' (2004: 136). As such, the world we 'know' through language is different from the world that exists in itself. Language is only one way of 'knowing'.

This inevitable, abstracting tendency might be seen to be a result of the way language itself has evolved. Merlin Donald's *Origins of the Modern Mind* (1991) and Steven Mithen's *The Singing Neanderthals* (2005) narrate the history of language as a gradual, abstracting process with its origins in bodily expression. According to both Donald and Mithen, human language developed from an earlier mimetic stage of communication relying on gesture, emotive vocalisations and movement. Donald founds his argument on the logical premise that 'the words and symbols of language must ultimately have originated outside language' (1991: 233) and demonstrates how language progressed from a system founded on mimetic gesture in the episodic culture of early man to an early speech system and finally to the emergence of visual symbolism within the more procedural culture of homo erectus. Donald's work finds a correlate in the work of Givón (2002) who describes as 'inescapable' the conclusion that the neural circuits which support language processing in humans evolved out of their respective pre-linguistic precursors in the visual information-processing system (2002: 26).

This view is further supported by the more recent work of Michael Corballis (2009) who argues that:

...language evolved from manual gestures, initially as a system of pantomime, but with gestures gradually "conventionalizing" to assume more symbolic form. The evolution of episodic memory and mental time travel, probably beginning with the genus Homo during the Pleistocene, created pressure for the system to "grammaticalize," involving the increased vocabulary necessary to refer to episodes separated in time and place from the present, constructions such as tense to refer to time itself, and the generativity to construct future (and fictional) episodes. In parallel with grammaticalization, the language medium gradually incorporated facial and then vocal elements, culminating in autonomous speech (albeit accompanied still by manual gesture) in our own species, Homo sapiens. (Corballis, 2009: 25)

Steven Mithen (2005), meanwhile, proposes a single mimetic precursor for both music and language. Both Mithen and Merlin Donald believe that this pre-linguistic, mimetic form of communication was quite adequate in itself, but social and geographical pressures (larger social groups and greater mobility) made a more structured, abstract system of communication necessary. This is supported by the work of Robin Dunbar (2001) who argues that increased group size in homonids provided the impetus for the

evolution of a more structured communicative system, and also by Givón (2002) who believes that a visual gestural language was useful in societies of restricted group size, restricted geographic range and communicative isolation and that change was driven by social expansion. The introduction of writing at a much later stage and the capacity for external information storage which that provided then introduced a further, necessary level of abstraction. As Corballis puts it: ‘Signs...tend to become less iconic and more arbitrary over historical time in the interests of speed, efficiency and grammatical constraints.’ (2009: 28)

He cites Tomasello’s (2003) observation that linguist’s conceptions of language have traditionally been shaped by the languages of literate, Western populations. Language varies according to cultural requirements, in fact.

Across the world, languages may vary as much as the material cultures themselves do. In non-western societies, with relatively few material artefacts, language may take a rather different shape...but is nonetheless finely tuned to the needs and customs of the culture...Prior to the emergence of autonomous speech, a largely gestural form of language would presumably have served almost as well, but for the psychological (rather than linguistic) disadvantages of the visual modality relative to the auditory one. (Corballis, 2009: 33)

This shift towards written representation and external storage is traced by McGilchrist in *The Master and His Emissary* (2009). The first form of written language is believed to have emerged in the fourth millennium BC. Written representation began with pictograms (first used around 3300 BC) and gradually gave way to ideograms, more schematic diagrams which, according to McGilchrist, represented ‘a shift...towards abstraction’ (2009, Kindle Location 7404). A further shift towards phonograms occurred later, and in Ancient Egypt all three methods of written communication were used alongside each other in different contexts: ‘this shift towards arbitrary signs that are no longer even schematically related to the perceptual properties of the thing referred to, only to the sounds made in referring to it, moves writing further into the territory of the left hemisphere.’ (McGilchrist, 2009: Kindle Location 7405)

From these phonograms, syllabic and phonemic languages developed along slightly different trajectories. Thus McGilchrist is arguing that writing itself became more abstracted in its development and that in our remaining syllabic languages, ‘meaning is

less arbitrary, more clearly rooted in the world out of which it emanates' (2009: Kindle Location 7422). Corballis describes the process of abstraction differently, relating it to simple expedience. He outlines Ferdinand de Saussure's concept of the arbitrariness of the sign and counters:

The arbitrariness of words (or morphemes) is not so much a necessary property of language, though, as a matter of expedience, and of the constraints imposed by the language medium. Speech, for example, requires that the information be linearized, squeezed into a sequence of sounds that are necessarily limited in terms of how they can capture the physical nature of what they represent. (Corballis, 2009: 28)

Donald (1991) argues that each early evolutionary stage of language development (episodic culture and mimetic culture) remains embedded within the overall architecture of the human brain in a vestigial way. His assertion is supported by Tucker (2002) who states that all behaviour, including language, is achieved through integration of all the processes that have been involved in it (including early precursors – 2002: 55). How, then, does the holistic, mimetic, embodied communication we used to rely on to communicate find its expression nowadays? Steven Mithen believes it is expressed primarily through music. Since *The Singing Neanderthals* argues that music and language share a common ancestor in mimetic culture, Mithen suggests that now language is our chief means of conveying information, music has lost its role in communicating information and is left as a system concerned almost entirely with the expression of emotion – he suggests this is one of the reasons music moves us so deeply.

But the expressive world of mimetic culture also survives in prosody, the music of speech. From Mithen's evolutionary theory follows the assertion that poetry is far closer to the embodied world than other forms of communication and McGilchrist's belief that metaphor connects us back to the world of experience that language was initially used to control and categorise. He argues that 'a metaphor asserts a common life that is experienced in the body of the one who makes it and the separation is only present at the linguistic level' (2009: Kindle Location 3253). As such, it tries to bridge the gap between the world and the expressive system created by language. This links to neuroscientific evidence that 'the sounds of words are not arbitrary, but evocative, in a synaesthetic way, of the experience of the things they refer to.' (McGilchrist, 2009:

Kindle Location 3318). This seemed echoed by something Poet A said about poetry's relationship to music as compared to its relationship to narrative discourse:

Poetry's closer to music than it is to novels, I think....People have forgotten how to read poetry because actually....the novel and the film have become such dominant art forms that we're used to reading each text as if it were a novel, which means you don't read the first chapter 6 times and then put it on the shelf, you read it right through and then you put it away. People think a poetry book has to be read like that. You would never dream of listening to a CD like that. Music has to be listened to repeatedly until it works its way into your brain. Poetry should be read like that. - Poet A

In *The Master and His Emissary*, McGilchrist cites work by Ramachandran et al (2001) on the 'bouba-kiki effect' to support an argument for musical origins of language. A sample group was shown two shapes, one round and bulbous and the other jagged and spiky. Participants were asked to guess which of these shapes was called 'bouba' and which was 'kiki'. 98% of the sample population thought that the round shape was 'bouba' and the spiky shape 'kiki'. This experiment is often used to support the connection between words and the gestures that might have given rise to them, a vestigial remnant of the mimetic origins of language which survive more strongly in poetry than elsewhere. Don Paterson has elaborated on this idea in his essay 'The Sound of Sense' (the second part of *The Lyric Principle*, published in *Poetry Review*, Volume 97:3) in which he suggests that since words are often iconic, sounding like the things they mean, the acoustic and semantic aspects of words can be separately described but are not actually separable. Furthermore 'the words we choose to convey the most urgent and convincing senses automatically tend to exhibit a higher level of musical organisation' (Paterson, 2007: 71).

Thus, in summary, there is a contradiction inherent in these neuroscientific discourses about the origins and development of language and thus its relationship to the external world which finds a parallel in Norman MacCaig's poetry, his evocations of the 'exactness' and 'inadequacy' of metaphor.. Language originates as 'an embodied expression of emotion' (McGilchrist, 2009: Kindle Location 3401) communicated from an individual inhabiting one body to an individual inhabiting another, and yet it also abstracts us from the processes that gave rise to it and the things it represents. This is the paradox at the heart of MacCaig's work. As McGilchrist says: 'making things explicit

is the equivalent of focusing on the workings, at the expense of the work, the medium at the expense of the message.’ (2009: Kindle Location 4994)

This is why, according to Riach (2005), MacCaig ‘never trusts words entirely. He wants to represent a non-verbal world responsibly so he doesn’t try to transmogrify the birds and animals into human caricatures’ (2005:560). Riach contrasts MacCaig with a writer like Ted Hughes, for whom animals often form allegories of aspects of human nature and for whom metaphor is less problematic. Yet at the same time, as MacCaig recognises in poems like ‘Growing Down’, this process of making explicit is necessary if we are to communicate through poetry at all. Metaphor may be a limited tool, but it remains one of the best we have.

3.5 Language and embodiment

There is a further parallel to be inferred between MacCaig’s treatment of the relationship between observer and observed and a recent shift in cognitive science and neuroscience away from theories of artificial intelligence and towards notions of embodied cognition – the idea that the human mind is crucially influenced by the human body and by bodily experience (see Gibbs, 2006). In MacCaig’s poems about Assynt, understanding of the landscape is shown to be bodily rather than cerebral. In ‘Climbing Suilven’ (1954), the narrator’s movement up the hill serves to ‘thrust / the mountain down and down’, a sense of the landscape’s scale only comes from the body:

Parishes dwindle. But my parish is
This stone, that tuft, this stone
And the cramped quarters of my flesh and bone.
I claw the horizon down to this....

(MacCaig, 2005: 46)

It is interesting to note the struggle for domination between man and nature implied by lines like ‘thrust / the mountain down’ and ‘claw the horizon down’: words like ‘thrust’ and ‘claw’ contain an implicit violence, a sexual violence, even. The narrator of ‘Climbing Suilven’ seems at times like the anthropocentric narrator of a poem like ‘Humanism’, seeking to overpower the landscape. Yet the climber in this poem accepts

their confines, 'the cramped quarters' of the body, contrasting with the limitless expanse which can be seen from the top of Suilven. They are content to experience small details and to know the mountain through these fragmentary pieces: 'this stone, that tuft, this stone'. The way these items are listed almost mimicks the way someone climbing might scan the track in front of them, happening upon one thing, then noting another: it attempts to mimic the act of immediate perception. The landscape is only experienced by moving through it.

Similarly in 'Landscape and I' (1972), the Scottish landscape finds its own expression through the poet's body, his ways of exploring it:

Landscape and I get on together well.
Though I'm the talkative one, still he can tell
His symptoms of being to me, the way a shell
Murmurs of oceans.

(MacCaig, 2005: 286)

Here, the human body is a kind of conduit as well as an exploratory tool. The use of a bodily word like 'symptoms' reinforces the way the landscape seems to enter the human body physically and become part of it. The comparison to a shell that 'murmurs of oceans' almost implies that man is born of these landscapes in the same way that a shell emerges from the sea and bears a trace of its origins forever. Here, the mountain Schiehallion penetrates the narrator's mind and 'leaves behind / A meaning, an idea, like a hind / Couched in a corrie'. Yet in order to fully comprehend this meaning, the narrator must use his body:

...I'll woo the mountain till I know
The meaning of the meaning, no less. Oh,
There's a Schiehallion anywhere you go.
The thing is, climb it.

(MacCaig, 2005: 286)

MacCaig's final line starkly highlights the difference between describing an experience through language and comprehending it physically. There may be mountains like Schiehallion 'anywhere', or rather mountains that would be described in similar verbal terms. But the experience of climbing it is unique. 'The thing is, climb it' propels the reader into action. The line itself is stripped back, shorter than each that precedes it, emphasising the simplicity of MacCaig's conclusion. It is a gauntlet thrown down to the reader, an invitation that they should climb a mountain for themselves. There is an imperative to MacCaig's poems about Assynt, an immediacy that demands the reader occupy the present, inhabit it as bodily as the narrator. In 'Summer Evening in Assynt' (1975) each stanza is founded on a different glance ('I look up', 'I look away', 'I look down'...) – as in 'Climbing Suilven', these rapid, alternate descriptions mimic the way someone takes in different parts of the scenery as they move up a mountain, seeing first one thing and then another (MacCaig, 2005: 323).

Yet again, there is a certain contradiction in landscape poems like 'Landscape and I' or 'Praise of a Road' (1974) – the human body is both insignificant (the anti-humanising tendency expressed in poems like 'Humanism' coming to the fore again) but also vital as a translator. In 'Praise of a Road', the view affects the observer almost physically:

You won't let me forget you. You keep nudging me
With your hairpin bends or, without a *Next, please,*
Magic-lanterning another prodigious view
In my skull where I sit in the dark with my brains.

(MacCaig, 2005: 311)

'Nudging' implies the landscape's physical power over the narrator. Yet there is a certain, unavoidable anthropocentrism in the way the road expresses itself as if it were a 'nudging', speaking body, then becomes 'an acrobat with a bullrushy spine, / Looping the air, turning to look at yourself'. Despite this appealing paradox, bodies of land and bodies of people are nonetheless vital to processes of understanding, ways of 'knowing' in MacCaig's poetry.

Embodiment occupies a crucial position within neuroscientific discourses. The kind of mind/body dualism found in Cartesian philosophy might seem to be tempered by neuroscience, which emphasises physical processes in the brain - a part of the body. Yet some would argue that, in neuroscience, the body is only important in terms of its representation in the somatosensory cortex; the body becomes a vessel for the mind and brain (see Tallis, 2011). As Gibbs (2006) puts it: 'neuroscientists...seldom acknowledge the role played by the body as a whole in the cognitive operation of the brain.' (2006: 5). However, with the shift away from artificial intelligence models in cognitive science and neuroscience and the decline of the computational theory of mind, contemporary neuroscientific discourses are more orientated towards the kind of embodied theories of cognition outlined in Gibbs' work and implicit in MacCaig's poetry.

Artificial Intelligence is based on the idea that the functioning of the human mind can be compared to that of a computer and that intelligence depends on a system's organisation and functioning as a symbol manipulator. The capacity of computers to be 'intelligent' in this way was famously demonstrated by Alan Turing's test involving a human judge in conversation with a human and a machine. Artificial Intelligence is underpinned by a computational theory of mind (the kind favoured by Stephen Pinker in his book *How The Mind Works*, 1999) and, as such, downplays the role of the human body in cognition. Cognition is logical, autonomous and disembodied.

By contrast, Gibbs (2006) argues that 'human language and thought emerge from recurring patterns of embodied activity that constrain ongoing, intelligent behaviour.' Gibbs is influenced by the philosophy of writers such as Merleau-Ponty, who defined perception as an organism's entire bodily reaction to its environment. Perception is a holistic process and, as such 'asserting that specific brain sites are the causal loci of particular kinds of cognitive performance completely misses the full-bodied nature of cognition' (Gibbs, 2006: 279). Anderson (2003) has also reflected on the importance of embodied cognition to neuroscience and the shift away from artificial intelligence, noting how 'cognition is a situated activity' (2003: 1). The significance of 'embodied cognitive neuroscience' is also discussed by Fuchs (2009) and Wilson (2002).

The way the narrators of MacCaig's poems often come to appreciate the landscapes and living things around them through the body also finds a parallel in a key topic of recent neuroscientific debate: mirror neurons. As Rizzolati et al (2005) outline, mirror neurons

are ‘...a general neural mechanism (“mirror mechanism”) that enables individuals to understand the meaning of actions done by others, their intentions, and their emotions, through activation of internal representations coding motorically the observed actions and emotions’ (2005: 107)

These neurons were originally observed in monkeys, found in the ventral premotor cortex (area F5), and are active both when the monkey does a particular action and when it observes another individual doing a similar action. In humans, the observation of actions done by others activates, besides visual areas, two cortical regions whose function is usually considered to be predominantly a motor one (these areas are the inferior parietal lobule and the lower part of the precentral gyrus as well as part of the inferior frontal gyrus). The implication of the discovery of mirror neurons in humans is that the premotor and parietal cortices contain a mechanism that assists with action understanding and thus, by implication, with understanding the physical world. As Rizzolati et al (2005) go on to suggest, mirror systems are believed to be implicated in emotional empathy too:

The mirror mechanism transforms what others do and feel in the observer’s own experience. The disappearance of unhappiness in others means the disappearance of unhappiness in us and, conversely, the observation of happiness in others provides a similar feeling in ourselves. (Rizzolati, 2005: 120)

Furthermore, interest in mirror systems as the basis of language itself has grown within neuroscientific discourses. Pulvermüller and Fadiga (2010) argue that

Neuroimaging investigations have found specific motor activations when subjects understand speech sounds, word meanings and sentence structures. Moreover, studies involving transcranial magnetic stimulation and patients with lesions affecting inferior frontal regions of the brain have shown contributions of motor circuits to the comprehension of phonemes, semantic categories and grammar. (Pulvermüller and Fadiga, 2010: 1)

Barsalou (2009) has used neuroscientific studies of mirror neurons to suggest that simulation is a basic mechanism in the brain ‘with the situated character of experience in the environment being reflected in the situated character of the representations that underlie simulation.’ (2009: 1281). Mediated through mirror systems, ‘simulation is the re-enactment of perceptual, motor and introspective states acquired during experience

with the world, body and mind' (2009: 1281). We undertake situated conceptualizations when we attempt to understand experience and these also allow us to make predictions about environments and situations. Corballis (2009) ascribes a crucial role in language evolution to mirror neurons: 'the mirror system provided a natural platform for the subsequent evolution of language. In nonhuman primates, the system provides for the understanding of biological action, and possibly for imitation, both prerequisites for language.' (2009: 25)

MacCaig's poetry about Assynt, often written when he was far from the landscape he loved so well, can partly be read as evocative simulations, re-enactments of a rich perceptual world, understood through the senses. Yet even that act of simulation is problematic. In 'A Man in Assynt', the narrator tries to recall the details of the landscape in turn, then reflects:

I can't pretend
it gets sick for me in my absence
though I get
sick for it. Yet I love it
with special gratitude, since
it sends me no letters, is never
jealous and, expecting nothing
from me, gets nothing but
cigarette packets and footprints.

(MacCaig, 2005: 221)

'Cigarette packets' and 'footprints' both imply a particular kind of carelessness, something throwaway or hardly thought of. The kind of simulation Barsalou describes is another human impudence, natural though it is. The relationship between man and landscape in 'A Man in Assynt' is conflicted: MacCaig describes it as 'a love affair, so nearly human / we even have quarrels'.

3.6 The living mountain

Perhaps the most appropriate correlate (or even model) of MacCaig's approach to embodiment comes not from neuroscience itself at all but from Nan Shepherd's *The Living Mountain* (1977), a study of the Cairngorm mountains in Scotland, drawing on

decades of exploration there. Like MacCaig, Shepherd suggests through her prose that mountains can only be known through the senses, through the act of exploring them. In the mountains one may live ‘a life of the senses so pure, so untouched by any mode of apprehension but their own, that the body may be said to think.’ (1977: 105)

As Robert MacFarlane says in his introduction to the 2011 edition of *The Living Mountain*: ‘for her as for Merleau-Ponty, matter is ‘impregnated with mind’ and the world exists in a continuous ‘active mood....the grammar of now, The present tense....For Shepherd, the body thinks best when the mind stops’ (2011: xxxiii).

Mountaineer Ed Douglas has argued that Shepherd anticipates neuroscientific research on embodiment in the way she writes about mountains: ‘she doesn’t just look, she feels everything...Nan Shepherd wants to disappear into this landscape....If you start ferreting through recent neuroscience, you realise she was onto something, that the way our body functions and experiences the world alters the way we think.’ (Douglas: 2012)

There is something in her prose, her insistence that ‘knowledge does not dispel mystery’ (1977: 59) that resonates with MacCaig’s evocations of lived experience and the significance of embodied cognition. MacCaig’s poetry is often bodily, even though the body too is a limited tool of exploration – as in Shepherd’s work, we can only know that we don’t know everything.

Poet J, who trained as a dancer, reflected on the similarities between poetry and dance in interview:

....when dancers are taught, you can say what the steps and the rhythm are but you can’t necessarily articulate what happens in between and so dance teachers ‘resort’ to metaphor without even knowing they’re doing it (in the way a lot of people resort to metaphor in everyday life without knowing they’re doing it). What interested me is that the most exact way of saying how you wanted someone to move would be the most inefficient and inarticulate way because it would take so many words....metaphor is more precise, gestures with more precision than anything else. However, in a way, it’s not an end destination. It’s towards exactitude...There is an understanding of metaphor which is experiential and physical. There’s something about the understanding of metaphor which means it has to be an embodied understanding firstly and primarily. Pre-language. And dance is pre-language. – Poet J

The paradox at the heart of MacCaig's depictions of language and cognition seems to find a parallel in Gödel's incompleteness theorem in mathematics, the idea that any consistent system will contain things that are true but unprovable within the system. Hofstadter (2000) has suggested that this mathematical theorem serves as an interesting metaphor for consciousness, which is a 'strange loop' that can never have complete knowledge of itself because of this fundamental paradox of introspection. Shepherd and MacCaig are writers who bring this paradox to life through literature. To quote Norman MacCaig's 'On a Beach' (1981):

I used to know things I didn't know.
Not any more. Now I don't know
even the things I know, though I think I do.

(MacCaig, 2005: 415)

This poem with its riddling quality uses the claustrophobic repetition of 'know' to show the trap that is created when we try to think about the process of thinking, the contradictions inherent in self-consciousness. It is a typical MacCaig paradox: to 'know' and 'not know' at the same time.

3.7 MacCaig and the right hemisphere

If we return to McGilchrist's characterisation of the right hemisphere and its 'style' of apprehension outlined in Chapter 2 (Section 2.2), the poetry of Norman MacCaig might seem to share many of its preoccupations with this attitudinal mode. Unlike the quantifying left hemisphere, the right hemisphere is sensitive to context, to the body and the non-verbal. It sees the world as a Gestalt with imprecise boundaries. Thus, unlike the rationalising left hemisphere, the cognitive styles we associate with the right hemisphere are more alive to uncertainty, to the kind of paradoxes MacCaig explores in his poems about language, metaphor and landscapes. As McGilchrist says:

Non-verbal behaviour, language, facial expression, intonations and gestures are instrumental in establishing complex contradictory, predominantly emotional relations between people and between man and the world. How frequently a touch by the shoulder, a handshake or a look tell more than can be expressed in

a long monologue. Not because our speech is not accurate enough. Just the contrary. It is precisely its accuracy and definiteness that make speech unsuited for what is too complex, changeful and ambiguous. (McGilchrist, 2009: Kindle Location 2037)

This reads like something of a defeat, one that echoes MacCaig's 'hatred' of a linguistic trope like metaphor – something exact yet inadequate. MacCaig understands that language is often a blunt instrument because of, not in spite of, its precision. It is its limiting, constricting force that makes it a poor tool to reflect the complexity of lived and embodied experience. As both McGilchrist and MacCaig reflect, metaphor is the closest we have to a bridge between body and world, but as a property of language, it can still limit as much as it expands. In interview, Poet C suggested this contradiction need be a limit, just something brought to the fore by the particular, peculiar act of writing poetry:

When I began writing poetry in my teens I thought that real poets were people who had ideas for poems and then they worked on them... It took me decades to realise most great poets don't know what they're writing until they're engaged in the writing process. But I don't like to think of that as something mysterious...that's just the working process. It's like a sculpture, as Geoffrey Hill said, where you have this hard block of language that you're carving out to make a poem, but the real difficulty for poets is, while you're carving that, there isn't any block there. It's only as you carve that the block comes into existence....So it's actually an act of faith more than mystery for me. The only good poems I've written were ones where I had no idea where I was going.... Rather than trying to turn ideas into words, it's the words trying to turn themselves into ideas. - Poet C

In the end, we are both trapped and freed by language as MacCaig suggests, with characteristic complexity, in 'By comparison' (1954):

Trees and stars and stones
Are falsely these and true comparisons
Whose likenesses are the observer. He

Stares, in the end, at his own face, and shame
Of his deep flaw, mortality.

(MacCaig, 2005: 43)

The right hemisphere ‘world’, as described by McGilchrist and as explored in other terms by Norman MacCaig has an interesting parallel in Ignacio Matte-Blanco’s concept of the indivisible world (1998). Influenced by psychoanalysis (or, more specifically, Freud’s characterisation of the unconscious) Matte-Blanco contends that human thought is actually bi-logical, submitting to two different kinds of reasoning at once: ‘there is in human beings and the world a mode of being which expresses itself in the distinction between things, hence in their division; and another mode which treats any object of knowledge as if it were non-divided: the heterogenic and indivisible modes’ (1998: 64).

This is the fundamental antinomy of human beings in the world, as these two incompatible modes of thought or being both claim equal rights to be true. Our perception is heterogenic but our sensation is indivisible. Poet J touched upon this theme of indivisibility when comparing poetry and dance. She argued that metaphors are not ‘final’ but ongoing:

There is a certain lack of finality about it. Metaphors are parallel to what they describe but that implies a certain finality rather than a continuation from there to some other place. I write for music theatre and opera and I’ve always preferred rehearsal to performance. I like process, things that are continuous and in movement rather than things that end because things that end are fenced in. Things that continue are intrinsically more interesting and exciting. The fact of metaphor is not some end place, it’s not a beginning place. – Poet J

Though never directly acknowledged in McGilchrist’s work, Matte-Blanco’s notion of bi-logical reasoning and his concept of the indivisible world seem to underpin McGilchrist’s characterisations of the hemispheres: two equally necessary modes of apprehension which must be kept separate, because of the incompatibility in the ways they model the environment.

Crucially, McGilchrist believes that the right hemisphere itself is sensitive to paradox, a topic he explores in an essay *The Divided Brain and the Search for Meaning* (2012). Defining paradox as those moments ‘when our theories about the world, our ways of thinking, come face to face with reality and show themselves to be inadequate to understanding the world’ (2012: Kindle Location 301) he quotes the physicist Richard Feynman and his statement that ‘nature’, the world as it is, confronts the left hemisphere with a series of paradoxes. To those who deal in quantum mechanics, matter is as difficult to explain as consciousness. The ‘natural’ world is full of paradoxes and contradictions. Faced with paradox, the right hemisphere concludes that logic has its limits as a way of understanding the world. The left hemisphere, however, concludes that ‘the experiential world somehow doesn't measure up to logic.’ (2012: Kindle Locations 312-313) since ‘the left hemisphere sees truth as internal coherence of the system, not correspondence with the reality we experience’ (2012: Kindle Location 315):

Rationality, the schematic carrying out of algorithmic procedures in the way that a machine would, is better done by the left hemisphere, it is true. But other kinds of reason, including the reason that tells you the limits of reason, depends on the right hemisphere. (McGilchrist, 2012: Kindle Locations 276-277).

Poetry, McGilchrist seems to imply, is uniquely placed to explore paradox, since it is an irreducible art form. ‘The meaning and the structure are not like a body and its clothes. Once you have taken the apparent ‘message’ out of its context, and examined the language of a poem like a cast-off coat, you are left with a handful of tatters. (2012: Kindle Locations 185-186). A much more contemporary poem which seems to articulate the paradox at the heart of Norman MacCaig’s work is ‘Deceit’, by Michael Donaghy (1954-2004)

The slate grey cloud comes up too fast.
The cornfield whispers like a fire.
The first drops strike and shake the stalks.
Desire attained is not desire.

The slate grey cloud comes up too fast.
However slyly we conspire,
The first drops strike and shake the stalks.
We cannot hold the thing entire.

The wind betrays its empty harvest.
The dead leaves spin and scratch the street,
Their longing for the forest
Forever incomplete.

Tell the driver to let you off
Around the corner. Be discreet.
Desire attained is not desire
But as the ashes of a fire.
The dead leaves spin and scratch the street.

(Donaghy, 2009: 11)

Donaghy's poem can be read as a kind of elegy to incompleteness. As soon as we fulfil desire, it becomes something else, stripped of the longing that characterised it, resembling its former state only as ashes resemble a fire. Longing, by definition, must be 'forever incomplete'. For MacCaig, the act of writing about the non-human world seems to be 'as the ashes of a fire too'. Poetry, like everything else, is testament to the fact that 'we cannot hold the thing entire'. Yet McGilchrist would argue that this paradox, uniquely appreciated by the right hemisphere, is a crucial kind of understanding in itself. As he suggested in a discussion with the Royal Society for the encouragement of Arts, Manufactures and Commerce (February 2013):

In the living world, context is everything, but this is neglected by the left hemisphere. Thus the left hemisphere prefers the explicit, without understanding that rendering things explicit, and isolating them under the spotlight of attention, denatures and ultimately kills them, just as explaining a joke or a poetic metaphor robs it of its meaning and power.... (McGilchrist, 2013)

Norman MacCaig is concerned with one of the most fundamental paradoxes of all; the idea that we cannot evoke the experiential world through language, yet language is all we have to do so. His doubt remains characterised by its fluency, embodying the paradox precisely. In interview, several of the contemporary writers I spoke to echoed the idea implicit in MacCaig that we can question language, but must ultimately return to working with what we have. Poet D expressed it pragmatically:

I always started out from the point of view of knowing that language was inadequate and I was comfortable with that as an idea. I remember reading Aldous Huxley talking about the eye as a restriction rather than something that enabled us to see and I think very quickly I adapted that to language as well – it's ridiculous to assume that 26 letters can help us to explain everything that's here....I'll work with what we've got and try to make the best of that. - Poet D

Poet A went further, suggesting that the concept of 'adequacy' is not only unattainable but, perhaps, limiting:

Language is always inadequate in the sense that no poem completely evokes or encompasses what you have a hunch it should, otherwise you wouldn't write the next one. Robert Graves once said 'if we wrote the perfect poem, the world would end'....what drives you from poem to poem is the idea that no poem can ever encompass what you think a poem should be able to. - Poet A

What drives some poets, then, is the notion of inexpressibility itself. For Poet C, it is even a kind of ideal:

I'm always hoping language will be inadequate because I feel the power of the poem is in what it's trying to say, we're always looking for the right words....I'm actually scared to death of writing the perfect poem because I'd never write anything again in my life. I like the idea that words are these...hapless tools we have to use that never quite get there. - Poet C

Perhaps the most interesting definition of metaphor, however, came from Poet G, who believes what might be described as 'inadequacy' is in fact central to its power:

‘Metaphor is about a kind of calculated inaccuracy. If everyone agreed on it there’d be no place for subjectivity...there’d be nothing at stake.’

Metaphor as calculated inaccuracy, its power lying in its limitations. A definition that might offer MacCaig some sense of redemption, a way of letting his own language off the hook.

3.8 Summary

In this Chapter I have explored Norman MacCaig’s paradoxical relationship with metaphor (Section 3.1 and 3.2) and related this to the notion of language being somehow ‘inadequate’ to convey thoughts and feelings about the world MacCaig’s narrators inhabit (Section 3.3). I have related this to the equally ambivalent and mysterious position occupied by metaphor within neuroscientific discourse (Section 3.4) and to theories by Mithen (2005), Donald (1991), Corballis (2009) and others about the evolution of language from gesture and mimesis. In turn, I demonstrated in Section 3.5 that MacCaig’s poetry might evince theories of embodied cognition (see Gibbs, 2006) and how we can apprehend through the body as much as through language, that vehicle which he finds so problematic. In Section 3.7, I concluded that the ideas expressed by MacCaig’s work often find a parallel in McGilchrist’s (2009) descriptions of the ‘attitudinal mode’ of the right hemisphere.

In Chapter 4 I will demonstrate how ideas from neuroscience might equally be relevant to a reading of Paul Muldoon’s poetry. As with MacCaig, relating Muldoon’s work to neuroscience offers a broader reading than the interpretations of some critics might suggest and presents surprising new connections, appropriate to a poet whose work so often makes a show of its own ability to connect disparate ideas.

Chapter 4: ‘Should they not have the best of both worlds?’ – Paul Muldoon and duality.

That part of my mind that makes connections all the time is overlaid by something else, by a kind of sensible brain which is usually in control in my daily life, making me try and make sense when I talk to people...and that is not the poetry part of my brain. I understand why poets at the turn of the 20th century became so interested in the occult, why they saw themselves as a channel for the poems. It's not really about spiritualism but it is about trying to suspend the sensible brain, return to a place where we are more instinctive and where we notice things as they really seem to us rather than translating it into something we think is going to be acceptable. – Poet B

Words want to find chimes with each other, things want to connect – Paul Muldoon

This chapter will relate the poetry of Paul Muldoon to a specific aspect of perception that also preoccupies neuroscientists: connection-making. Sections 4.2 and 4.3 will review the critical context for Muldoon’s work and look at how critics often seek to cast him as a poet of political duality (see O’Brien, 1999), examining the difficulties inherent in confining Muldoon’s work to one particular context. Section 4.4 will look at duality as a broader theme in Muldoon’s poetry and suggest how this might reflect the basic hemispheric duality that also interests McGilchrist (2009) in *The Master and His Emissary*. Section 4.5 will study ‘cryptocurrents’ (Robbins, 2011) in Muldoon, leading into a discussion of patternicity and hyper-connection in Muldoon’s later poems in Section 4.6 and 4.7 and relating this to the work of Shermer (2011) and Seung (2013).

4.1 Telling new weather: Muldoon and duality

Paul Muldoon’s first collection, *New Weather* (1973) takes its title from the last line of the volume’s second poem, ‘Wind and Tree’ in which an Irish saying that two-thirds of the wind happens where there are trees (see Kendall, 1996: 28) is used to frame a dramatic premise:

In the way that the most of the wind
Happens where there are trees,

Most of the world is centred
About ourselves.

(Muldoon, 2001: 4)

From the image of a solitary figure in this second stanza (the 'self' with the world centred around it) the poem moves towards a contrasting description of forced unity in nature:

Often where the wind has gathered
The trees together and together,

One tree will take
Another in her arms and hold.

(Muldoon, 2001: 4)

The anthropomorphism of the tree (specifically, the tree as female) immediately evokes a human relationship, one which is developed and complicated in the following two stanzas:

Their branches that are grinding
Madly together and together,

It is no real fire.
They are breaking each other.

(Muldoon, 2001: 4)

This sudden conflict announces what Kendall (1996) considers the poem's central theme, 'the emotional pain which results from destructive relationships' (1996:22). The

phrase 'together and together' echoes the poem's third stanza, a repetition which seems to imply that 'togetherness' is present in both the tenderness of holding and the 'breaking' of the trees grinding together. The final stanzas of 'Wind and Tree' reintroduce the more self-reflective tone of the opening and introduce the lyric 'I':

Often, I think I should be like
The single tree, going nowhere,

Since my own arm could not and would not
Break the other. Yet by my broken bones

I tell new weather.

(Muldoon, 2001: 5)

The dilemma of being two rather than one is left unresolved. On the one hand, to live singly is to be protected from harm ('my own arm could not and would not break the other'). Yet to be 'like / the single Tree, going nowhere' is presented as something less remarkable than its painful alternative: the 'new weather' told by broken branches and the sense of progress and movement that implies. In a further ambiguity, Muldoon has chosen to isolate the last line. It stands alone below the couplets above – form contradicts content.

With its direct and more subtle evocations of coupling, 'Wind and Tree' can, of course, be interpreted as a poem about sexual relationships. Kendall notes that it is 'the earliest published example of an insistent association in Muldoon's poetry of sex and pain' (1996: 28). But to see 'Wind and Tree' as a purely sexual poem is reductive - it can also be read as a poem more broadly concerned with the notion of 'doubling', or, as Wills (1998) puts it, 'Muldoon's dilemma': '...a struggle between the wish to remain isolate and inviolate, and the notion that only through relations with others can change, progress, feeling (and, implicitly, writing) occur.' (Wills, 1998: 28)

Kendall (1996) notes the influence of Robert Frost's poem 'Tree at my Window' (1928) on Muldoon's poem:

Tree at my window, window tree,
My sash is lowered when night comes on;
But let there never be curtain drawn
Between you and me.

Vague dream-head lifted out of the ground,
And thing next most diffuse to cloud,
Not all your light tongues talking aloud
Could be profound.

But tree, I have seen you taken and tossed,
And if you have seen me when I slept,
You have seen me when I was taken and swept
And all but lost.

That day she put our heads together,
Fate had her imagination about her,
Your head so much concerned with outer,
Mine with inner, weather.

(Frost, 2001: 251)

Though 'Tree at my Window' is perhaps more straightforwardly positive about the concept of union than 'Wind and Tree' (let there never be curtain drawn /Between you and me'), the thematic similarities are clear - like Frost, Muldoon seems compelled to explore the contrast between outer and inner weather. The figure at the centre of Muldoon's poem stands with 'most of the world' centred around him or herself. The parallel for this 'inner weather' is the outer world, the strange dynamics of the trees, alternately holding and breaking one another. This extended image is used to contrast the nature of looking inward with the risk inherent in looking outward. In this sense, Muldoon could be exploring the relationship between the self and the external world as much as the implied violence of sex. Wills (1998) takes 'Wind and Tree' as a motif for *New Weather* as a whole and argues that, in his first collection 'Muldoon is unsure how

much trust he can place in the reader. Again and again he seems to draw the veil of secrecy aside, while never quite owning up to the meaning of what is found there.’ (1998: 28)

I will suggest that, in observations like this, Wills is conflating poet and narrator and confusing poetics with personal politics. This chapter will argue that Muldoon’s prolific body of work has chiefly been characterised by its critics as being about dualities (both political and personal). I believe these dualities can be framed differently (and perhaps more usefully) in terms of McGilchrist’s (2009) depiction of hemispheric lateralization and the contradiction between two mutually-exclusive but necessary ways of apprehending the world. They can also help us to understand the obsessive way that Muldoon connects ideas, how, as Sean O’Brien puts it: ‘it is as if, faced with Forster’s injunction ‘Only Connect’, Muldoon has taken him literally and indiscriminately’ (1998: 176)

I will consider the stylistic developments in Muldoon’s work from *New Weather* (1973) to *Maggot* (2010) in terms of this McGilchristian paradigm and his tendency to ‘Only Connect’. This discussion will relate to discourses surrounding connection-making in neuroscience. In turn, this relates to Muldoon’s conception of the nonarbitrariness of the sign and, more specifically, the name: ideas that are differently explored elsewhere in Muldoon’s critical work. Sean O’Brien is one of many critics to make reference to Muldoon’s belief in the dictum ‘nomen est omen’ (the belief that a person’s name is fundamentally related to aspects of their job, character or personality) in his essay ‘Muldoon as Critic’ (*Poetry Review*, Vol 97, no 1, Spring 2007) noting that ‘although Muldoon ranges widely, his method is consistent: etymology, echoes and the anagrammatical properties of words are what first fascinate him.’ (2007: 87)

4.2 The critical framework

In her essay ‘Muldoon’s Antecedents’, Brearton (2004) suggests that Muldoon’s poem ‘Errata’ might be seen as a set of instructions for reading his entire oeuvre:

For “Antrim” read “Armagh.”

For “mother” read “other.”

For “harm” read “farm.”

For “feather” read “father.”...

(Muldoon, 2001: 445)

‘Errata’ suggests that we should not necessarily take objects, or indeed words in Muldoon’s poetry at face value. Though it isn’t clear whether we should we trust in the substitute or ‘ghost’ word in each pairing any more than its original. Certainly, this idea of almost-Freudian substitution recalls any number of Muldoon poems in which one word or concept deliberately bleeds into another. At the close of ‘Sushi’ (From *Meeting The British*, 1987), a chef’s apprentice has ‘scrimshandered a rose’s / exquisite petals’ from the end of a carrot, and hands it to the head chef who weighs it ‘gravely’ from hand to hand:

with the look of a man unlikely to confound

Duns Scotus, say, with Scotus Eriugina.

(Muldoon, 2001: 174)

This is more than just a play on similar words – ‘Sushi’ begins with a couple debating something (‘Why do we waste so much time in arguing?’) and the ability to confound two figures is implied as a slight, or intellectual weakness. In ‘Milkweed and Monarch’, Muldoon plays subtly on this same idea of conceptual slippage, but applies it to something more apparently personal:

As he knelt by the grave of his mother and father

The taste of dill, or tarragon –

He could barely tell one from the other –

(Muldoon, 2001: 329)

Here, it is unclear whether the subject of the poem is having difficulty distinguishing between the two tastes, between the two graves or, indeed, between the two parents buried there. ‘One’ is a distinctively ambiguous pronoun to have used. For ‘mother’,

read ‘father’? Returning to ‘Errata’, with its direct exploration of linguistic similarities, Brearton suggests that the poem is ‘an invitation to dwell, through rhyme, in more than one place at the same time or in the same place twice’ (2004: 46).

Wills notes in the Introduction to her critical study *Reading Paul Muldoon* that he is one of the ‘most elusive’ poets alive (1998:9). There is always a presumed difficulty in reading Muldoon’s work – McDonald (2004) picks up on this in his Introduction to *Paul Muldoon: Critical Essays*, suggesting that: ‘both his poetry and his prose have often kept their distance from the kinds of certainty – whether about personal or literary history, aesthetic or political positioning – which many students of contemporary writing would like to possess’ (2004: 2).

Students, and perhaps critics too: McDonald characterises Muldoon as someone who seems ‘always on the verge of being understood, but never quite capable of being critically pinned down.’ (2004: 2). Interestingly, this statement seems to shift the responsibility for ‘being understood’ towards Muldoon and away from critics. In his illuminating essay ‘Muldoon’s Covert Operations’ (2011), Robbins surveys both Muldoon’s poetic and critical work through a neo-Freudian lens and connects this resistance to being pinned down to Muldoon’s deliberate project as a poet: ‘Muldoon’s work retains a theoretical commitment to a form of boundless intentionality, according to which there is no limit to the meanings in a poem for which the poet might be held responsible’ (2011: 268)

The seemingly limitless numbers of connections between tropes and ideas a Muldoon poem may make or suggest can be bewildering for critics – perhaps this is why it is often appealing for them to describe Muldoon’s propensity for connection-making in terms of thematic duality, or doubling, in his collections. Most often explored is the theme of duality and political conflict in Muldoon’s work: a popular example is ‘The Boundary Commission’ with its evocation of borders and their arbitrary nature:

*You remember that village here the border ran
Down the middle of the street,
With the butcher and baker on different sides?
Today he remarked how a shower of rain*

Had stopped so cleanly across Golightly's lane
It might have been a wall of glass
That had toppled over. He stood there, for ages,
To wonder which side, if any, he should be on.

(Muldoon, 2001: 80)

This vacillation in the face of political division, the significance of a wall 'made of glass', the notion of wondering 'which side, if any, he should be on' suggests a kind of deliberate ambivalence to arbitrary distinctions. It has also been taken to imply a difference between Muldoon's approach to writing about Irish politics and Seamus Heaney's – distinctions which have been laboured by critics like Kendall (1996). Kendall's book-length study of Paul Muldoon is at pains to show how Muldoon rejects extremism and tribalism. In a discussion of Muldoon's 'A Trifle', Kendall finds Muldoon's poem about a bomb scare in Belfast 'less self-important' than Heaney's essay about cancelling a BBC Belfast recording because of an exploded bomb. He argues that:

Muldoon's trifling unrhymed sonnet captures the extent of the real 'Suffering' in Belfast, where a bomb alert itself is no more than another trifle: paradoxically, only a dilettante would labour the event. The poem suggests that those who go about their everyday lives amidst the ever-present threat of violence cannot afford the indulgence of Heaney's artful scruples. (Kendall, 1996: 91-92)

O'Brien (1998) responds witheringly to Kendall's attempt to distinguish Muldoon's politics from Heaney's in 'Paul Muldoon: The Advanced Muldoon' (collected in his book *The Deregulated Muse*), suggesting that

...a more useful area of contrast between Muldoon and Heaney lies in their treatment of origins. If Heaney's poems return often to the theme of having somewhere to come from, Muldoon's have a much more unstable, complex sense of the past and of identity. (O'Brien, 1998: 173).

Nonetheless, attempts to look at Muldoon in relation to Heaney often distinguish them on the basis of Muldoon's more nuanced, even transcendent approach to politics. 'Mules' is the title poem of Muldoon's 1977 collection, a book which Wills (1998) believes illustrates his political stance characteristically:

The poems in the book do try to tell something of the truth of the streets of Belfast and the border country, articulating something between the truth of the pamphleteer and the truth of the romantic, pastoral youth. For if Muldoon inhabits a position somewhere in the middle of these two poles, this suggests not simply that he rejects both sides, but also that he is persuaded by both (Wills, 1998: 45)

'Mules' begins with the narrator questioning 'should they not have the best of both worlds?', then goes on to describe the creatures with their hybrid ancestry ('her feet of clay gave the lie / To the star burned on our mare's brow'). Muldoon uses these contrasts between earth and sky throughout to evoke a creature 'neither one thing or the other', bringing the two domains together in the poem's final image:

We might yet claim that it sprang from earth
Were it not for the afterbirth
Trailed like some fine, silk parachute
That we would know from what heights it fell.

(Muldoon, 2001: 67)

It has been suggested by critics including Wills (1998) that the mule in 'Mules' stands for poetry and its relationship with politics, poetry as a 'hybrid' that should not 'pamphleteer' too directly nor romanticise. This idea seems to be echoed in Muldoon's 'Lunch With Pancho Villa', where, against the backdrop of a revolution, a poet is harangued by a pamphleteer:

'Look, son. Just look around you
People are getting themselves killed
Left, right and centre

While you do what? Write rondeux?...

(Muldoon, 2001: 41)

The narrator is left questioning 'but where (I wonder myself) do I stand...?'. Yet this political duality has a wider implication, according to Kendall, who says of 'Mules': 'the hybrid motif establishes parallels not just with the particularities of life in the North, but also with humankind's dual nature' (1996: 60) As such it is 'a poem about inheriting two formative but irreconcilable traditions' (1996: 51)

Or as Wills puts it, it contains a 'basic ambivalence' (1998: 42) which characterises the collection *Mules*, concerned as it often is with

...bizarre and unlikely liasons and the ambiguous entities to which they give rise. At the most general, metaphysical level, Muldoon is concerned with the relationship between transcendence and immanence, sky and earth and the uneasy position of poetry suspended midway between the two. (Wills, 1998: 42)

As such: 'the mule, or cross breed, in some sense symbolises the art of poetry...not simply because of its association in Muldoon's work with transcendence, but rather precisely because of its mediation between earth and sky.' (1998: 47)

These readings of 'Mules' as a political poem are in some sense allegorical, inferred from Muldoon's position as a Northern Irish poet rather than from the poem itself. Likewise the debate between Kendall and O'Brien about the political implications of 'A Trifle' takes the emphasis away from the way in which it is ambiguous, a poem about what we notice and what matters to us. Consider Muldoon's narrator, a worker in Belfast, filing out of the office after 'another bomb alert':

I had been trying to get past
a woman who held, at arm's length, a tray,
and on the tray the remains of her dessert –

a plate of blue-pink trifle

or jelly sponge
with a dollop of whipped cream on top.
(Muldoon, 2001: 120)

Are we really supposed to infer (as some critics – see Sean O’Brien, 1998 – have) that the ‘blue-pink’ trifle with its white ‘dollop of whipped cream’ on top is a symbol of the Union Jack, or might it be that Muldoon’s narrator is trifling with us? The Union Jack, after all, isn’t blue and pink but blue and red. As such, O’Brien’s seems like a misreading, informed by the critic’s desire to attribute political significance to Muldoon’s imagery rather than by the imagistic content of the poem. ‘A Trifle’ describes a basic incongruity – in the midst of a Belfast bomb scare, a woman is holding a jelly dessert (and holding it ‘at arm’s length’, as if she herself is not sure what to make of it). It seems more plausible that the end of this poem is about what we choose to foreground: the woman in the poem is more concerned with her lunch than with the bomb scare (by implication, because this is just ‘another’ scare). This has also become the most significant thing the narrator notices as he or she leaves the building. ‘A Trifle’ stands up to a multiplicity of readings, some more complex and contradictory than others. O’Brien attempts to reduce it to one overtly political meaning, contradicting his observation elsewhere that ‘Paul Muldoon the poet expects his readers to be on their toes’ (*Poetry Review*, 2007).

It sometimes seems as if to refer primarily to the different kinds of dualities in Paul Muldoon’s work (political, personal, sexual) and to read his poems almost exclusively in those terms is something of a surrender, an easy way of categorising the particular difficulties he presents the reader with, inferred from a presumed context for the writing itself. I will argue that we should consider duality as a more specific project, an *end in itself* in Muldoon’s work, a commitment to a particular way (or rather two incompatible ways) of seeing the world, one which finds a correlate in McGilchrist’s *The Master and His Emissary*, in his presentation of the two hemispheres, their fundamental duality and the contradictions this can create, the extent to which ‘for us as human beings there are two fundamentally opposed realities, two different modes of experience; that each is of ultimate importance in bringing about the recognisably human world’ (McGilchrist, 2009: Kindle Locations 206-207).

4.3 Muldoon and misreading

In Simon Armitage's poem 'Homecoming' (from *CloudCuckooLand*, 1998), itself clearly influenced by Muldoonian precedents, the narrator begins with an entreaty: 'Think, two things on their own and both at once'. This could almost be a motif for Paul Muldoon's whole oeuvre, returning to Brearton's idea that his poems invite us to 'dwell...in more than one place at the same time'. It is this aim, the difficulty of holding these things in parallel, that is crucial in Muldoon's work -not just the different kinds of 'dualities' he explores, but the inherent nature of duality.

Revisiting Wills' suggestion that Muldoon's poems reveal a poet who both rejects and is persuaded by both sides of a political argument (1998), it seems that the way many critics have explored duality in Muldoon's work suggests a surprising readiness to conflate the narrators of Muldoon's poems with Muldoon himself, their implied opinions with his. Returning to 'Wind and Tree', Wills discusses this poem in relation to 'Dancers at the Moy' and uses it to make a surprising suggestion about Muldoon's relationship with his readers:

Does poetic language open the individual up to experience and emotion, or work as a defence against it? Does it maintain the individual in splendid isolation, or – like the tree in the wind – does it bring him into (possibly damaging) contact with others – among whom the readers of poetry surely figure highly? (Wills, 1998: 31)

Wills' final comment, presented as something so obvious it is almost an aside, contains a rather bold assertion, reinforced by her earlier reference to 'him' rather than 'them' (or, indeed 'him / her'). She is assuming that the relationship between the individual and the world debated through 'Wind and Tree' also stands for an implied 'risk' inherent in Muldoon's relationship with his readers. We cannot so readily assume this link between narrative voice and authorial persona.

As Poet D put it in interview:

One of the necessary contradictions in a poem is the sense that a reader thinks they're discovering something about you/the speaker but is also being asked to inhabit that position themselves. There's a kind of dual occupancy of poems. There is an inherent contradiction there – what seems to be so confessional is an invitation to someone else to inhabit and experience. It's also saying 'this might look very particular, but I hope its universal as well, otherwise you're going to be excluded from it. – Poet D

Perhaps this is less a 'contradiction' and more of a duality – the necessity to read something apparently personal as both universal and particular at the same time.

I will suggest Muldoon's poems are not necessarily intended to be read as indictments of his own personal or political dualities, but rather something more equivocal, something more fundamentally 'double'. Even when critics are quick to point out that Muldoon's work has a far more abstract, complex relationship to Northern Irish politics than Heaney's (as in 'A Trifle' and the readings of it discussed earlier in section 4.2), they are only willing to extend that notion of abstraction so far and continue to look for implied 'opinion' in Muldoon's work. 'The Sightseers' (from *Quoof*, 1983) is a good example of this kind of potential mis-reading. In the poem, a family have set out in their car, accompanied by their 'best loved uncle' Pat

...not to visit some graveyard – one died of shingles,
One of fever, another's knees turned to jelly –
But the brand-new roundabout at Ballygawley,
The first in mid-Ulster.

Uncle Pat was telling us how the B-Specials
Had stopped him one night somewhere near Ballygawley
And smashed his bicycle

And made him sing the sash and curse the Pope of Rome.
They'd held a pistol so hard against his forehead
There was still the mark of an O when he got home.

(Muldoon, 2001: 110)

For all this is a poem to which a clear political context can be applied, to look for a dominant political message in it may be reductive, because it can also be read as a poem about ambivalence and circularity, about the idea of pursuing these meaning as an end in itself. By choosing to title his poem ‘The Sightseers’, Muldoon is putting emphasis on the act of looking from the start. He then foregrounds the act of observation in the second stanza – the family are sightseers, but the thing they are going to visit is not a conventional sightseeing destination. This immediately questions the reader’s assumptions about the things we might go looking for. The poem’s central images are the circle of the new roundabout and the ‘mark of a O’ left by the pistol in the final stanza. The subtle link between the two might be taken to imply that, though this is a poem set against a backdrop of past political conflict, it is also a poem about circularity in the abstract. Critics trying to force a direct political moral from the poem are left, quite literally, going round in circles.

This recalls the wry final stanza of ‘The Frog’ (also from *Quoof*, 1983), where the narrator contemplates the creature, disturbed by building work:

The entire population of Ireland
Springs from a pair left to stand
Overnight in a pond
In the gardens of Trinity College,
Two bottles of wine left their to chill
After the Act of Union.

There is, surely, in this story
A moral. A moral for our times.
What if I put him to my head
And squeezed it out of him,
Like the juice of freshly-squeezed limes,
Or a lemon sorbet?

(Muldoon, 2001: 120)

Here, the delicate image of the sorbet suggests something insubstantial, something likely to melt on contact with air, like a poem with the meaning wrung out of it. To try to squeeze a direct moral from a Muldoon poem is as useful as looking for the answer inside the body of a frog. At the same time, it could be inferred that the frog image suggests this process is a harmful and destructive one – ‘what if it put him to my head / and squeezed it out of him’ also brings to mind a gun held to the head, the trigger ‘squeezed’. This substantial, stark image contrasts with the insubstantiality of the ending, the light ‘juice of freshly squeezed limes’ or the ‘lemon sorbet’. Muldoon does not allow the reader to process his metaphors one way. Once certain conceptual domains have been evoked (the context of ‘Ireland’ at the start, the double meaning of the ‘Act of Union’ which could refer to mating or to the 1801 legislative agreement with Great Britain) they can’t be easily put out of mind. To focus on Muldoon as a poet of direct, worldly oppositions and dualities can only get us so far. Instead, I will suggest that Muldoon’s poems signify a commitment to a larger kind of duality, explored variously through his narrative forms.

It is a fundamental duality, a struggle between different ways of conceiving the world that Muldoon explores directly in his poem ‘Lag’ (from *Hay*, 1998), which uses the story of two Siamese twins as a metaphor for a relationship between the narrator and another (‘we were joined at the hip. We were joined at the hip / like some latter day Chang and Eng’). The hostility in the twins’ relationship is as important in the poem as their proximity:

It was Chang, I seem to recall, who tried to choke
Eng when he’d had one over the eight.
It was Chang whose breath was always so sickly-sour.

It was Chang who suffered a stroke.
Eng was forced to shoulder his weight.
It was Chang who died first. Eng lived on for five hours.

(Muldoon, 2001: 408)

Significantly, we are never told which of the implied couple was most like Chang and which was most like Eng. It is the doubling *itself* that moves to become the theme of the poem, rather than the relationship behind it, the relationship for which the twins are supposed to be a metaphor. The metaphor becomes the subject of the poem just as, I will argue, Muldoon's linguistic and metaphorical dualities can be seen as the overarching theme of his work rather than the other things they are often assumed to stand for.

4.4 Reading Muldoon: a hemispheric parallel

In the following two sections, I will argue that, in their interpretations of Muldoon's prolific work, critics should pay more attention to the most likely way that Muldoon intends his own work to be read, based on his readings of other poems. In his essay 'Muldoon and Pragmatism' (2004), Redmond points towards a duality in the way we are expected to read Paul Muldoon's poetry, one which he connects to the pervasive influence of Robert Frost. He suggests both poets engage in a 'complicating process' which suggests that their poems can (or indeed should) be read both quickly and slowly:

Both writers make it possible for the reader to read them quickly, while at the same time hinting that a slower reading might be preferable, or even that a combination of slow and quick readings might be the most desirable.

(Redmond, 2004: 96)

These 'quick' and 'slow' readings correspond to the fundamentally divided nature of our attention explored by McGilchrist in *The Master and His Emissary*. McGilchrist considers why the brain is fundamentally divided by the medial longitudinal fissure when connectivity is normally seen as an advantage: 'evolution would never have sacrificed the apparent advantages of massively greater interconnectivity, unless there were a commanding advantage in, at the same time, keeping some things apart.' (McGilchrist, 2009: Kindle Locations 69-70).

This returns us to the assumption – discussed in the previous chapter – that the attentional modes of the hemispheres are not just different but fundamentally

incompatible. We need to be able to survey the whole and consider the parts. But we cannot do both at exactly the same time. We need two different ways of seeing. This idea formed the basis of the 'Gestalt' psychology popularised by the Berlin School from the late 1980s, and Gestalt psychologists maintain that the brain is a holistic, parallel processor with self-organizing tendencies: we see objects in their entirety before perceiving their individual parts, suggesting the whole is greater than the sum of these parts (see Hartmann, 2010). As McGilchrist notes:

...the link between the right hemisphere and holistic or Gestalt perception is one of the most reliable and durable of the generalisations about hemisphere differences, and that it follows from the differences in the nature of attention. The right hemisphere sees the whole, before whatever it is gets broken up into parts in our attempt to 'know' it. Its holistic processing of visual form is not based on summation of parts. On the other hand, the left hemisphere sees part-objects. (McGilchrist, 2009: Kindle Locations 1282-1286).

Which way of reading, 'quick' or 'slow', does Muldoon favour? Redmond cites Muldoon's frequent emphasis in interviews that people should be able to read his narratives simply as 'ripping yarns', taken in on an initial, quick reading. Redmond makes the interesting suggestion that: 'Muldoon's emphasis on reading quickly presupposes different levels of understanding and, in what seems an unusual move from such an obviously sophisticated artist, fails to privilege the deeper level' (2004: 98)

It is worth interrogating what Redmond means by 'deeper' here, from within a McGilchristian framework. Redmond seems to assume that a 'quicker' reading is necessarily a more superficial one. But throughout his work, McGilchrist emphasises the utility of a more holistic, instant appraisal, the kind typical of the way the right hemisphere comprehends. There is an emphasis on McGilchrist on the significance of NOT knowing the significance of each factual detail, each component of the larger picture:

The left hemisphere's take on things comes from assessing thousands of points of information in turn and trying to reach a conclusion about the whole picture that way. This has the profoundest consequences for the way it sees the world,

when contrasted with the take of the right hemisphere, which sees things as a whole, never as isolated particles independent of a context. Of course we do not actually build things up in the way that the left hemisphere imagines. That illusion comes from the fact that when we ask ourselves, after the event, how we understood something, our linear-processing left hemisphere comes up with the only way it knows, the way it would have had to do it if asked. But fortunately we don't often ask it. We grasp the whole and only later choose to survey such particular parts as we prioritise for their interest or relevance. By seeing isolated points, the left hemisphere imagines that there are atomistically distinct entities, rather than seeing everything embedded in its context, which radically changes its nature. (McGilchrist, 2009: Kindle Location 202-5).

Thus the 'quick' reading associated with the right hemisphere has its own validity, its own holism before the left hemisphere isolates the components of the whole, or in this case, text.

As Shermer puts it in *The Believing Brain* (2011), the story-weaving capacities of the left-hemisphere are not necessarily more instructive: the neural network he calls the 'left hemisphere interpreter' is adept at reconstructing events into a logical sequence and a story that 'makes sense'. But its reconstruction may not be faithful, it is biased towards that necessity of 'making sense'. And it engages in confabulation. In *The Telltale Brain* (2011), Ramachandran discusses anosognosia, the denial of paralysis seen in some patients after a stroke which affects the right hemisphere. Since the left hemisphere is concerned with constructing an internally-coherent belief system:

If there is a small piece of anomalous information that doesn't fit your "big picture" belief system, the left hemisphere tries to smooth over the discrepancies and anomalies in order to preserve the coherence of the self and the stability of behaviour. ...the left hemisphere sometimes even fabricates information to preserve its harmony and overall view of itself. (Shermer, 2011: 267).

The right hemisphere, by contrast, is concerned with detecting these discrepancies. As discussed in the previous chapter, it is sensitive to paradox and contradiction. To quote McGilchrist:

Paradox means, literally, a finding that is contrary to received opinion or expectation. That immediately alerts us, since the purveyor of received opinion and expectation is the left hemisphere. I called it a sign that our ordinary ways of thinking, those of the left hemisphere, are not adequate to the nature of reality. But – wait! Here it seems that the left hemisphere, with its reliance on the application of logic, is stating the opposite: that it is reality that is inadequate to our ordinary ways of thinking. (McGilchrist, 2009: Kindle Locations 3846-3850).

Patients with a right hemisphere stroke who are paralysed on the left side of their body will deny that they are paralysed at all, because the right hemisphere which would normally detect discrepancy, is not functioning properly. They rely on the left hemisphere, which constructs a coherent internal picture, despite evidence from the external world to the contrary. Ramachandran believes this clinical evidence relates to ‘the kinds of everyday denials and rationalisations that we all engage in to tide over the discrepancies in our daily lives’ (2011: 267). McGilchrist connects confabulation to a shift in Western philosophy in which paradox gradually became conceived of as something more and more problematic. This difficulty with paradox is reflected in our daily lives, our philosophy and perhaps also in our readings of a poet as complex as Muldoon. To criticise, to interpret solely in one way, is surely to engage in a kind of low-level confabulation (whatever the critical framework – a problem that my own analysis of Muldoon cannot escape).

Ultimately, Muldoon remains committed to the idea that his readers should comprehend his work in different ways, to contradiction itself. We should be able to ‘think two things on their own’ but also ‘think both at once’. As such, we should resist the simplifying tendencies of confabulation. Like McGilchrist, he seems to accept that ‘ordinary ways of thinking...are not adequate to the nature of reality’. In Muldoon’s ‘Getting Round: Notes Towards an Ars Poetica’ (1998), Muldoon reflects on his own practice as a critic and writer and admits that it is necessarily contradictory, suggesting:

‘you have before you a person who....argues for the primacy of unknowing yet insists on almost total knowingness on the part of poet as first reader....’ (Muldoon, 1998: 127)

This is a contradiction that his work often embodies, one that makes it difficult for critics to know how to discuss it. It is, perhaps, a mirror of the contradictions we face in everyday cognition. As Ramachandran notes:

The notion that many aspects of the human psyche might arise from a push-pull antagonism between complementary regions of the two hemispheres might seem like gross oversimplification; indeed the theory itself might be a result of “dichotomania”, the brain’s tendency to simplify the world by dividing things into polarized opposites....but it makes perfect sense from a systems engineering point of view. Control mechanisms that stabilise a system and help avoid oscillations are the rule rather than the exception in biology.
(Ramachandran, 2011: 267)

This notion of ‘dichotomania’ seems contained within the work itself, from the invisible line of ‘The Boundary Commission’ to the twins of ‘Lag’. It even proves relevant to a reading of perhaps Muldoon’s best known poem ‘Quoof’:

How often have I carried our family word
for the hot water bottle
to a strange bed,
as my father would juggle a red-hot half-brick
in an old sock
to his childhood settle.
I have taken it into so many lovely heads
or laid it between us like a sword.

A hotel room in New York city
with a girl who spoke hardly any English,
my hand on her breast
like the smouldering one-off spoor of the yeti

or some other shy beast
that has yet to enter the language.

(Muldoon, 2001: 112)

This sonnet (the form lending its own kind of dichotomy to the content) is about both separation and the unity that can exist across such divides. The childhood word for the hot water bottle is a marker of separateness, a barrier between the narrator and others: 'I have...laid it between us like a sword'. It is a part of personal history that cannot be shared. In the sestet, it is language itself which creates the same division, the girl's lack of English. Yet the connection between the narrator and the girl spans the divide, comes before language itself – his touch is like a 'shy beast / that has yet to enter the language'. In 'Quoof', Muldoon sets up a dichotomy in order to deliberately challenge and undermine it, to suggest that people are both fundamentally divided but intimately (perhaps endlessly) connected, beyond the mechanisms that contrive to separate them.

4.5 Muldoon and inter-connection

In his article 'Paul Muldoon's Covert Operations', Robbins (2011) carefully complicates Redmond's argument that Muldoon can be read in two ways by focusing on the almost infinite inter-connections in his work and the way that Muldoon poems can be read in terms of what he calls 'cryptocurrents' – things not found in the text but outside it.

Crucially, Robbins begins with the way Muldoon reads poetry himself, something made public in volumes such as *To Ireland, I* and *The End of the Poem* (2006). In the latter, a series of collected Oxford lectures, Muldoon suggests that we can productively read poems by looking for 'resisted usages' – words that are omitted from the poem, but which we can trace back to it by a series of imaginative connections. For example, in an analysis of Yeats' 'All Souls' Night', Muldoon argues that the word 'lees' is crucial because of its association with Yeat's wife, Georgie Hyde-Lees. This would not be so remarkable if it weren't for the fact that the word 'lees' doesn't appear in the poem at all, and furthermore, Muldoon uncovers it by examining two other Yeats poems in which the word does not appear either. Robbins concludes from *The End of the Poem*:

As a way to read Yeats, the location of what Muldoon calls “cryptocurrents” cannot be responsibly recommended to undergraduates. But I suggest that it is an entirely appropriate device by which to read Muldoon’s own poems. That is to say, he models his poems on this theory, rendering explicit in his own writing the cryptoprocedures he takes to constitute poetic thinking in general. (Robbins, 2011: 267)

In his analysis of Ted Hughes’ poem ‘The Literary Life’, Muldoon detects similar ‘cryptocurrents’ and suggests that Hughes’ piece corroborates Bloom’s argument in *The Anxiety of Influence* (1973) about the relationship between authors and their influences. Suggesting that it is difficult to read poems without an account of their intertextual relations, he finds Hughes’ description of Moore darning ‘crewel-work flowers’ in ‘A Literary Life’ not only indicative of cruelty (a cruelty inferred from biographical information about relations between Hughes, Plath and Moore) but also of accrual – the method Muldoon considers characteristic of both Moore’s poetry and of Hughes’. Thus ‘The Literary Life’ is a poem about influence. In an audacious link, Muldoon connects the influence of Moore to a poem called ‘Dehorning’ in Hughes’ *Moortown Diary* and concludes that this is ‘a book in which the very word Moore is an element of the title, as clear an indicator as one might find of Hughes’ desire to simultaneously include and occlude her influence’ (2006: 45).

The notion that this titling is ‘as clear an indication as one might find’ seems inherently contradictory, since – if the title really does reference Moore – the name is deliberately hidden, or ‘occluded’ as Muldoon might put it - it is an unconscious inclusion. Indeed, Muldoon’s reading here is almost as directed by what he as a reader wants to find as O’Brien’s reading of Muldoon’s ‘A Trifle’ is. It seems wilfully abstruse to claim that a book title which originated from Hughes’ experiences of farming on the moors of Devon owes more to a denied poetic influence than it does to the geographical setting of the collection. This is a Freudian, free-associative approach. Whether or not Muldoon’s interpretation of ‘Dehorning’ can be defended, the readings found in *The End of The Poem* are indicative of what Muldoon describes as his guiding principle as a reader: ‘my own conviction is that the tangential is most likely to be on target, most likely to hit the butt.’ (Muldoon, 1998: 298)

As Vendler (2006) puts it:

Muldoon is a bizarre critic, a shape-shifter. He turns every poet he considers into some version of himself...untenable inference is dear to Muldoon, unprovable and unlikely as it is. He makes pro forma apologies for his inferences, but he cannot let go of them....All of Muldoon's lectures depend on this sort of giddy non-referential referentiality, in which a spool of possible resonances unwinds backward as far as possible from the (often absent) word where it began. (Vendler, 2006)

Here, the phrase 'turns every poet into some version of himself' is telling – Vendler believes that Muldoon exhibits this same kind of 'non-referential referentiality' in his own work and this is perhaps why he is so ready to ascribe similar (albeit unconscious, perhaps) motivations to others in his reading of established poems and poets.

Poet J recalled hearing Muldoon's lectures on *The End of the Poem* and described their relationship with what she considered the psychological states implicated in writing poetry:

...what he was essentially doing was not only following the etymological trail of language but he was actually following the trail of the writer's thoughts and how they went from one thing to another, that trail that none of us ever articulate while we're writing, that's going on in our heads, but we're jumping from one thing to the other, things that are seemingly unconnected and he was following that through literature. I understood what he was doing, he was not simply throwing things out but following how the mind connects things. Sometimes you can identify those links in your own poems, through the music for example and you can see what sounds you connected unconsciously, but what's not so readily identifiable is how you are moving from one idea to the next. – Poet J

Here, we might substitute 'the trail of the writer's thoughts' with 'the trail of his own thoughts'.

Nonetheless, Muldoon states in ‘Getting Round...’ that the reader or critic might somehow enter ‘the mind’ of the poet during the act of composition, which Robbins takes as evidence that ‘the bedrock principle of Muldoon’s poetry is the sort of private linguistic associational attraction familiar from his own criticism’ (2011: 270).

Robbins thus feels justified in applying Muldoon’s own hunt for ‘resisted usages’ and ‘cryptocurrents’ to a section called ‘The Beatles: *The Beatles*’ from his poem ‘Sleeve Notes’ (from *Hay*, 1998), in which Muldoon riffs around a pun on ‘album’ (implying as it does the word ‘albumen’) and ‘white’ in relation to the popular name given to The Beatles’ self-titled record known as ‘The White Album’.

Though that was the winter when late each night
I’d put away Cicero or Caesar
And pour new milk into an old saucer
For the hedgehog which, when it showed up right

On cue, would set its nose down like that flight
Back from the U.S. ...back from the yes, sir...
Back from the....back from the U.S.S.R...
I’d never noticed the play on “album” and “white”.

(Muldoon, 2001: 410)

Through a series of rhyming associations, Robbins suggests that the ‘crypt word’ in ‘The Beatles’ is ‘revolution’, a word which does not appear in the poem, but which is also found in the title of two tracks on the Beatles’ album (‘Revolution 1’ and ‘Revolution 9’). The words ‘Cicero’, ‘Caesar’ and ‘USSR’ in the poem all converge around the similar-sounding ‘czar’, and the word that connects ‘Caesar’, ‘Czar’ and ‘USSR’ is ‘revolution’ – a highly charged word in the year that *The White Album* was released. Thus, ‘one word hides another, and it is that crypt word – not the thing to which it refers, but the word itself – for which the speaker must assume responsibility, though he has not uttered it or anything like it’ (2011: 274).

Furthermore, Robbins suggests that 'The Beatles' captures (or indeed records) Muldoon in the process of discovering one of the key crypt words in his oeuvre: the fact that 'white' stands for 'death', concepts he repeatedly links throughout *Hay*, the collection which 'Sleeve Notes' appears in. Significantly, Muldoon also lingers over the different implications of 'whiteness' in a reading of Marina Tsvetayeva's 'Poem of the End' in one of his 'The End of the Poem' lectures. Such a reading might seem ludicrous were it not for its strong connection to Muldoon's own methods of reading the work of other poets and his self-confessed commitment to an almost infinite degree of connection branching out from the poem. Rooted in these twin principles, Robbins' imaginative reading of 'The Beatles' seems no less plausible than the critical debates that have taken place over, for example, the 'politics' implied in Muldoon's 'A Trifle'. Indeed, in Muldoon's own terms, Robbins' reading seems more appropriate.

This kind of reading method, this obsession with 'cryptocurrents', links to Muldoon's conception of the self or the agent in his poems, Robbins believes:

Muldoon's poems are exercises in thinking about the problem of actions that result in unintended effects or consequences for which agents are nevertheless held responsible. This is a more radical notion of self than that which the positing of an unconscious is meant to elucidate, for it represents an expansion of agency beyond the horizon even of cause. (Robbins, 2011: 267)

Robbins is suggesting that, in Muldoon's work, characters and narrators can be held responsible for meanings they did not deliberately or consciously intend. He is suggesting that, in the same way, writers may be held responsible for meanings that they did not consciously intend. In turn,

...the expansion beyond usual literary horizons in Muldoon's own work (the continuation of a single rhyme scheme across several books, for example) marks 'another way of grappling with death and loss of self, precisely by insisting on the perseverance of the "I"....his self might persist as a form but not as continuation of content, as structure, but not signification. (Robbins, 2011: 296)

Since this observation is not rooted in Muldoon's own admissions or in his own ways of reading other poems, it seems less plausible than the rest of Robbins' approach – an inference too far perhaps, influenced by Robbins' tendency to connect Muldoon's ways of reading to Freudian analysis. All writers produce work which they might imagine will endure over time. And in almost all cases, a continuity can be expected between books. This need not imply a fear of the loss of the self (unless all art is conceived of as a fight against the loss of the self). Again, there seems a tendency to conflate narrators and authors.

Overall, Robbins believes that Muldoon's 'cryptography depends upon a notion of authorial intention so attenuated that we will have to look beyond literary criticism in order to find a theory adequate to it.' (2011: 269). For Robbins, this is provided by the intuitive leaps of psychoanalytic process. As I have already suggested in this chapter, theoretical neuroscience might enhance our understanding of Muldoon's work further.

4.6 Only connect: the believing brain

It might be argued that Muldoon's way of reading (and thus, by Robbins' implication, the way he expects we might read him) is connected to or exploits a fundamental cognitive bias, one examined by Shermer in his book *The Believing Brain* (2011) which focuses on a tendency he calls 'patternicity'. As I have discussed previously on my blog 'Poetry On the Brain' (Mort, 2012), patternicity is 'the tendency to find meaningful patterns in both meaningful and meaningless data' (Shermer, 2011). Shermer describes the brain as a 'belief engine' and argues that patternicity is also accompanied by agentivity, 'the tendency to infuse patterns with meanings, intentions and agency': in other words, we see patterns everywhere and we assume that they aren't random. Some of these ideas return us to the left hemisphere's tendency towards confabulation, to impose a narrative on events that may not be easily narrated.

The combination of patternicity and agentivity that Shermer describes in *The Believing Brain* connects to statistical biases explored in Mlodinow's *The Drunkard's Walk* (2009) - a statistical and mathematical examination of how we miscalculate probabilities in daily life and often underestimate the role of chance. Amongst other things, such miscalculations can influence gambling behaviour, social and political decision-making

and economic decisions. To explain why such tendencies persist, in *The Believing Brain*, Shermer makes a compelling if basic case for the role of natural selection. He asks the reader to imagine a hominid, three million years ago, walking along the savannah and hearing a rustle in the grass. Is it just the wind or is it a dangerous predator? Assuming the latter when it's really just the wind would be a 'Type 1 statistical error or false positive - a non-existent pattern. But in this case, the 'Type 1 error has no negative consequences. Assume the noise is nothing to worry about, however, when a predator is lurking in the bushes, and you are dead. False positives are less harmful than false negatives. Thus, as Shermer suggests 'there was a natural selection for the cognitive process of assuming that all patterns are real and that all patternicities represent real and important phenomena.' (2011: 60)

Amongst other things, we use these patternistic tendencies for facial recognition and for mimicry, an essential aspect of learning. Thus, it is not surprising that Shermer goes on to posit a connection between mirror neurons and agenticity. Our capacity for Theory of Mind (see Frith and Happé, 1999; Baron-Cohen, 1985) – the ability to attribute mental states to other people as well as ourselves and thus make inferences about behaviour - makes us more likely to assume that patterns (particularly with regard to human behaviour) are meaningful. Shermer also believes that dopamine - a chemical transmitter substance - is most closely related to neural correlates of belief. Dopamine assists learning behaviour on a neural level, enhancing the transmitting ability of neurons at a given time and thus increasing synaptic connections in response to a perceived pattern.

Interestingly, experimental research by Brugger and Mohr (2010) showed that people with high levels of dopamine were more likely to find significance in coincidences and patterns where no real patterns existed in an experimental context. The experiment tested signal detection amongst a control group who were either given levodopa (200mg) or a placebo drug and looked at the interaction between scepticism, dopamine levels and sensitivity to 'false alarms' in the experimental stimuli.

In interview, Poet B argued that poetry exploits a natural tendency that we all have, something very like Shermer's notion of patternicity and suggested that this is most evident in children:

Children notice the connections between seemingly unrelated things....because they don't have the inhibitions about that we develop later. Working with young children reveals that is part of our natural way of apprehending the world around us, by likening one thing to something else, often quite unrelated.... –

Poet B

She suggested that this is a capacity inherent in children which we inhibit as adults and which writers have to learn to recapture. The process of writing poetry is about 'trying to suspend the sensible brain, return to a place where we are more instinctive and where we notice things as they really seem to us rather than translating it into something we think is going to be acceptable.' (Poet B).

She seemed to suggest that patternicity was both innate but repressed, something that comes to the fore amongst writers and the superstitious (the latter category are considered extensively by Shermer, who devotes sections of *The Believing Brain* to exploring paranormal beliefs and openness to unusual experience). Thus according to Poet B: '(Poetry) can be a kind of obsessive thing....but connecting is something everyone does. Drawing likenesses is so integral to poetry. Poets become forensic observers of the world because you have to really look to grasp what it is something reminds you of.'

Poet D echoed this, suggesting that all humans see the world as 'a series of comparisons. If you can make an accurate comparison, or rather one that works, then you are close to activating what's going on anyway within our reception of the world....It's a sensation: you recognise the way that you recognise things.'

Creativity, of course, is a kind of discriminate patternicity (as opposed to some forms of psychosis, which can be characterised by indiscriminate patternicity). Poet G elaborated on this distinction, the fine line between noticing connections and being overwhelmed by them:

You must be looking for the web of elements that will pull a poem together...you have to develop that tendency. But that doesn't necessarily mean you think the world is connected in a magical, mystical kind of way....there's lots of madness in that way of thinking as well, if the poems are a kind of

frenzied linking of things to other things then they've lost their touch. Poets are people who rehearse all that in order to make shapes that orient or point the reader towards something in the world. It's not the marvellous moment that all things point towards in an epiphanic sense, its more well if you go down there and turn right you might end up somewhere interesting. So its directional..... You don't write all the time, but you do go through the motions of writing all the time and these are the kind of little obsessive things you have to do and they are the ways that the world speaks to you because metaphor is such a primary language in the way that we negotiate and communicate. – Poet G

But reading poetry can be an unconscious exercise in patternicity too. Don Paterson has written about the 'contract' that readers enter into when they know they are reading a poem: in simple terms, we assume that the words in the poem have connotative as well as denotative meaning. We assume that no image is arbitrary. Reading a poem is an over-signifying enterprise. As Paterson puts it in 'The Lyric Principle (Part 1: The Sense of Sound)':

Humans – no doubt in an act of vital compensation for their habit of hypercategorization, and the fragmented perception it brings - will connect any two unrelated things you care to throw at them...Poets take advantage of this by prompting or initiating just such a game of connection, presenting the reader with elements that, on a casual glance, seem only indirectly related - or not related at all. (Paterson, 2007: 62)

We might frame Paterson's remarks more scientifically by relating what he calls 'hypercategorisation' to the left hemisphere's piecemeal, discrete attitudinal mode and the 'fragmented perception it brings'. The notion of 'compensation' is not quite accurate – McGilchrist (2009) demonstrates how both modes of apprehension are crucial to attention; it is not a case of one mode 'compensating' for the other but of the necessity of both to perception. Nonetheless, Paterson's remark seems particularly relevant to the way Muldoon writes: the wealth of possible meanings it would be possible to imply from his work, the 'cryptocurrents' he looks for in the work of other poets, the way he expects the reader to 'think two things on their own and both at once'. At the same time, poems like 'The Frog' seem to deliberately undermine these

ways of reading, the tendency towards patternicity that makes critics of his work always strive to identify allegorical meanings.

The idea of a contract between reader and poet and the ‘oversignifying’ enterprise that they engage in seems particularly relevant to a poem like ‘Cuba’ from *Why Brownlee Left* (1980). The poem juxtaposes two events, the narrator’s sister arriving home late from a dance and the advent of the Cuban missile crisis. In the first stanza, the girl is received back home by her angry father:

My eldest sister arrived home that morning
In her white muslin evening dress.
‘Who the hell do you think you are
Running out to dances in next to nothing?
As though we hadn’t enough bother
With the world at war, if not at an end.’
My father was pounding the breakfast table.

(Muldoon, 2001: 78)

In the second stanza, the father figure begins to rant about politics and implies the imminence of crisis:

...But this Kennedy’s nearly an Irishman
So he’s not much better than ourselves.
And him with only to say the word...

(Muldoon, 2001: 78)

He suggests that his daughter should make her ‘peace with God’ in the midst of crisis. In the third and final stanza, the narrator can hear the sister talking to a priest behind the curtain:

‘Bless me, Father, for I have sinned.
I told a lie once, I was disobedient once.
And, Father, a boy touched me once’
‘Tell me, child. Was this touch immodest?
Did he touch your breast, for example?’
‘He brushed against me, Father. Very gently.’

(Muldoon, 2001: 78)

In a poem where no overt connection between the two incidents is made, the last stanza relies on the reader connecting the gentle brush that the sister describes with the nearness of the missile crisis, or rather the near miss of it. It works by simple juxtaposition rather than obvious metaphor. It exploits the reader's connective abilities, the assumption that nothing described in a poem (and, perhaps, particularly in a Muldoon poem) is arbitrary. Separating 'very gently' from the statement that precedes it in the last line foregrounds the slightness of the incident at the same time as enforcing the 'gentle' link between the Cuban Missile Crisis and an encounter between a boy and a girl. This in turn takes us back to the father's speech in the second stanza: 'and him with only to say the word'. Wars too are triggered by small things, by a single word or gesture.

4.7 Connection for connection's sake

Sebastian Seung argues in his book *Connectome* (2013) that human individuality arises not from genomes but from what he calls 'connectomes', the totality of the connections between all the neurons in the nervous system. The challenge for neuroscience is to map these different connectomes in order to understand the mind, individual differences and the source of brain disorders. According to Seung, it is not the size or location of areas in the brain that counts but the connections between these areas – this is where the uniqueness of an individual mind lies. As such, perhaps it might be inferred that the uniqueness of Muldoon is also 'connectomic', that his tendency to hyper-connect mirrors what might be considered the most important property of the human brain and the chief concern of neuroscience – the nature of connectivity itself. This also finds support in the work of Gabora and Ranjan (2013) whose discussion of 'neurds' suggests that our brains store implicit as well as explicit information and that each concept in the brain is represented by assemblies of neurons which overlap when representations share features. Thus, when a given concept is accessed, similar representations can interfere with each other and create 'crosstalk' (Gabora and Ranjan, 2013: Kindle Location 610). Muldoon's poetry draws attention to this 'crosstalk', the way that one representation can overlap with others.

To Poet E, a fundamental, straightforward kind of connection is at the heart of all poetry:

Poetry is bringing two things together. Michael Longley has this nice definition about a poem needing a sperm and an ovum and I think that's it exactly for me. Its two things from a different direction coming together and becoming one. I think that's why I've never liked confessional poetry because to me that just seems like one thing. It's the existence of two things that bring intelligence into it. – Poet E

This was echoed by Poet C's assertion that connections are everywhere around us and that poetry is simply 'an inclination to take notice' and to make a show of those existing inter-connections.

Arguably, Muldoon's more recent work has become more and more concerned with connection as a theme in itself, making a show of the poet's ability to dramatise patternicity. Writing of his recent collection *Horse Latitudes*, Vendler (2006) has said:

Paul Muldoon may not himself be ignorant of any of the many fields (historical, philosophical, linguistic) to which he constantly alludes, but most of us, opening *Horse Latitudes*, his tenth volume of poems, may long for notes, and even for explanations. (Vendler, 2006)

In that collection, his poem 'The Old Country' unfolds like a concertina, connecting words by derivation. The form of the corona (a chain of sonnets, where the last line of each stanza is echoed in the first line of the next) accentuates this sense of something unravelling, snagging along the way:

...Every flash was a flash in the pan
and every border a herbaceous border
unless it happened to be an
herbaceous border as observed by the Recorder

or recorded by the Observer.
Every widdie stemmed from a willow bole.
Every fervor was a religious fervor
by which we'd fly the godforsaken hole

into which we'd been flung by it.
Every pit was a bottomless pit
out of which every pig needed a piggyback.

Every cow had subsided in its subsidy.
Biddy winked at paddy and Paddy winked a Biddy.
Every track was an inside track.

(Muldoon, 2012: Kindle Locations 548-549).

As well as using the form of the corona (the next sonnet begins 'every track was an inside track'), each of Muldoon's sonnets is peppered with repetitions ('pig / piggyback', 'subsided / subsidy') and reversals ('observed by the Recorder / recorded by the Observer'). The language of the poem, particularly the refrains picked up between sonnets, emphasises its claustrophobic nature too – the phrase 'every track was in inside track' implies circularity and containment, a kind of 'inner circle' which we loop round and round. We feel as if we have fallen into the 'bottomless pit' of Muldoon's Old Country. Elsewhere, we are told that 'all conclusions were foregone' and 'every point was a point of no return', heightening the expectation of refrains and similarities, or foregone conclusions in the language as well as the content of the poem. The phrase 'every runnel was a Rubicon' comes back several times in the poem, beyond its expected repetition, creating a sense of a place full of boundaries, but boundaries that are always being subtly crossed. The final stanza of the last sonnet in the sequence concludes with the idea that, in the old country 'every town was a tidy town' (an idea which, tidily, doesn't have to be repeated, but, with a last flourish, echoes the very first line of the first sonnet in the sequence) and reaffirms a sense of self-containment.

Vendler has suggested that he uses the repetitious form of the corona here to explore clichés in Irish sayings and to look quizzically at his relationship with Ireland. She sees 'The Old Country' as a staple poem in a book which finds Muldoon busy 'resisting intelligibility', 'ever the master of distancing himself while involving himself'. Whatever the themes of 'The Old Country' might be, its most obvious theme is connection itself, the act of linking one common utterance to another. As Wills has suggested differently elsewhere, 'Muldoon's characteristic technique, particularly in his more recent work, could be described as the art of repetition, or, as he puts it in 'The Key', the 'remake'.'
(Wills, 1993: 195)

That same art is often in evidence earlier in Muldoon's work, of course, and particularly throughout *Hay* (1998), particularly in a poem like 'The Little Black Book' in which the narrator lists a series of sexual conquests (in alphabetical order), each linked by the refrain 'between her legs':

It was Aisling who first soft-talked my penis-tip between her legs
while teasing open that Velcro strip between her legs.

Cliona, then. A skinny country girl.
The small stream, in which I would skinny-dip, between her legs.

Born and bred in Londinium, the stand-offish Etain,
who kept a stiff upper lip between her legs...

(Muldoon, 2001: 444)

Wills has noted that the ways Muldoon writes about sex often turn on a tension between uniqueness and substitutability. That certainly seems the case in this poem, where each woman is remembered by a particular characteristic or qualifier, but each belongs to the same class by virtue of what she has 'between her legs'. As Allen (2004) puts it in his critical essay on 'rhyme and reconciliation' in Muldoon:

...the result is reductive, bitter, bleak and anti-heroic in contrast to the jaunty picaresque treatment of such matters in *Quoof*. The bathos of the form allows no grace or favour to any of the poem's participants, though the closure concedes the moral victory to Una: "I fluttered, like an erratum slip, between her legs."
(Allen, 2004: 87)

The tension between the unique and the substitutable that Wills identifies seems crucial to Muldoon's work as a whole: it is certainly reflected in the form of his more recent collections and poems – in the way, for example, 'The Old Country' plays on difference and similarity. This is a country that is unlike any other place, yet it could also be almost anywhere else. The particular thrives on the general. Muldoon's obsession with clichés

and popular phrases belies an interest in how they are used to local effect. As Wills notes, Muldoon often seeks to emphasise the extent to which the unique experiences of an individual are incommunicable. Whether this makes them useless as a fit subject for poetry, however, is another matter. Surely poetry deals in those things that seem difficult, impossible even, to communicate. As Poet Y put it in interview:

(Poetry) does discover new variations on sensibility and also it finds a way of trying to pin down those nebulous senses and emotions and thoughts that we all carry around with us and part of the pleasure of poetry is seeing those pinned down...that's one of poetry's jobs; to try to pin down in the physical world what it means to be alive. – Poet Y

It is this that makes poets 'build better than they know', in the words of Poet Z: 'The controlling intelligence has to be porous and let through instinct...The best poems are often the product of someone building better than they know...they have that sort of fingertip control but they don't have an iron grip.'

For all he emphasises its crucial importance to neuroscience (and, indeed, to society), connectomics may be more limited than Seung assumes. Reviewing *Connectome* for the TLS, Ghazanfar (2013) dismissed it as a 'radical reductionist approach' which downplays the extent to which neural circuits are moulded by their interactions with the body and the environment (indeed, with culture as part of environment). It is not enough to only connect. This almost mirrors some of the criticism levelled at Muldoon's later work, the show he seems to make of his ability to link one thing with another. As William Logan observed wryly in an online review of *Horse Latitudes* for *The New Criterion* in 2006:

There's nothing natural about his poems now—they're full of artificial sweeteners, artificial colors...Poem after poem fires off words with such abandon they're noisier than Phil Spector's Wall of Sound...Muldoon's a Wittgenstein disciple who believes the world is everything that is the case, and he can't bear to leave anything out: you can find Gene Chandler, stilettos, spivs with shivs, tweenie girls, and anti-Castro Cubans, all within half a dozen lines. He has a riddle about griddle that takes thirty lines (if you haven't gotten the hint, Muldoon's favorite rhea is logorrhea—or is that his favorite logo?). Like

God, he loves all things equally and not wisely but too well; in the democracy of such love lies tedium. (Logan, 2006)

Some of the poems in Muldoon's latest full collection of poems, *Maggot* (2010) seem to find their narrators striving for those connections which might make a narrative coherent. 'Love Poem with Pig' moves swiftly from a description of the people of Smartno throwing their last pig to invading Turks to stop them attacking their hilltop town (it works: 'Only stout defenders, the Turks concluded, would conjoin / blasphemy with beneficence') to a more domestic scene, where the narrator's beloved is eating pork:

.....The way you poke a fork
at a slab of pork
shoulder or pork loin
on which you've yet to put your stamp
suggests you might succumb if my steadfastness were itself to fail.
Before you undermine
my confidence so I suddenly decamp
and go looking for some other hilltop town to assail
maybe you'll toss me a little something? Maybe you'll give me a sign?

(Muldoon, 2010: 73)

Here, the sense of striving for meaning is accentuated by the arbitrary or unusual line breaks ('undermine / my confidence...') which seem to suggest a grasping towards something which is deliberately not reached.

There is an even more freewheeling logic at play in '@', in which each stanza uses the symbol as a trigger for a different perception or memory, almost in the manner of someone starting into a Rorschach ink blot test and seeing different shapes each time. The sign is at once 'the whorl of an out-of-this-world ear', the tail of a Capuchin Monkey and

Like the ever-unfolding trunk
of the elephant in the room that gives such a bad vibe
it vies with your old hippie girlfriend who once lent such weight
to any argument to which you feared she might subscribe,

including her insistence we abbreviate
our most promising rlshps...

(Muldoon, 2010: 74)

The argument, like the hypothetical elephant's trunk, seems 'ever unfolding' and the ellipsis at the end of each stanza (all but the last, which finishes with a full stop) emphasises a resistance to draw single conclusions. The parallels are the subject of the poem, the connections themselves, not some kind of minor epiphany they might tend towards. The phrase 'to which you feared she might subscribe' in this third stanza is telling, indicating the narrator's stance as an avowed fence-sitter – to subscribe to one argument is fearful.

The poems in *Maggot* often seem to notice without elaborating on what it is they're noticing. They are loose chains of connections, linguistic or intellectual, which work like the riffs in 'The Old Country'. Wills suggests this has been a tendency in Muldoon's work for a long time – describing the narrative arc of 'Sushi', she states that: 'the activity of the 'volatile'....apprentice suggests that arbitrary connections, not systematic analysis, are the fundamentals of creation...'. As such, this ties into Muldoon's obsession with the ways in which fiction and fact compete in versions of history, how myth can be as important as reality – what matters is the connection we make between ideas. Wills supports her argument by discussing 'Madoc: A Mystery' as a blending of fiction and fact which never comes down on the side of either.

In interview, responding to the hypothesised idea that poets are people who 'connect more', Poet I distinguished between connecting and making a connection:

No. I don't think they (poets) connect more. But I do think they make more connections, which is not the same thing, is it? Poets don't need to feel compelled by, or suffer from, the connections they make. I noticed you use the turn 'as if' in your poems quite a lot and I do too. I tried at one point to stop myself using the 'as if' turn towards the end of a poem as a kind of counter-factual idea to drive its close — because it seemed I was relying on it too much. Paul Muldoon is full of counter-factual assertions and assumptions. They allow you to make a connection that you don't necessarily believe in, to connect without being caught in, or being wholly compelled by, those connections – superstitiously, or in other ways. – Poet I

This links back to Poet G's description of writers as people who 'rehearse' certain kinds of connection. To connect ideas in a poem is to connect them hypothetically, to test the association out, rather than to forge a new connection (perhaps neutrally, in the way Seung might suggest) in the world. Poet I argued that poets 'think' with these connections, however, that: 'the much-used word 'ambiguity' in poetry may be no more than a name for that space to think and feel without compulsion.'

Thus poetry remains an exploratory practice:

There isn't a correct word, a *mot juste*, you're looking for when writing, because if there were your work would have to have a mono-linear trajectory. What you need so as to be in a creative mood is to have the feeling of something branching out from a starting point. There have to be verbal possibilities, not a verbal route or a destination. – Poet I

This 'branching out', these 'verbal possibilities' describe a process of connection-making important to the way that we write and read and particularly to the way we might read a poet like Paul Muldoon. With the publication of his collections *Horse Latitudes* and *Maggot*, there seems to have been a recognition amongst critics (see Logan) that Muldoon's work increasingly explores the possibilities of connection for its own sake. But, as I have argued throughout this chapter, this is a tendency that can be identified in Muldoon's poetry from the outset and which relates to the 'cryptocurrents' of his own critical writing, as well as finding a parallel in fundamental cognitive processes, themes which are explored by neuroscientists like McGilchrist, Ramachandran, Seung and others. Thus his more recent work makes explicit a tendency which has underpinned his poetry and interests from the start. Ultimately, Wills believes his approach to connectivity has something to do with his nuanced approach to Truth:

Muldoon's work does not depend on a notion of the 'true', a concept he always treats with suspicion. The self-conscious rhetorical form of the work undermines the aura of authenticity and sincerity necessary for the reader's belief in the truth claim inherent in poetic statements....it would be mistaken however to conclude that Muldoon's poetry attempts to undermine the distinction between true and false; rather the implications is that the true cannot

be assumed like a mantle, nor arise spirit-like from within - both these modes of claiming poetic authenticity result in delusion. (Wills, 1993: 234)

Can we be sure that Muldoon is not deliberately undermining ‘the distinction between true and false’? Perhaps it is too early to say. Or perhaps Muldoon suggests we should doubt the veracity of our own judgement. Or perhaps the answer lies in a cryptocurrent, somewhere outside the world of the text altogether. As McDonald puts it in *Poetry Review* in a 2007 review of *Horse Latitudes*:

Muldoon invests very heavily in what might be called an hermetic theory of reading – which is also, as he acknowledges, a theory of writing. The finding of clues, and the apparently wayward, the counter-intuitive or sometimes plain irrational methods of piecing these together, lead Muldoon deep into intertextual mazes in, and between, his chosen poems and poets... Repeatedly, Muldoon explores a poem to show that everything connects (in ways always more or less arcane) with everything else, and that nothing is too odd, or too unlikely, to be good material for such connections. It all adds up, Muldoon suggests; but he refrains from saying what it all adds up to. (McDonald, 2007: 89)

4.8 Summary

As discussed in Section 4.2, Muldoon’s use of ambiguity makes it tempting for critics to interpret his poetry according to their own particular interests and agendas (such as O’Brien, 1998 or Wills, 1998). Thus, as an Irish poet writing in the wake of Heaney, Muldoon’s work is often interpreted through the lens of the political, even if his approach to the political is acknowledged to be indirect. However, as explored in Section 4.5, it can equally be argued that applying Muldoon’s approach as a critic and reader of poetry (see Robbins, 2011) and his pronouncements in *The End of the Poem* (2006) to his own poetic work reveals how ambiguity often becomes an end in itself in the poems. In turn, and as I argued in Sections 4.4 and 4.5, this might be seen as indicative of something more fundamental in the human condition: the paradox of duality, which is also framed as the paradox of the hemispheres in McGilchrist’s *The Master and his Emissary* (2009). As Sections 4.6 and 4.7 explored, Muldoon’s later work displays a kind of ‘patternicity’ (Shermer, 2011) which refers everything in the poems

back to everything else, a tendency which also has a parallel in our cognitive biases. An approach which frames the work in terms of these broader cognitive strategies allows for a less reductive way of reading Muldoon's prolific output.

I will take up this theme of patternicity and connection-making in Chapter 5, which considers connections between John Burnside's autobiographical writing (Burnside, 2007, 2010, 2014) about his experiences of apophenia (the unmotivated seeing of connections coupled with an experience of abnormal meaningfulness) and his poetry, particularly his tendency to evoke parallel worlds or negative worlds (in which something is always not quite happening, or in which things are delineated by their absences). As with Muldoon, I will suggest that relating Burnside's poetry to the concept of apophenia and to experiences which he writes about in his memoirs can help to provide a more precise way of reading his work, beyond the tendency of critics to label him a 'liminal' writer (Wynne Thomas, 2011).

Chapter 5: The Asylum Dance - John Burnside and Apophenia

I've occasionally thought as someone who makes patterns, metaphors, that unless I can impose those patterns on the world somehow then the world's going to seem too chaotic for me. It's about finding some kind of order in disorder. But every time I think I've established a credible, explicable account of why I write, I write a poem that doesn't fit any of those definitions. It keeps changing....I sometimes think poetry is always going to be a groping towards meaning and significance that ultimately can't be achieved or defined. But that doesn't stop us wanting to bowl at the moon or create local conditions of significance which we can live within. – Poet D

Poetry is a matter of relieving an irritation as well as seeking an inspiration. – Poet W

Having examined connection-making in Paul Muldoon's poetry and prose in Chapter 4, this chapter will review John Burnside's work in light of his experiences of apophenia, discussed at length in his memoirs (2007, 2011, 2014). I will suggest that negative worlds and parallel worlds serve a very particular function in Burnside's poetry, rather than signifying a vague 'liminality' identified by some critics (see Richardson, 2002). Section 5.1 will summarise the critical reception of Burnside's work and how critics have focused on 'liminal expression' (Wynn Thomas, 2011) in his work. Section 5.3 will examine Burnside's account of experiencing apophenia – the unmotivated seeing of meaningful connections – in his autobiographical writing and look at how his first collection *The Hoop* (1988) might reflect some of these experiences. Section 5.4 will argue that the parallel and negative landscapes that feature so heavily in Burnside's poetry serve a particular active function rather than signifying vague liminality. Section 5.6 will relate temporal fluidity in Burnside's work to experiments by Libet et al (1983) investigating free will. Section 5.7 will draw these strands together, suggesting the function of fragmented selves and negative or parallel worlds in Burnside's poetry.

5.1 The liminal life – critical contexts

When John Burnside won both the Forward Prize and the T.S. Eliot Prize for his collection *Black Cat Bone* in 2011, it renewed critical appreciation of his work. Reviews

and discussions of Burnside's poetry (Wynn Thomas, 2001; Richardson, 2002) most often draw attention to its other-worldly or 'liminal' qualities and, following the success of *Black Cat Bone* he was presented in the media as a poet of shadowy hinterlands. In September 2011, M. Wynn Thomas wrote typically of Burnside in *The Guardian*:

If nature is a haunted house, then art, or so Emily Dickinson remarked, is a house that yearns to be haunted. Few better contemporary examples could be found of the truth of this adage than John Burnside's latest collection, which is a tour de force of liminal expression.....His poetry is best when dwelling in possibility, the imagination having been skilfully persuaded, by rhythm and by image, to postpone making up its mind indefinitely. (Wynn Thomas, 2011)

The implication of Thomas' review is that, not only is John Burnside content to dwell in a realm of indefinite possibility, but that he is at his writerly 'best' when he does so. The phrase 'tour de force of liminal expression' could almost be a motif for the critical reception of John Burnside's work as a whole. Andy Brown – a poet who has collaborated creatively with Burnside in the past – has described his poetry similarly in *Agenda* as occupying a 'lit space' which is neither interior nor exterior, existing between binary opposites, defying categorisation:

The 'lit space' is the gap between...parallel lines; between the self and other; between internal and external; between imagination and reality; between nature and culture...the 'strange rhetoric of the parallel between nature and the imagination' as Wallace Stevens calls it – where we dwell. (Brown, 2011: 109)

That term 'lit space' as used by Brown here comes from one of Burnside's poems ('Unwittingly' from the collection *A Normal Skin*, 1997) in which the narrator is trying to locate the place where thought begins and remarks that it is 'always the same lit space, the one good measure'. In 'Unwittingly', then, the narrator answers the quest for a location by refusing to locate himself anywhere, echoing Wynn Thomas' suggestion that this is writing which intends to 'postpone making up its mind indefinitely', to sit on the fence (*The Guardian*, 2011).

In the same issue of *Agenda*, Sampson conceives of Burnside's 'evasive' tendencies slightly differently from Andy Brown, relating the 'evanescent' qualities of his verse to 'a profound anti-dogmatism', a refusal to bow to easy meaning-making: 'his poems rarely

state what they believe, or arrive at conclusions either narrative or intellectual' (2011: 117). Her essay on his work ('The Expanded Lyric: John Burnside and the Challenge to British Tradition') implies that there's something paradoxically decisive in this kind of refusal. To avoid conclusions is a conclusive stance in itself.

However, this same avoidance of 'easy meaning-making' has been strongly critiqued by Richardson (2002) in *Areté*. Richardson sees mystery itself as the defining theme of Burnside's oeuvre but argues that it tends towards meaninglessness. Quoting Sean O'Brien's *The Deregulated Muse* (in which O'Brien describes much Scottish poetry as being dominated by 'vestigial but undimmed apprehension of mystery, felt both as a mental climate and in landscape') Richardson summarises:

In all his recent work, the 'vestigial but undimmed apprehension of mystery' is certainly now not just a characteristic of Burnside's poetry but its central theme. Burnside's blurb-writers are fond of emphasising this: 'no-man's land' will always be mentioned as Burnside's territory; the poems are always 'hymns to the tension between' or 'poetry rooted in the tension between', or 'the "somewhere in between" of dusk or dawn, of mists and sudden light, where the epiphanies are'. The protagonists of his poems are 'infinitely mysterious, difficult and "out there"'. (Richardson, 2002: 133)

The danger of occupying this poetic 'no-man's land', Richardson believes, is that the poet risks saying nothing of meaning about the mysteries he evokes:

If 'mystery' is Burnside's theme, his writing is always going to be a record of failure. It is possible, as Paul Muldoon has demonstrated, to make this record entertaining and meaningful. But you have to be exact in your meaning, as well as your mystery. Burnside lacks exactness. (Richardson, 2002: 133)

The subjective endorsement of Muldoon's work as inherently more 'meaningful' than Burnside's might be challenged here, particularly since the grounds of comparison are unclear – it is, after all, possible to be exact and meaningless at the same time. Rather than elaborating on his comparison, however, Richardson illustrates the imprecision of Burnside's liminality with a wry example of substitution:

Burnside's favourite word, apart from 'someone', 'somewhere' and 'sometimes', is 'something'; and a fun game to play when reading Burnside is to find a word

to substitute for ‘something’ whenever it appears in the text (for some reason, ‘dogshit’ often seems to work).... All in all, ‘something’ occurs 25 times in *The Light Trap*, a collection of 27 poems. Is this how a poet writes a poem where the mysteriousness is exact, not the meaning? Just by using ‘something’? Might one not conclude that technique is impoverished here and not just Burnside’s *lexis*? (Richardson, 2002: 140)

This chapter will argue that, rather than signifying an inherent meaninglessness, or what Richardson calls a ‘sentimentalised unknowing’, Burnside’s preoccupation with parallel worlds, negative tropes (where something is suggested by a reference to its absence) and the seemingly vague have a very specific import in his work. Burnside’s liminality can be related to the experience of the mental condition apophenia (the unmotivated seeing of connections) which he writes extensively about in his own memoirs.

Thus liminality is not an end in itself but a product or representation of a certain kind of pattern-making which finds expression in Burnside’s poetry. This in turn relates to Burnside’s own conception of past, present and future and to neuroscientific research into the nature of free will. I will discuss these themes in relation to Burnside’s poetry and his autobiographical writing, showing how the latter can illuminate the former and take our critical appreciation of Burnside beyond references to the ‘lit space’ or the liminal as a destination in itself, beyond ascribing his work an easy and un-interrogated dimension of mystery.

5.2 Why link writing and life?

Before beginning a discussion of John Burnside’s experiences of apophenia and their relevance to his creative output, it is necessary to defend an approach which will relate his poems to evidence drawn from outside of them. The argument in this chapter runs contrary to the New Critical ideas posited by Wimsatt and Beardsley in their essay ‘The Intentional Fallacy’ (1954) which argues that texts have three kinds of evidence relating to them – internal evidence, external evidence and contextual evidence – and that anything which might fall into the realm of the writer’s biography should not be seen as relevant to the text itself. In short, we should be careful not to confuse the personal and the poetic. Upon publication, they argue, a poem passes from the control of the person who wrote it and becomes abstracted from the intentions that gave rise to it:

The poem belongs to the public. It is embodied in language, the peculiar possession of the public, and it is about the human being, an object of public knowledge. What is said about the poem is subject to the same scrutiny as any statement in linguistics or in the general science of psychology. (Wimsatt and Beardsley, 1954: 5)

Defining poetry as ‘a feat of style in which a complex of meaning is handled all at once’, Wimsatt and Beardsley state that its relationship to intention is different from that of a ‘practical message’ which succeeds only if intention is conveyed. By contrast:

The meaning of a poem may certainly be a personal one, in the sense that a poem expresses a personality or state of soul rather than a physical object like an apple. But even a short lyric poem is dramatic, the response of a speaker (no matter how abstractly conceived) to a situation (no matter how universalized). We ought to impute the thoughts and attitudes of the poem immediately to the dramatic speaker, and if to the author at all, only by an act of biographical inference. (Wimsatt and Beardsley, 1954: 5)

This argument was developed famously by Barthes in his 1967 essay *The Death of the Author*, in which he states that literature is a space in which all identity is lost, including the identity of the one who writes. Books are palimpsests, tissues of signs and imitations and ‘the true locus of writing is reading’ (Barthes, 1967). Thus the unity of the text is in its destination, not its origin.

Having argued for a similar position – the separation of narrator and poet - in the discussion of critical approaches to Paul Muldoon in Chapter 4 Section 4.1 and 4.2, I agree that authorial personas and poet biographies are by no means the same thing and should not be confused. As indicated by Chapter 4’s discussion of Wills and Muldoon, there may be no good reason to impute biographical data directly to a poem, to argue that the opinions being expressed are those of the author, that ‘I’ necessarily means ‘I, the poet’.

At the same time, whether the poem’s subject is entirely fictional and dramatized or whether it draws on aspects of autobiography, the author’s whole style or mode of expression may be influenced by aspects of their biography and, in particular, by their mental health or characteristic ways of thinking. The idea that biographical information

can be relevant to creative writing even though it should not necessarily be imputed to the meaning of an individual poem is not as contradictory as it might seem. This position is best expressed by the poet Michael Donaghy in his collected essays, *The Shape of the Dance* (2009) in which he asserts that a poem is a diagram of consciousness.

...Consider how any printed page of verse or prose, with all its paraphernalia of paragraphs, running heads, marginalia, pagination, footnotes, titles, line breaks and stanzas, can be understood as a diagram of a mental process....the words in the centre of the page surrounded by their somewhat reserved audience of footnotes and marginalia are a diagram of self-consciousness, a commentary frozen out of the flow of the story, song or poem, out of the voice we've entered as we participate. (Donaghy, 2009: 10)

Thus Donaghy suggests that the page we encounter as readers offers us a 'model of the mind'. If a poem is a diagram of consciousness, a diagram of mental processes, then it in turn is influenced by the mental processes of the writer, even if the piece in question is entirely dramatized and fictionalised (as Wimsatt and Beardsley suggest). It follows that if the writer in question has experienced a particular kind of thought process (perhaps categorised as mental illness) it will have influenced the ensuing 'diagrams of consciousness' in various crucial ways.

Stockwell (2013) suggests that the intentional fallacy poses 'the wrong sort of question' (2013: 263) and sums up the debate about intention by describing the work of Wimsatt and Beardsley as a reaction against the 'biographical criticism and wild psychic speculation that passed for literary scholarship in the 1920s and 30s' (2013: 265). However necessary such a reaction might have been, he suggests that its legacy has meant 'a neglect of questions of deliberateness, artistic choice, creativity, authority and credibility.' (2013: 266). Whilst Stockwell believes that there are not single readings of texts, he also thinks that 'most literary works have an encoded, text-driven response' (2013: 269) and, furthermore, that this is assumed by readers of texts: 'readers assume that there is a preferred reading of a literary text, which they impute to the author's intention' (2013: 269). Stockwell's approach takes into account the interaction between 'readerly disposition' and 'textual imposition' (2013: 263) and as such offers a middle ground.

The value of this more nuanced approach to intention which acknowledges some correlation between an author's state of mind and their work is reinforced by Caterina Eppolito writing in *Poets on Prozac* (2008) about her experiences of anorexia and how the characteristic patterns associated with the disease went on to inform her work long after she was physically healthy again: 'although I didn't like a therapist's revelation that poetry was a continuation of my anorexic thinking, it was true. Although my body had physically recovered, my poems were full of constraint, restriction, rules and obsession.' (2008: 127)

This reinforced an idea expressed by Poet D in interview that there's a crucial relationship between the individual psyche of the poet and his/her creative output, in contrast, perhaps to other forms of writing:

....All poems are about the individual, they say what it's like from the individual point of view, rather than when you read a newspaper report of what's happened in Baghdad – essentially, that's telling you how it feels for everybody. I sometimes feel that poetry starts from the opposite end. It is utterly idiosyncratic, but you sometimes manage to form these links with other people's thoughts or feelings as well. – Poet D

That 'idiosyncrasy' must, of course, in part relate to the poet's own obsessions, illnesses and mental states. Poet D extended this notion to suggest that a poem is a kind of unique transmission or broadcast from one individual mind to another:

Why do we need poetry when we have access to so much information and entertainment, most of it online? My feeling is that it comes back to the individual mind – when one individual mind is making a transmission or a projection or a broadcast that they've thought about in a very considered way, I still think that's quite unusual. – Poet D

There is an established precedent for relating the output of creative artists, particularly poets, to experiences of mental illness of the kind John Burnside discusses in his memoirs. *Sounds from the Bell Jar* (1990) by Gordon Claridge, Ruth Pryor and Gwen Watkins explores the lives and works of ten authors in terms of the traits that psychotism and creativity might have in common. Introducing their study, they state the relationship plainly:

Among its several distinguishing features the human mind has two that most clearly define its uniqueness. One is the capacity to take great leaps of the imagination; the other is its susceptibility to the wild aberrations of insane thought. The possibility of an inextricable connection between these qualities has long been debated... (Claridge, Pryor and Watkins, 1990: 1)

This long-debated link between mental illness and creativity has been well documented, from Kay Redfield Jamison's 1996 volume *Touched With Fire* (which postulates a connection between the cyclothymic aspect of bipolar disorder and different parts of the creative writing process) to quantitative research carried out by Nancy Andreasen into participants in the University of Iowa's highly prestigious creative writing programme. Using standardised diagnostic interviews, Andreasen found that 80 per cent of the writers in her sample qualified for a diagnosis of affective disorder, compared to 30 per cent for her control group. She also found a rate of mental disorder of 42 per cent in the relatives of the writers in the Iowa Writers' Workshop, compared to 8 per cent for the relatives of controls (Andreasen, 1987)

A study which I conducted in 2013-14 with Dr Oliver Mason of University College London backed up these older findings (Mason and Mort, forthcoming, 2014, *Psychological Medicine*). We tested whether poets possess greater vulnerability to schizophrenia and bipolar disorder, and for what style of poetry in particular. 291 poets were found to have greater Unusual Experiences, Cognitive Disorganization and Impulsive Non-conformity when compared to matched norms on the shortened Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE). Based on the Mood Disorder Questionnaire, 18.4% of poets met criteria for lifetime bipolar disorder. Self-identifying as an 'avant-garde' poet was particularly associated with both positive schizotypy and bipolar symptoms. Our research was based on a similar study undertaken by Ando et al (2014) with comedians and we compared a sample of 291 poets (recruited through social media and e-mails sent to poetry databases) with a sample of 808 individuals in a control group. All were asked to fill out an anonymous online survey based on that of Ando et al. (2014) with the addition of the Mood Disorder Questionnaire (MDQ). This diagnoses bipolar disorder by self-report if seven or more symptoms are endorsed as occurring at the same time, and as causing 'moderate-to-severe' problems. There were highly significant differences between the poet sample and the control group favouring higher scores in poets for Unusual Experiences,

Cognitive Disorganisation and Impulsive Nonconformity. According to the MDQ criteria, 18.4% of poets met diagnostic criteria for bipolar disorder at some point in the past (see Mason and Mort, forthcoming, 2014).

The authors of *Sounds from the Bell Jar* are keen to emphasise that any relationship between the mental illness experienced by some writers and their output is not straightforward or directly causal. Genuine neurological disease does not assist creativity. Rather, if creativity and psychosis are connected

...this is more likely to be revealed, not as a function of the psychotic state itself but in more subtle ways – for example, through certain modes or forms of thinking in which the tendencies to psychosis and creativity might prove to have in common. (Claridge, Pryor and Watkins, 1990: 4)

In his book *Strong Imagination* (2001), clinician Daniel Nettle is careful to emphasise the same point. Considering how the disorders he discusses might be related to creativity, Nettle covers much of the same ground (and cites some of the same studies) as Redfield Jamison, looking at incidences of mental illness in the families of successful artists and the extent to which ‘creative individuals have often sought to cultivate something very close to the schizotypal experience as a way into their work.’ (2001: Kindle Locations 1504-1505). Wary of the Romantic notion of the ‘mad’ author or artist, Nettle adds several caveats. Firstly, many of the studies he and Redfield Jamison cite ‘do not demonstrate an association between psychotic traits and creative capacity so much as an association between psychotic traits and creative recognition. This may reflect something about what contemporary Western culture chooses to bestow value on.’ (2001: Kindle Location 1627) He is also careful to show how mental illness is, of course, debilitating and prevents creative output rather than facilitating it. Writers, he argues, are people of great self-discipline, organisation and, often, strong ego, traits that may be undermined in illness.

Crucially, Nettle distinguishes between psychosis and psychotism. The genes he is trying to explain the persistence of are those of the latter, not the former. And he makes the case for psychotism being related to creative output and thus being kept in the population throughout evolution because it has a useful function. Heightened creativity comes from psychotism, but not psychosis. He takes examples of artistic endeavours

being prized highly in Inuit cultures and other societies to suggest an artistic universal, enduring throughout time:

There is an obvious similarity between the peacock's tail and what goes on in the Inuit dance house....at the very centre of the struggle to survive, one suddenly encounters a thing of deep impracticality and showiness, in which individuals compete to impress each other...Human creative performance could well be, at root, a form of sexual display. (Nettle, 2001: Kindle Location 1911)

The central characteristic of human display, according to this model, is not a physical characteristic but a cerebral one. The argument is not meant to imply that the conscious (or even unconscious) motivation on the part of the creator is to attract a mate, nor that people appreciate art because of a subconscious drive for sex, just that the reason the drive to create has stayed around is because of its usefulness in sexual selection: 'it is a theory about the evolutionary significance of cultural performance, not its human significance.' (2001: Kindle Location 1911). Nettle's attempt to establish a non-causal but direct link between creativity and mental illness is supported by the work of Ludwig (1995), Karlsson (1984), Post (1994) and Keefe and Magano (1980), whose work he synthesises in his own study, as well as the work of Andreason (1987, 2000) previously cited.

While the authors of *Sounds from the Bell Jar* (1990) stop short of attempting a biological, evolutionary explanation for the postulated link between mental illness and creativity, they do survey connections between the apparent psychological profiles of the ten writers included in their study, suggesting common traits reflected in both their biographies and their writing. In particular, they suggest that the writers in question often exhibited a strange mixture of hypersensitivity and detachment. On the one hand they were 'skinless', giving them a great imaginative capacity but also extreme sensitivity to the external world. The authors quote Strindberg – 'I am hard as ice and yet so full of feeling that I am almost sentimental' - and relate his admission to a fundamental feature of schizoid personalities: being oversensitive and cold at the same time, sometimes in quite different relative proportions. Trying to explain what seems a paradox, the authors suggest that 'apparent lack of feeling acts as protection against skinlessness, as a psychological - or even physiological - device for dealing with otherwise unbearable pain' (1990: 221-222). The assumption underpinning all these assertions is that the mental states of the writers in question are in part reflected in their

writing and that there is an inextricable link between overall creative output and the writers' experiences of mental illness.

There seems an even clearer case for making this assumed connection where the writers in question have made a link themselves between their experience of mental illness and their own creative writing, as John Burnside does through his memoirs, writing extensively about apophenia and describing his early life as a writer in relation to his illness. This is not to suggest that the 'self' revealed in a poem is the sum total of the author's own 'self' or even self concept. As Poet Y put it in interview:

I do feel like a totally different person when I'm writing a poem. Rilke said that the self that we reveal in our books is totally different from the self we reveal socialising or at parties... (poetry) does discover new variations on sensibility and also it finds a way of trying to pin down those nebulous senses and emotions and thoughts that we all carry around with us and part of the pleasure of poetry is seeing those pinned down...that's one of poetry's jobs; to try to pin down in the physical world what it means to be alive. – Poet Y

Nonetheless, poetry may bear traces of the mental states and experiences that gave rise to it – not the way a photograph would, more in the manner of what Donaghy calls a 'diagram'. Poet W put it even more succinctly, suggesting that a poet's work may be more revealing than anything else they might say: 'A poet is actually a machine for writing poems... The only way you can tell a tree is by its leaves and the only way you can tell a poet is not his attitude to life and not his, as it were, conviction about poetry, it's actually the poetry itself.'

Though not related to mental illness, a suggested link exists between synaesthesia and poets' accounts of tendencies in their work. Neurological conditions may have a direct link to creative output, but some poets in the interview sample described synaesthetic experiences in terms of 'ways of seeing' rather than as a neurological phenomenon: sometimes they were describing mental states with correspondences in their creative lives rather than the condition of synaesthesia. Several poets in the interview series related having experienced synaesthesia (the production of a mental impression relating to one sense by the stimulation of another sense). For Poet V, the link with his own poetry was strong: 'I've got a very synaesthetic mind where sound and sight, colour and

music and so on actually induce words...if I hear a piccolo...it has a correlation in language. Seeing and hearing things actually produces words’.

For Poet Z, the synaesthetic tendency was seen more as a trait that goes with the territory of being a poet, saying of the act of writing:

It modifies sensibility too...causes me to be in a state of constant flux. Also, there’s something about words that is compelling and that sort of causes swerves in thinking and that is to do with what it is that words actually mean...writers...look at words in a different way...there are hidden meanings in words that have to do with the shape of words and its colour and its weight. –
Poet Z

Whether writers really do ‘look at words in a different way’ or whether this is something particular to poets who have had experiences of synaesthesia, there’s a reported overlap between a mode of perception and a mode of poetic expression, supporting the argument that a poem may bear particular, identifiable traces of the mental states that underlie its genesis. Neuroscientists like Ramachandran (2011) might go further in the case of synaesthesia, suggesting that it is a mode of reasoning in itself, that it underpins creative thought. Synaesthesia, Ramachandran believes, is the result of ‘cross-activations’ between different areas of the brain (most commonly, number and colour V4 areas, which are adjacent) as a result of defective neural pruning, leaving the synaesthete with an excess of neural connections. Most intriguingly, Ramachandran proposes that synaesthesia - otherwise a trait of limited utility - remains in populations because of its relationship to metaphor: these ‘cross activations’ are a little like the process of finding likeness in otherwise unrelated concepts. Unsurprising, then, that synaesthesia is more common amongst artists and that the cross-activations it involves are conducive to creative thought. Whether or not there is a strong relationship between synaesthesia and metaphor, poets’ accounts of synaesthesia lend support to Michael Donaghy’s idea that, in many ways, a poem may function as a ‘diagram of consciousness’ (Donaghy, 2009).

5.3 Apophenia and creativity

In the Epilogue to his second memoir *Waking Up in Toytown* (2011), Burnside declares starkly:

When I was a full-scale lunatic, I suffered from a condition called apophenia. This condition, this unease, was described by Claus Conrad, the schizophrenia specialist who coined the term as the unmotivated seeing of connections coupled with the specific experience of an abnormal meaningfulness. In other words, seeing things that weren't there. Hearing voices in the background static. Finding God or the Devil in the last scrapings of a Pot Noodle. For normal folk, this connectivity allows them to make sense of the world, to find a modest, local and hopefully shared order by which to live. For the apohenic, it means a wild and unrelenting search for the one vast order that transcends all others, a hypernarrative, an afterlife – though what he ends up with is usually a tidal wave of incomprehensible and overwhelming detail: the whole world at once, jabbering constantly in a mind that can only find rest in oblivion. (Burnside, 2011: 5)

Later, in his 2014 memoir *I Put a Spell on You*, Burnside reflects on how he believes his apophenia puts him into a particular kind of category. He outlines the possibility that the world is divided into two groups of people, 'those who heard voices in the radiators and cisterns and those who heard nothing but water.' (2014: Kindle Location 2516).

People like us were doomed to spend the rest of their lives on the alert, listening for those whispers and catcalls in the plumbing. Even if we do 'get well'...we can never stop ourselves from pausing, halfway through the afternoon, or in the small hours, suspended over a sink or standing stock-still in some washroom or hallway, pausing to listen...to verify the silence. Because, of course, to stop hearing doesn't necessarily mean there is nothing to hear any more. (Burnside, 2014: Kindle Location 2516)

There is possibly some inaccuracy in John Burnside's description of the label 'apophenia'. It is now believed that the term was incorrectly attributed to Conrad (first name actually Klaus) by Peter Brugger in 2001. In Conrad's *Die beginnende Schizophrenie: Versuch einer Gestaltanalyse des Wahns*, published in 1958, he described the early stages of

schizophrenia in detail and coined the word ‘Apophänie’ to characterize the onset of delusional thinking in psychosis, the way that the schizophrenic may initially experience delusion as a kind of revelation. The term itself comes from the Greek ‘apo’ (away from) and ‘phaenein’ (to show) but was not intended by Conrad to comment on the experience of seeing meaningful interconnections. Since Brugger’s appropriation of the term, however, it has come to stand for the kind of thinking Burnside describes in the Epilogue to *Waking Up In Toytown* and also for some of the type of thinking that Michael Shermer describes as ‘patternistic’ in *The Believing Brain* (2011).

Thus Burnside’s attribution of apophenia may be more self-diagnosis than diagnosis. Nonetheless, for him as an author, it signifies an important way of categorising and making sense of certain kinds of abnormal experience and the concept of apophenia, and being apophenic has shaped his work in crucial ways. In interview, Poet A described this kind of connective tendency differently as ‘catastrophic thinking’ and made reference to the idea of self-diagnosis:

Famously, a lot of poets are desperate hypochondriacs. Now there’s something about hypochondria that’s to do with connection making and catastrophic thinking...there’s something about a hypochondriac that immediately puts one thing together with a set of other symptoms and creates a self-diagnosis.... Lots of poets have this way of connecting. – Poet A

Poet A seems to be implying that poets might often convince themselves they are ill by seeing meaningful connections between symptoms or signs which are essentially random. At the same time, the statement carries an implication that it is this tendency which enables them to connect disparate ideas in a more ‘useful’ way in their poetry. In *Waking Up In Toytown*, John Burnside gives an example of what he now considers to have been ‘apophenic’ behaviour to illustrate the term. He describes coming round in a room arranged carefully:

....crammed with clear glass bottles – clear, not green, not brown, and all of them full to the brim with the same sweet-smelling dark gold liquid that can also be found in the dozen or so bottles that have been placed at precise intervals around the bed....the bottles are open, there are no screw-top caps or lids, just a

single feather, balanced precariously on each rim. If one feather falls, then the spell fails – so it is important that every one of them stays balanced. (Burnside, 2011: 22)

Burnside's references to apophenia and his perceptions of extreme meaningfulness in the everyday connect to a paper published by neuroscientists Persinger and Makarec (1992) which provides an even stronger justification for linking Burnside's poetry and some of the experiences he describes in *Waking Up in Toytown*. Their paper, 'The Feeling of a Presence and Verbal Meaningfulness in Context of Temporal Lobe Function: Factor Analytic Verification of the Muses?' suggests a link between perceived extreme semantic meaningfulness and the feeling of a 'presence', which shows similarities to what writers often describe as 'The Muse'. These experiences are a lesser form of the unusual experiences that limbic (temporal lobe) epileptics have when burst firing is occurring in their temporal lobes. From their factor analyses of clusters of phenomenological experiences from 348 men and 520 women, Persinger and Makarec argue that periods of intense meaningfulness (much like the incident recounted by Burnside in his memoirs and quoted above) are a likely correlate of enhanced burst-firing in the left hippocampal-amygdaloid complex and temporal lobe in the brain. This allows access to non-verbal representations which are the right hemisphere's equivalent of an experienced sense of self and are felt as 'presences'. If these experiences of intense meaningfulness are caused by increased firing in the left temporal lobes, Persinger and Makarec suggest that a continuum of temporal lobe sensitivity exists in populations, with the extreme end of the spectrum dominated by limbic (complex partial) epileptics but also, crucially, by highly creative individuals. This would place Burnside at the extreme end of this spectrum of sensitivity. In some ways, then, his writing explores the implications of experiences which all 'normal' people have on some level and during certain states.

These sensitivities are certainly reflected in his poetic work: the descriptions of apophenia in *Waking Up In Toytown* seem reminiscent of many of the agitated mental states evoked in his first collection *The Hoop* (1988), in which Burnside's narrators are frequently victims of their own vivid imaginations. In 'That game of finding', he describes a 'game of finding someone in the house', which is innocent enough until 'the make-believe insinuates / a form'. The walls take on voices, an even silence is to be feared, for they are 'denser silences / where something grows, larger than I would

choose...'. Elsewhere in 'Silence is possible', the narrator refers to soundlessness as something that 'almost happens', but cannot:

...silence is possible,
but you have been a listener for years
and what could you find but the hard quiet
of huddled swimmers in a riverbed
or the casual hush of abattoirs
after the thud of a bullet nobody heard.

(Burnside, 1988: 16)

The poem seems to suggest that its narrator is prey to his or her own tendency to find patterns in auditory stimuli and cannot access 'true' silence because of their status as a 'listener'. This parallels the apophenic state Burnside evokes in *Waking Up in Toytown*, where it is his capacity to believe or imagine, rather than the stimuli he is reacting to, that leads to anxiety. It also has a parallel in something Poet I said in interview about the compulsive connections that poets may make:

Michael Donaghy's take on poets and their psychological makeup was the distinction between melancholia and paranoia. There's something interesting about paranoia and connecting things. He described it as batwing's sister. Finding links between things that don't exist or fabricating them is debilitating. It's one thing saying that Paul Muldoon can make cat rhyme with dog, especially in the longer poems, or creating long riffs, but that way madness lies... - Poet I

In another poem from *The Hoop*, 'Runners', Burnside notes that 'fear makes things real' (Burnside, 1988: 30). In 'Tundra's Edge', Burnside describes a wolf which enters a house 'slips in with the dawn / to raid your mirrors'. In the last two stanzas of the poem, it's implied that the wolf is an imagined presence ('you catch no scent', 'where the mirrors glow / those are not eyes, but random sparks of light'). But the imagined beast has a terrifying power of its own, real or not:

Yet here is Wolf. He rustles in the night.
Only the wind, but you switch on the light.

(Burnside, 1988: 29)

Here, the wolf might seem to be a symbol or emblem of the apophenic tendency, a thing conjured from nothing which has the power to terrify all the same – it is imagination itself that is the fearful thing. Burnside’s wolf seems a more flighty and unpredictable creature than the ‘black dog’ used to typify depression (a term usually attributed to Winston Churchill). Writing in *The Guardian* in 2012 Burnside described the hyena, a creature wolf-like in build, as his totem animal because ‘the hyena is the king of nothing. The hyena comes and goes, it is indeterminate and truly mysterious...’ Something in that statement recalls the indeterminacy of the wolf described in ‘Tundra’s Edge’, its close relationship with nothing, and returns us to the idea of finding form in the formless – to Burnside’s notion of apophenia, to the unmotivated seeing of connections.

The poems in *The Hoop* often refer to talismans, echoing Burnside’s reference in *Waking Up In Toytown* to those neatly arranged bottles set up to aid a ‘spell’. In ‘Nature study’, he describes someone who hoards dead leaves, dead animals because ‘the things you kill / may lend security on troubled nights’. There seems a kind of comfort in collecting, in categorisation, in physical objects. Whilst the irrational nature of the superstitious collecting is acknowledged (‘Talismans are claimed / when fear outweighs community of sense’), its necessity is reinforced:

...you stay at home. A wing is all it takes
to cancel the disorder that intrudes,
and ranks of tense antennae, ridged with hairs
defend your space against all predators.

(Burnside, 1988: 46)

Compared with these poems in *The Hoop*, Burnside’s later work seems more to do with being eluded by things than being haunted by them. In a collection like *The Hunt in the*

Forest (2009) or *Black Cat Bone* (2012), Burnside's narrators are more often in pursuit than being pursued, like the hunter in his poem 'The Fair Chase' (from *Black Cat Bone*), who tracks a scent endlessly through the forest even though 'nothing was ever there'. When he finally kills what he thinks is the beast, it leaves nothing to prove it has been slain ('all I could find was an inkwash of blear in the grass...no body, no warmth, no aftermath, nothing to prize...'). In the title poem of *The Hunt In The Forest*, children hurry to the woods to keep an unnamed 'appointment', 'at the meeting of parallel lines, / where everything is altered by its own / momentum'. The sense of shape-shifting the poem evokes ('greyhound to roebuck, laughter to skin and bone') suggests a place without destinations, a world where everything is constantly in flux (Burnside, 2009: 2). The narrators in *Black Cat Bone* often exist in a state of limbo. In 'Disappointment', 'someone is walking home / to the everafter' (Burnside, 2011: 18). In 'The Listener', a figure walks at nightfalls and mourns 'something like the absence of ourselves / from our own lives' (Burnside, 2011: 46). In 'Amnesia', the narrator watches snow falling and enjoys the way that 'everything / is one / wide / incognito', recalling old daguerrotypes in which 'a man / is almost there, / raising his hand / to wave' (Burnside, 2011: 54). Almost there, but never quite. In 'Stalkers' (from *The Hunt in the Forest*), the subject of the poem, a hunter, is met by something that cannot be named:

...something comes to meet him
on the wind

fallow and cold

and sweet
like the mouth of his bride.

(Burnside, 2009: 20)

There seems a deliberate ambiguity in the phrase 'fallow and cold', which is neither wholly non-threatening nor wholly sinister. 'Cold' might suggest chilling, but when followed by 'sweet' seems to imply something more invigorating, a gentler kind of sensation. Likewise 'fallow' often means uncultivated, but a fallow field is left untended to increase its longer term fertility, so there's also something more hopeful in the word.

Conversely, the image of the bride's mouth might suggest comfort and tenderness, but following so shortly after 'cold' there is a slight implication of death. 'Stalkers' tiptoes along an ambiguous seam.

More than any of his previous collections, Burnside's *All One Breath* (2014) gestures towards a fundamental holism or inter-connectedness in the world as its narrators perceive it, a unity implied in the collection's epigraph, taken from Ecclesiastes: 'for that which befalleth the sons of men befalleth beasts; even one thing befalleth them: as the one dieth, so dieth the other; yea, they have all one breath; so that man hath no preeminance above a beast.'

The quotation implies that all creatures, man and beast, are inextricably linked and that the fate of one affects the fate of all. Drawing the collection's title from such an epigraph seems a statement of intent. Indeed, the last poem in the collection, 'Choir', refers back to this unity, running through time as well as between species:

...like as not, most everything runs on
as choir: all one, the living and the dead,
first catch, then canon; fugal; all one breath.

(Burnside, 2014: Kindle Location 819)

Again, to end the collection with this kind of dramatized state seems a significant nod towards the interconnectedness of the world. Yet the word 'fugue' seems crucial here – whilst it implies variations on a cyclical theme, it also suggests a degree of fragmentation. And it might, in the minds of some readers, echo the notion of 'fugue state': a rare psychiatric disorder characterised by amnesia, a state in which individual characteristics seem to be lost (see DSM IV Dissociative Disorders).

Elsewhere, the collection *All One Breath* (2014) displays familiar tropes and explores Burnside's stock themes: the disparate nature of the self, the glamour of nostalgia and the power of our constructed narratives. This first theme is foregrounded in the book's opening sequence, 'Self Portrait as Funhouse Mirror' in which different perceptions of faces in mirrors are scrutinised and challenged, thus implicitly questioning the notion of

the unity of the self. There's a sense of representation always being limited – in the second section of the sequence ('II Self Portrait'), the narrator notes how 'the one thing you want to portray / is the one thing it lacks' (Burnside, 2014: Kindle Location 108). The sequence's sixth poem ('VI A Rival') complicates the relationship between a person and their mirror self, describing a person looking into the mirror, watched in turn by a lover. The lover sees the reflection and observes:

I catch a passing glimpse of someone new,
someone I might have loved had we ever met
and, now that we've come this far, I must admit
that, given the choice, I'd rather her than you:
that inward self a camera might steal...

(Burnside, 2014: Kindle Location 197)

This is familiar territory for Burnside and recalls his poem 'Fidelity' from *The Asylum Dance* (2009), in which the narrator sees another woman in the face of his sleeping lover. But 'A Rival' adds another dimension to this already complex chain of observation:

...though now I come to think of it, I swear
I've caught her giving you such private looks
as lovers do, when no one else can see
and then I've turned away, for all our sakes,
because it's clear she'd rather you than me.

(Burnside, 2014: Kindle Location 197)

Having turned the loved one's reflection into an object of desire, the narrator gives that reflection its own agency (subtly evoking Sylvia Plath's 'silver and exact' mirror with its own speaking voice) and subverts the act of looking by suggesting that the reflection is somehow in love with the face it reflects. People in *All One Breath* remain fundamentally distanced not only from each other but from themselves, even though the different aspects of the self may enjoy a kind of complicity.

To readers familiar with Burnside's prolific body of work and prose memoirs, *All One Breath* is a more apparently autobiographical collection than many of his preceding collections. Titles like 'Tommy McGhee, Corby Works, 1981', 'On The Vanishing of my Sister, Aged 3, 1965' and 'My Grandmother, Elizabeth Burnside, 1962' refer directly to events and people from the author's life, even if the poems themselves are dramatized. In 'Tod Und Verkalrung', a similarity might be inferred between the character in an earlier poem from *Black Cat Bone* ('The Fair Chase') and the figure of Burnside's father. 'The Fair Chase' (Burnside, 2011: 3) describes a never-ending hunt through a forest, and in 'Tod Und Verkalrung':

My father comes back from the dead,
having been transfigured.
Now he's a tracker, out on the edge of the town
following a line of cloven prints
to where the snow begins, beyond the pines.

(Burnside, 2014: Kindle Location 411)

Even in this poem, however, the ending imagines whatever is being tracked giving the tracker the slip:

...it steps free,
no backward glance, no scent, no mere redemption,
only a gap in the snow when it slips away.

(Burnside, 2014: Kindle Location 411)

The apparent link to autobiography is deceptive – Burnside's narrators and characters remain elusive, somehow unreachable, lost in a strange kind of present, whatever their relationship to the past. Indeed, the characters that populate Burnside's later poems seem to exist in a state of suspension, one which nonetheless seems more benign than the anguished states evoked in *The Hoop*. In 'Creaturely' (*Black Cat Bone*), it's suggested that this state of limbo is to be celebrated, even, since 'the only gift is knowing we belong / to nothing' (Burnside, 2011: 41). There is a certain numbness implied in a

poem like 'Transfiguration' where the narrator steals the 'tattered remnant' of a bobcat's soul after finding it dying in the road. The process of drinking the creature's soul in is grotesque ('I tasted blood and catpiss and a thread / of spirit in my throat') but rather than being tormented afterwards by the deed, a state of calm is suggested:

I was the Omega, falling asleep at the wheel
and travelling on unharmed, through dreams of musk
and fur, no final wave
of son or husband buried in my hands,
my blood exchanged for fire, my thoughts for stone.

(Burnside, 2011: 31)

The lines 'no final wave / of son or husband in my hands' suggest that the narrator might have expected a notable moment of transition, a letting-go of the old, human self. Instead, the change is something more seamless, the narrator simply 'travelling on unharmed'. It's interesting that the traveller passes 'through dreams of musk / and fur' because, at the same time, this contains the implications that the whole thing has an imagined element to it anyway. However, 'thoughts for stone' suggests a solidity, an inevitable realness as well as cool detachment.

Even in a poem like 'Moon Going Down', where the narrator dreams his lover is with someone else ('hands in her skirt and that / dove sound caught in her throat / that I thought was ours'), there's a certain detachment to the way the vision is described, a certain acceptance in the line 'she's with him now', a generosity, even:

....they are pure
as animals and
selfless
like the rhythm in the heat

that, now and then, mistakes itself
for hunger,

and blesséd, strung like pearls on molten wire,
to bell and cry beneath a hunting moon,

they come together; live, unwarranted;
a braid in every touch, a flame for longing.

(Burnside, 2011: 35)

There is a strange calmness in the description of the lovers as ‘selfless’. Even though the narrator appears to think them misguided in their passion (the heat ‘mistakes itself / for hunger’), he also recognises that they are somehow ‘blesséd’. In Section 5.4, I will suggest that the negative (and, in particular, the concept of negative worlds or *via negativas*) becomes a benign, precise force in John Burnside’s later work and that this too can be linked to the concept of apophenia, or rather to a means of avoiding the traits associated with apophenic thinking and obsession.

5.4 Parallel worlds and negativity

In a poem called ‘Hearsay’ (from *Black Cat Bone*, 2011), John Burnside describes a parallel world, a world of the mind:

At the back of my mind, there is always
the freight line that no longer runs
in a powder of snow...

(Burnside, 2011: 49)

The narrator seems continually obliged to be aware of a negative dimension, a route that no longer exists. The visual image (or not-image, since it is a line that ‘no longer runs’) is extended:

...and footprints
from that story we would tell
of the girl from the next house but one

who should have been tucked up in bed
when she went astray...

(Burnside, 2011: 49)

Burnside complicates the ambiguity of this image – the missing or lost girl – further in the fifth stanza of the poem:

Nothing I know matters more
than what never happened:
the white at the back of my mind and the legends we made...

(Burnside, 2011: 49)

It is unclear whether the girl's disappearance is fact or legend, but Burnside also seems to suggest that the facts of the matter are unimportant. What matters is the *via negativa*, the freight line that no longer exists. There's almost a double negative in this close pairing of 'nothing' and 'never', but this stanza seems to direct attention back to the first stanza, the parallel world it evokes. It is that 'never' world that becomes more important than the 'real' world. This notion of parallel dimensions is a constant refrain in John Burnside's poetry (a poem like 'Documentary' from *The Hunt in the Forest* centres around a world where everything is 'altered slightly, though not that much, / only another version of what we know') and his fascination with the possibilities these parallels afford seems to connect to Derek Mahon's poem 'Leaves':

The prisoners of infinite choice
Have built their house
In a field below the wood
And are at peace.

It is autumn, and dead leaves
On their way to the river
Scratch like birds at the windows

Or tick on the road.

Somewhere there is an afterlife
Of dead leaves,
A stadium filled with an infinite
Rustling and sighing.

Somewhere in the heaven
Of lost futures
The lives we might have lived
Have found their own fulfilment.

(Mahon, 1999: 60)

Mahon's poem seems to suggest a paradox: it is only through these 'lost futures' that a kind of fulfilment is reached. There's a sense of possibility, an enduring appeal in 'the lives we might have lived' above and beyond the lives that we do live – their untouchable nature is part of their attraction. There's also something Frostian in the paths the leaves take, a sense of two roads diverging 'and sorry I could not travel both' from 'The Road Not Taken' or 'Meeting and Passing', where two figures cross paths and are 'less than two / but more than one as yet'. In Frost's poem, the pair meet briefly and

Afterward I went past what you had passed
Before we met and you what I had passed.

(Frost, 2001: 118)

Despite the poem's sense of portentousness, the implication in phrases like 'all we did that day..' that the two people go on to become lovers, 'Meeting and Passing' is also a poem of lost futures and pasts, finishing as it does with a parting and an evocation of the randomness of all human meetings, the emphasis on the verb 'pass'. There's a sense in Frost's poem that the two are 'prisoners of infinite choice', like the leaves in Mahon's poem, alive (painfully alive, perhaps) to different possibilities and directions before them and behind them.

Burnside's work often concerns itself with these 'lost futures', almost at the expense of present experience. To repeat 'Hearsay': 'nothing I know matters more / than what never happened'. In an interview I conducted with him in St Andrews in 2012, Burnside alluded to the role that the idea of parallel lives plays in human relationships:

I'm thinking of what F. Scott Fitzgerald said about the difference between a sentimentalist and a romantic. A sentimentalist hopes that love will last forever, a romantic desperately hopes it won't. I think one of the problems with writing love poetry is that if you write a love poem that says 'hey I love you forever', you know that you're telling a lie in one sense because the part of you that appreciates story and drama doesn't want anything to last forever. 'They all lived happily ever after' is a horrible way to end a story because it closes down the possibility of other stories.... when you fall in love with someone, it's a kind of death as well, because you lose the possibility of being someone else. (Burnside, 2012: 34)

The possibility of other stories seems crucial to what motivates John Burnside as a writer. A chapter in *Waking Up in Toytown*, 'Losing Helen' deals with the death of an old factory work colleague with whom Burnside became fascinated, more because he did not know her well than because he did. His description of their encounters and her sudden death at home one morning bristles with a sense of 'the heaven of lost futures'. As he puts it 'any first meeting is the occasion for a romance that might last a lifetime....even if the moment came to nothing, as mine did on this occasion.' From Burnside's poetry and prose, the reader often gets the sense that he is more fascinated by what did not happen than what did. In interview, Burnside was quick to clarify that the parallel worlds he imagines are multiple rather than part of one singular alternative. He said of *Black Cat Bone* (the book he was about to publish at the time of my interview with him):

I think in my next book there's a sense of a whole number of other selves, parallel selves. I used to have this polar thing that there was me and this other self, the person that I could have been and that he was better than me, happier and more successful – more wise maybe in my case. In this book, I'm trying to bring out the idea that actually there are any number of possible selves, some of them better and some of them worse. (Burnside, 2012:34)

One of his early, best-known poems, 'The Good Neighbour', hauntingly describes the half-seen life of the man next door whom Burnside doesn't know, a man who is 'not quite there, / but not quite inexistent, nonetheless'. His work is stalked by these doubles. Burnside's collection *The Myth of the Twin* (1994) is in part a reference to the feeling Burnside describes in his autobiographical writing of having a twin whom he never knew. In his first memoir *A Lie About My Father*, he names this 'Ghost Brother Syndrome':

Surely he had been there all along, a ghost companion on the long walk to Mass on a Sunday morning, a fellow swimmer, tracking me stroke for stroke the length of the public baths... In one form or another, I would keep him by me all my life: my brother, my soul-friend, my other self. He would continue where I left off, and I would live for him, tuned into the rhythm of an other-world that nobody else could hear, a whole kingdom of ghost brothers, hidden in the dark. (Burnside, 2007: 133)

The idea of the brother continuing where Burnside left off is particularly potent in relation to poems like 'Hearsay'. The connection between swimming and the self, or between swimming and identifying with another swimmer, appears in a number of John Burnside poems, from 'A Swimming Lesson' (1995) to 'Old Man Swimming' (2009). In the former, he applauds the 'gift / for transformation' that swimmers enjoy' (Burnside, 2006: 19). In the latter, the narrator watches an older man swim in a pool and makes him a 'model' for himself, and concludes the poem by imagining that, somewhere else, in a different pool 'the better self I meant to be / glides quietly, length by length, to his own abstention' (Burnside, 2009: 51).

A John Burnside poem will often ask the reader to imagine something impossible, then extend that image through descriptions of an invented place that is *in itself* something of an impossibility. For example, in his poem 'An Essay Concerning Time', he invites the reader to imagine 'going to meet a friend / in the abstract', then adds:

though no one is there, at the last, in the quiet room
that so much resembles
the room you have just abandoned,

a dribble of paint on the threshold,
a coat hung to dry...

(Burnside, 2009: 36)

The final description of this invented place is of 'a music that nobody hears, in the air of a door / left open', which further deepens the sense of temporal confusion. Burnside has created an imaginary landscape which he first describes, then subtly denies: if nobody hears the music, nobody has entered this room after all. A friend is encountered, 'in the abstract', but they do not exist anyway – whether abstract or concrete - in the empty room the poem evokes. Even his readers are ghosts in the poem and place they have just stepped into.

The metaphors Burnside uses to evoke these 'other-worlds' or 'ghost worlds' in his poetry are shadowy themselves, their vehicles vague, or sometimes even impossibilities - as in 'Hearsay', the freight train than 'runs to nothing'. In a sense, Burnside's are negative metaphors, relations between things that are often beyond our conception. In a 1970 study of Proust, Kamber and Macksey define negative metaphors as those in which an initially posited sensation moves towards an imaginary one; not rooting sensations in the known world, but moving beyond it. In Burnside's metaphors, sometimes both tenor *and* vehicle are elusive or imaginary. Take this stanza from 'Mandelstam at Voronezh' in Burnside's first collection, *The Hoop*:

There is a face in the whitest
corner of the frost:
half-bear, half-featureless, and almost
human, like the face
of any accident.

(Burnside, 1988: 9)

First, an aspect of frost is being conceptualised physically, but not in a way we can easily visualise: it is only 'half-bear', 'half-featureless', not fully but 'almost' human. So the metaphor links the patterning of frost to an abstract notion of the face, before

introducing an even more abstract third element ‘the face / of any accident’. Is this an attempt to personify ‘accident’? An example of metonymy where ‘accident’ stands for a person involved in an accident? Or does he mean an accidental resemblance of a face? The deliberate ambiguity of the line renders this stanza metaphorically rich and vague at the same time and its central concept (‘an imaginary, half-human face is like the face of an accident’) is what Kamber and Macksey would call a negative metaphor. Burnside is highly specific in his evasiveness, just as he is in this passage from *Waking Up in Toytown* where he describes his feelings after the end of a love affair:

I carried around a perfect whiteness, like some still, cold object at the back of my mind. Not the whiteness of a northern winter, or the white of apple blossom, not even the white of new linen on a hospital bed – though that does come close. Not Chinese white, or white lake. Not snow or ice or cloud or fog. No, this was the white of a new beginning that hadn’t happened, a clean slate that had stayed clean, the white of hiatus, the white of entropy. (Burnside, 2011: 174)

Here, the whiteness is mostly described in terms of what it is not, but there’s a specificity to that negative process, particularly in the almost amusing aside ‘though that does come close.’ We may have difficulty calling to mind ‘the white of a new beginning that hadn’t happened’ but we have been instructed in what it is *not* like.

Burnside’s use of negatives relates to Hidalgo Downing’s work on text worlds and negation (2000), in which she explores the use of negative tropes in fiction in relation to the status of the negative in logic and in psychology. Acknowledging that ‘within the study of language, the affirmative appears to be quite straightforward; negation, by comparison, is extremely difficult to define and describe’ (2000: 23), she cites Givón’s (1979) argument that the assignment of positive or negative value to an oppositional pair is arbitrary but, in language, it reflects deep pragmatic and ontological facts about how the human organism perceives the universe.

Hidalgo Downing reviews psychological research that shows how negative linguistic structures are acquired later than affirmatives and take longer to process (Clark, 1976) – in a test of sentence processing time, Clark (1976) found that the word ‘absent’, for example, takes longer to process than the word ‘present’. Experience is usually coded in

positive rather than negative terms and negation is a second degree operation which relies on the existence of affirmatives: 'experience is usually coded positively and...negation tends to be used only if there is an expectation that is not fulfilled' (2000: 38). Negatives may be logically unacceptable in Western philosophy if we accept the law of the excluded middle, but negation is psychologically present: Hidalgo Downing also cites Apter's work (1982) on cognitive synergy, the extent to which we are able to apprehend paradoxes.

In fictional texts, Hidalgo Downing believes that negation is a 'natural foregrounding device' (2000: 197). Drawing on Text World Theory (see Werth, 1995; Gavins, 2007), she posits negation as a particular kind of sub world, a conceptual and semantic domain triggered by a negative word: 'several related negative clauses create a complex nonfactual domain that describes a complex state of affairs where something is not the case or a property fails to occur' (2000: 198). The effect can be one of defamiliarisation, making the reader question the relationship between reality and fiction in the text. Crucially in relation to Burnside's work, negation also enables contradiction 'thus creating a feeling of instability in the way that the reality of the fictional world is conceptualized' (2000: 200) and also creating 'a kind of cognitive illusion where the unfamiliar acquires a strange feeling of familiarity' (2000: 200). In Burnside's case, then, it enables the creation of parallel worlds and a sense of déjà vu.

The negative tendency in Burnside's imagery reflects a transcendental impulse in his work as a whole: it's no coincidence that when he writes of the body, he often uses the metaphor of a 'cage'. Perhaps this even implies a suspicion of the limiting aspects of language itself. Burnside's novel *The Dumb House* (1998) is a disturbing, extended exploration of language acquisition which posits communication somewhere beyond speech and writing. The narrator, Luke, tells us at the beginning of the novel 'from the moment I first learned to talk, I felt I was being tricked out of something' (1998: 7). Later, he muses:

We talk in order to impose limits, to contain the world in a narrow frame....The trick and the beauty of language is that it seems to order the whole universe, misleading us into believing that we live in sight of a rational space, a possible

harmony. But if words distance us from the present, so we never quite seize the reality of things, they make an absolute fiction of the past. (Burnside, 1998: 8)

Language is also portrayed as an inadequate tool in Burnside's poetry, the act of naming cast as artificial. In 'Septuagesima', the narrator dreams 'of the silence / the day before Adam came / to name the animals':

...we are sometimes
haunted by the space
we fill, or by the forms

we might have known
before the names,
beyond the gloss of things.

(Burnside, 2006: 8)

Some of his negative metaphors seem to gesture towards this silence 'before the gloss of things'. Burnside's heaven of lost futures remains mysterious and inaccessible for all the time he's spent evoking it with sensory detail (interestingly, Burnside's liminal poems often contain very specific pairings of descriptive words: 'mud and carrion', 'candy and broken glass', 'ironwood and ginko': words seem to 'ghost' their partners, like the brother Burnside never had). According to Hidalgo Downing's work, then, this kind of fictionalised deployment of negation reflects a strategy in Burnside's work, one which seeks to defamiliarise and contract within the 'text worlds' he has created.

5.5 The importance of nothing

Thus rather than signifying a kind of evasiveness or aesthetic failure in the way Graeme Richardson suggests in his *Areté* essay, it could be that the negative in John Burnside's work also has a very particular psychological function, protecting against the over-connective tendencies that those who experience apophenia suffer from. If the world often seems so richly patterned that it overwhelms, if seeing connections becomes a pathological condition, perhaps the only way to express yourself adequately in writing is to evoke the 'not-world' instead, to write about things by alluding to their negatives or

opposites. Poet I described something of the precariousness of the writing condition when reflecting on his own process:

When I'm in the mood to write, I think you're often on the cusp of being thwarted by the feeling that it's just you feeling this for the first time. You're almost struck dumb by that. You are on a kind of precipice. You're ready to think 'oh it's just me that thinks that', but on the other hand you're ready to do something about it. – Poet I

Similarly, discussing the impulse to connect in her work, Poet F suggested that she was almost afraid of being bombarded with ideas for a new poem: 'There is something serendipitous about ideas coming to you if you allow yourself to be open to them, but I fill my days up with ridiculous things so that I can't be open in a way.'

Though far from the pathological levels of connection John Burnside describes in his work, both writers alluded to a fear of being open to ideas and connections, lest they seem overwhelming.

Poet G suggested that these connections are already inherent in the world, that connective or creative thinking is something we choose to step into or step out of:

(The creative space) is immediate and surrounds us all the time and it's as easy to step into as to step out of, it's just that most people spend a lot of time stepping out of it...I don't think of writing as a special thing that has to happen at a special time in a special place, I think of it as the ordinary thing that we are doing that needs to be shaped. – Poet G

Perhaps John Burnside's world of 'nots' and 'nevers' is such a compelling one because, paradoxically, it is easier to comprehend. In cognitive terms, instead of the myriad of categories we must hold in our minds when we think of the known world, we have a single, abstract conception of an 'unknown world' with infinite possibilities. In one sense, the world negative metaphor gestures towards is created by poets as a means of dealing with what MacNiece would have called 'the drunkenness of things being various', the 'incurably plural' nature of life. When the world seems too vast to write about, it's easier to refer to a parallel world of 'what might have been' instead. To return to Burnside's description of apophenia in *Waking Up in Toytown*, perhaps these negatives

offer a release from a ‘tidal wave of incomprehensible and overwhelming detail: the whole world at once, jabbering constantly in a mind that can only find rest in oblivion’.

Writing of Wordsworth (and specifically his struggle to ‘condense’ all of his ideas into writing), Hillis Miller (1971) notes: ‘negatives...have a paradoxical power in poetry...the introduction of negatives...adds more than it takes away. It creates a shadowy existence for what is denied.’ (1971: 305)

Discussing Auden’s famously misquoted phrase ‘poetry makes nothing happen’ in its full context (something that survives / In the valley of its making where executives / Would never want to tamper) Angela Leighton notes how the phrase ‘turns, by a tiny inflection, a redistribution of its stresses, into its opposite: ‘poetry makes nothing HAPPEN.’ By this accentual difference, ‘nothing’ shades into a subject, and happens. This is an event, and its ‘happening’ sums up the ways of poetry. Intransitive and tautological, nothing is neither a thing, nor no thing, but a continuous event.’ (2007: 145). In Section 5.6, I will suggest that nothing can be similarly treated as a subject, a happening in John Burnside’s work. At the end of ‘Amor Vincent Omnia’ (from *The Hunt in the Forest*, 2009), he describes a season and place where

...nothing will measure you here
and find you wanting.

(Burnside, 2009: 42)

In this case, nothing could just as easily be active as passive. Nothing *is* finding a lack or want in what it measures. The negative world that John Burnside evokes is a world all the same, not just a vagueness. It offers a freedom from the kind of paranoid thinking evident in apophenia, a sense of what Poet H called ‘possibility’ in interview:

In my book about coming back to England, the world possibility appears a lot. It’s very important to creativity I think, just to have the feeling. There isn’t a correct word you’re looking for, because if there was your work would have a mono-linear trajectory. What you need to be in a creative mood is to have the feeling of branching out. There have to be verbal possibilities, not a verbal route or a destination. – Poet H

Leighton's active conception of 'nothing' fits with John Burnside's own references to the creative process in an essay for *Strong Words* (2000):

I would say that we are not born with a spirit (as we are born with lungs, or a heart) but it is our peculiar gift to live as spirits, by an imaginative (or magical, or alchemical) process: an invention, by which we create ourselves from moment to moment, just as the world around us creates itself out of nothing. (Burnside, 2000: 259)

Burnside's definition of the spirit, then, is something created from nothing – but nothing is a wellspring or source, a resource which the 'world around us' draws on. He develops his argument to suggest that, living as spirits, we live in a kind of 'eternity' and are stateless. This recalls some of the worlds evoked in *The Hunt In The Forest* (2009) and *Black Cat Bone* (2011), where Burnside's narrators dwell in a kind of ever-present no man's land. Furthermore, Burnside suggests that this other-world is not something shadowy or vague at all but something more 'real' than the outer world:

...the lyric, and especially the love poem, reminds us that 'outward' life is about a certain form of limitation, a defeat of sorts. The lyric says there is the possibility for every sentient being to experience the opposite of that defeat, which is not of course victory (defeat and victory being equally illusory) but transcendence of the idea of victory-defeat, in life as a spirit. (Burnside, 2000: 261)

Thus transcendence in Burnside's work does not represent the 'sentimentalised unknowing' that Richardson (2002) attributes to it, but something far more specific: a state unconstrained by the limits of the 'outer' world, a state that endures beyond the 'tidal wave of incomprehensible and overwhelming detail' characteristic of the 'apophenic' states Burnside reports having experienced.

This impulse in Burnside's work connects in turn to his concept of past, present and future and the operation of free will within these time frames, and in turn relates to work in neuroscience about how we understand the passage of time and our place in relation to it.

5.6. Past, present and future: the illusion of free will.

There's something of Burnside's declaration that 'nothing I know matters more than what never happened' ('Hearsay') or Mahon's 'heaven of lost futures' in a short passage from *Waking Up in Toytown* in which Burnside describes the last stage of a brief affair between him and a former lover who he'd been reunited with: she now married to someone else. He narrates how they took a walk in the snow one day and then drove back in silence, snow creaking beneath the tyres 'as if the weather was trying to slow us down and prevent us from going back to our separate worlds'. He describes how they paused before parting:

This is the moment I remember, the moment that contains all the others. There is no afterwards to this moment. It has nothing to do with time or circumstance, and there are nights where I am capable of imagining it continues somewhere, this one moment that contains all the others, travelling on and on forever, like the light from our headlamps that is still travelling through the universe, on and on and on, into infinity. (Burnside, 2011: 163)

Like the leaves in Mahon's poem, the lovers' lives seem to 'find their own fulfilment' in another of Burnside's *via negativas*. The impression is created simply by the moment 'travelling on and on forever'. The existence (and persistence) of these negative worlds in his poetry and prose seems to relate to Burnside's concept of time. Writing in *The Guardian* in 2002, he described the difficulty he finds in ever fully inhabiting what we call 'the present':

...for some time, I have been suffering from a condition that, for want of a better term, I shall call 'critical nostalgia'. Actually, it's a little more complicated than that: what ails me is a whole set of different, though intimately related nostalgias that, like the various symptoms of a rare disease, point to what is lacking in my day-to-day subsistence as a slightly askew inhabitant of the social realm. One of these symptoms is nostalgia for the present: the feeling that, as I experience the moments of the day, I am always being distracted, or interrupted – as with Muzak or traffic noise or celebrity gossip – so that the majority of those moments never entirely unfold or cohere, sliding quietly from anticipation

to memory, without ever being properly savoured. Alongside this loss of the here and now, which I experience as a form of actual and often deliberate theft, there is also a nostalgia for a lost or hidden self, for the unsocialised not-person whose dreamlife – both sleeping and waking – forms the lyrical ground of my being. That I cannot speak about this creaturely dreamlife life in everyday discourse – because it is close to inexpressible, in everyday terms, perhaps, but also because societal convention dismisses that life – is a source of frustration, and even pain to me. Every day, as I perform the prescribed rites of personhood, I feel that I am simultaneously betraying that dreamlife, and so collaborating with those powers and principalities whose job it is to keep me more or less tame. (Burnside, 2002)

This curious concept of a ‘nostalgia for the present’, the inability to experience something as it is happening, linked to a kind of loss of the ‘true’ self (‘true’ defined as impossible – the ‘not self’) seems to echo the frequent references in Burnside’s poetry to temporal fluidity. In ‘A Pint of Mild’ from the sequence ‘Burning a Woman’, for example, a woman giving birth is described as having

...no historic past
or future tense,
only a present of streetlamps and empty roads,
and men spilling out of the light, in the evening air,
or wandering into the blue
of a different story.

(Burnside, 2006: 22)

Similarly, the narrator in ‘Old Man, Swimming’ from *The Hunt in the Forest* merges concepts of both self and time as he recalls watching an older man swim, and walks past a swimming baths to note how ‘the better self I meant to be / glides quietly, length by length, to his own abstention’ (Burnside, 2009: 51). In the first part of the poem, the old man has been envied his ability to live in the present, to revel in ‘easy, unnumbered laps’ while the narrator is plagued by Burnside’s peculiar form of ‘critical nostalgia’, preoccupied with ‘thoughts / of later, or somewhere else’.

The concept of the fluid, ‘dream’ self that exists separately from temporality is echoed across Burnside’s poems in his obsession with transformation, parallel lives and vanishings and also in his remark in *Waking Up In Toytown* that

As it happens, I have never found myself a very convincing phenomenon, anyway – it’s always seemed more like a crack in the fabric of things, an ugly damp fissure that I have spent a lifetime trying to paper over with lies and half-truths and my own brand of special effects....what matters is the story. The ritual. The fact of repetition, and the choosing to repeat. (Burnside, 2011: 105)

This image of a ‘crack in the fabric of things’ is echoed in poems like ‘Halloween’ where the narrator muses:

The village is over there, in a pool of bells,
and beyond that nothing,
or only the other versions of myself,
familiar and strange, and swaddled in their time
as I am, standing out beneath the moon
or stooping to a clutch of twigs and straw
to breathe a little life into the fire.

(Burnside, 2006: 11)

The image is like a painting within a painting within a painting: alternate selves stretching off towards infinity. Each self is only a ‘version’. The ending of ‘The Solitary in Autumn’ curiously echoes ‘Halloween’ and its notion of multiple selves. The narrator is standing in the garden at the end of October and looks out across the other gardens:

sometimes I think that someone else is there
standing in his own yard raking leaves
or bending to a clutch of twigs and straw
to breathe a little life into the fire.

(Burnside, 2006: 15)

The phrase repeated from ‘Halloween’ almost seems like a concrete talisman – the noun ‘clutch’ suggesting its verb, the narrator trying to cling or hold on to something that can be held when faced with the fluidity of the self. The breathed-on fire, too, is something

very definite and physical which serves to anchor the narrator to a world whose existence he often doubts.

If the 'not-person' that Burnside tellingly refers to in his *Guardian* piece cannot be spoken of in everyday discourse, it finds expression in his poems (it is, as he says his 'lyrical' self, after all), which operate in a time removed from our usual conception of past, present and future. Burnside's temporal fluidity finds an interesting parallel in the work of Libet et al (1983) and others whose neuroscientific research into the nature of 'free will' or volition challenges our understanding of intention, time-scales and the nature of the self.

In a now infamous experiment (1983) Libet et al found that what we usually regard as free will (or, more accurately, conscious intent) does not initiate motor acts though it may control the process. Subjects in his study were asked to perform a voluntary act (such as a flick of the wrist) at any time they felt the urge to do so. Libet et al then measured the readiness potential - a measure of activity in the motor cortex and supplementary motor area of the brain leading up to voluntary muscle movement - and found that this was approximately 550 milliseconds before the activation of the involved muscle. He compared this with participants' own reports of when they were first aware of the action and found that conscious intent occurred after the onset of readiness potential, though it did still occur before the muscle was activated. Thus 'the initiation of the freely voluntary act appears to begin in the brain unconsciously well before the person consciously knows he wants to act'. (Libet et al, 1983: 51)

Libet et al's experiment is often taken to suggest that there is no such thing as free will and has been opposed strongly by philosophers and others as a result (see Hodgson, 2007). However, a close reading of Libet et al's analysis of their own results yields a more subtle argument, one which finds an affinity with John Burnside's notions of the self and time. Even though conscious will (Libet et al use this precise term more frequently than they use the more controversial term 'free will') may not initiate the onset of a voluntary act, it still has control over whether the act takes place or not. Thus Libet et al are not arguing that we do not have free will but rather pointing to a discrepancy between our subjective understanding of intention and the objective reality signified by the readiness potential. Their work gestures towards an unexplained (and

perhaps unexplainable) gap between physical and subjective phenomena, a gap which also preoccupies John Burnside.

Thus the implications of Libet et al's experiment are that the peculiar brand of 'nostalgia for the present' John Burnside describes in his prose and frequently evokes through his poetry may have some kind of neurological accuracy, since there is a disjuncture between what we do and what we consciously experience. Perhaps John Burnside is scientifically correct to question whether the self is a 'very convincing phenomenon', or to suggest that the same concept of self exists as a 'crack in the fabric of things'. For if the conscious self that detects the will to act is not necessarily the same as the physical self which activates a muscle, there is a gap in what we ordinarily understand as time. It is in these gaps that John Burnside's poetry flourishes, these gaps that the 'nowheres' of his narrators frequently point to.

'The Neural Lyre' by Turner and Pöppel (1983) suggests that poetry itself plays 'tricks' with time and shifts our understanding of temporal experience. Time, they argue, is not simple but composite, made from a hierarchy of more complex temporalities, just as human information processing is hierarchical in its organisation. Working from the assumption that the brain is a self-rewarding system and rewards itself for certain activities which are preferred for adaptive utility, they move on to suggest that poetry (particularly metred verse) is a technique through which these reward systems are stimulated and sensitised, and this explains its cultural universality: 'poetry fulfils many of the superficial conditions demanded of a brain-efficiency reward system' (1983: 20).

From a sample of over 200 poems in different languages, Turner analysed the average length of a line (defined as a structured, semantic unit, signified by the line break) and found that this was roughly three seconds. This 'extra-ordinary prevalence of the 3-second LINE in human poetry' (1993: 16) is interesting because it corresponds with the length of what Turner and Pöppel call the fundamental 'parcel of experience' for humans, defined in terms of the amount of auditory, visual or other sensory information we can process in one go without a break. As Turner and Pöppel put it succinctly (and perhaps simplistically): 'the three second period, roughly speaking, is the length of the human present moment' (1983: 18). A listener can absorb approximately three seconds of heard speech without pause for reflection and a speaker usually pauses (albeit only for a few milliseconds) every three seconds or so. There is a 'very exact

correlation between the three-second line and the three-second “auditory present”.
(Turner and Pöppel, 1983: 20)

Turner and Pöppel draw on Barbara Lex’s work on *The Neurobiology of Ritual Trance* (1979) to suggest that poetry stimulates both hemispheres of the brain and requires integrative collaboration between them, resulting in what they call a ‘stereo’ effect. Looking at ritual behaviours, Lex postulates that ‘many forms of ritual trance...share characteristic evocation and predominance of the special capacities of the right cerebral hemisphere’ (1979: 124) and, furthermore, that ‘the driving techniques employed in rituals are designed to sensitise or ‘tune’ the nervous system and thereby lessen inhibition of the right hemisphere and permit temporary right-hemisphere dominance....to achieve synchronisation of cortical rhythms in both hemispheres’ (1979: 144) Turner and Pöppel consider that ‘the work of scanning...verse....especially when combined with the activity of recognising allusions and symbolisms, and the combination of them into the correct patterns, seems analogous to these divinatory practices.’ (1983: 23). Thus:

By giving the brain a system of rhythmic organisation as well as a circumscribed set of semantic and syntactical possibilities, it encourages the brain in its synthetic and predictive activity of hypothesis-construction, and raises expectations which are pleasingly satisfied at once. (Turner and Pöppel, 1983: 24)

This echoes something Poet Z said about time within the writing process itself: ‘intense concentration has a strange effect...it certainly seems not to happen in real time. Those little electric connections between things that progress the poem are indispensable...Sometimes it’s just the sheer power of words that does it.’

Thus poetry, and in particular metred verse, takes effect by exploiting our concept of time, by dwelling in the human present moment. But, combining the work of Libet et al with this hypothesis, it might also be suggested that such an ‘auditory present’ takes place and is gone before we know it, leaving in its wake, perhaps, the nostalgia for the present that John Burnside evokes so frequently and so hauntingly.

These ideas were echoed by Poet J when she related an experience of being hypnotised whilst on a residential writing course. Whilst under hypnosis, she claims that she could reflect on her state of awareness and link it to her writing life: ‘I realised that the state that I was in really wasn’t any different from the state that I’m often in when I write and that the place she was taking everyone to is the place that most writers go all the time, that’s just normal for them.’

Connecting to Lex’s idea of the power of ritual trance and Turner and Poppel’s suggestion that aspects of poetry may draw upon aspects of ritual trance, altering our subjective experience of time, this parallel between hypnosis and creative writing is striking. This also connects to Csikszentmihalyi’s (1996) concept of ‘flow’, a mental state in which the subject is completely absorbed in their activity and, more specifically, to Dietrich’s (2004) attempt to relate ‘flow’ states to a suspension of the explicit control of the prefrontal cortex (as discussed in Section 2.6 of this thesis). The state of suspension apparent in hypnosis or the suspension of prefrontal cortex control identified by Dietrich in ‘flow’ experiences (2004: 757) also recalls the suspended state that Burnside’s ‘not-worlds’ and ‘not-selves’ often find themselves in, the state that offers an escape from the hyper-connective, superstitious thinking evident in states of apophenia. There’s something uniquely hopeful in this state of suspension, evident in Burnside’s poem ‘After Lucretius’, where ‘each thing dies / into its own becoming’:

...and if we are the fleshed
and perishable shadows of a soul
that shifts and slides
beneath this everyday

appearance, we are bound
by greenness and decay to see ourselves
each in the other, staying
and turning aside,

as lovers do, unable to resist
this ebb and flow:

new animals, with nothing in their minds
but light and air...

(Burnside, 2006: 92)

In this poem there's an almost Buddhist sense of reincarnation, of one thing always becoming another in the cycle of life. By 'new animals', the narrator also means 'old animals', since each thing bears the trace of another. Perhaps this is what is meant by the phrase 'as lovers do': lovers may recognise the familiar in each other as well as the new, may see something of themselves in the other. The choice of words like 'light' and 'air' suggests possibility and weightlessness, a freedom granted by the continuity described. In 'After Lucretius', the impossible remains eternal, untouchable and therefore impossible to tarnish, like the 'heaven of lost futures' in Mahon's 'Leaves'.

5.7 'What we desire in pain is order'.

There seems to be a slight tension between the suggestion in this chapter that via negativitas in Burnside's poetry might serve as relief from the obsessive tendencies of apophenia and the experiences of interviewed writers who are quick to point out that poetry is not therapeutic. As Poet V emphasised in interview: 'I don't think of poetry as therapy.' On the contrary, he noted:

Poetry I find an extremely agitating experience. I don't write poems to get better...I think poetry's supposed to upset you and disturb you....Every single poet I've known...has got something wrong with them psychologically. I don't think poems produce that state, I think that state produces poems. I wish it weren't so.

Similarly, Poet U, who discussed his own experiences of suffering from bipolar disorder said that he could not write when in the grip of depression, and added:

If you're upset or agitated, talk to a person. They will reply to you, the poem won't. People confuse art with communication...communication is something that takes places directly. Something else is happening when someone interacts with a poem....If you attempt to write a poem in order to work something out

that you feel deeply concerned with...then it is an incredibly isolating thing to do...it's essentially a narcissistic process.

Poet S put it even more starkly:

If a poet chooses to go into their 'dark places'...the problem is when it becomes obsessive...You have to find a balance. If the poet decides that's going to be their theme and they're really going to go fully into that area, I think it can kill them, and that's what I've been very afraid of actually. – Poet S

However, what this chapter has suggested is not that the act of writing poetry itself might provide relief from particular kinds of mental illness, but that certain tendencies and thematic obsessions in John Burnside's work might reflect a means of counteracting apophenic states. These tendencies find expression in his poetry, but the act of writing itself may remain difficult, even traumatic.

In John Burnside's poem 'A Normal Skin', the narrator observes a neighbour who suffers from eczema. She is taking apart clocks she has collected from car boot sales and church fetes and laying them out on pieces in the table. Trying to make sense of the ritual, the narrator suggests:

She knows how things are made – that's not the point -
what matters is the order she creates
and fixes in her mind:
a map of cogs and springs, laid out in rows,
invisibly numbered.

What we desire in pain
is order, the impression of a life
that cannot be destroyed, only dismantled....

(Burnside, 2006: 28)

There seems a parallel with the creative process here: the act of crafting a poem imposes order and limits on a world that otherwise might seem endlessly interconnected. The parallel worlds and *via negativas* that Burnside constantly evokes in his poetry are certainly things that 'cannot be destroyed, only dismantled', since they run on forever, both within the domain of the poem and outside of it, since the poem's publication confers a strange kind of immortality.

‘A Normal Skin’ continues:

What we desire in pain
is reason: an impression of ourselves
as wounded, explained,
coerced from a destination.

(Burnside, 2006: 28)

Since Burnside believes that the true self is a ‘not-self’, inaccessible in everyday life, perhaps the best the poem can achieve is an ‘impression’ of the self, a version – one possible explanation of events. The line ‘coerced from a destination’ suggests that we tell our stories in reverse, decide what it is we are looking for and then adapt our explanations accordingly. ‘A Normal Skin’ ends on a typically transient note, the narrator brought centre stage for the first time:

I’m not the one you thought
was sensitive, the soul you hoped to find:
arriving home, still wet with moonlit rain,
I enter the silence you left, in a dreamless house,
and reckon how little I feel
when I stop and listen.

(Burnside, 2006: 28)

There is an implication of coldness in the line ‘I’m not the one you thought / was sensitive’, which echoes the cool detachment found in other poems like ‘Husbandry’ (from *The Asylum Dance*, 2000) where the narrator apologises for his cruelty, his urge ‘to watch, and show no sign / of having seen’. As in ‘A Normal Skin’ where he is framed as stopping to listen, the narrator in ‘Husbandry’ is positioned as an observer. And in both poems, silence is key to the observation. In ‘Husbandry’, the narrator qualifies his tendency to ‘turn towards the dark / and leave you guessing’. It is ‘not wickedness’,

but what I comprehend

of fear and love:
cradled remoteness, nurtured by stalled desire;

willed deprivation;
the silence I'm learning by heart.

(Burnside, 2006: 69)

Here the distancing, the silence is described as effortful – it involves the act of ‘learning’. It might seem that rather than acting as ‘therapy’, poetry is a mechanism of imposing structure onto a world that would otherwise be difficult to comprehend (in the way it overwhelms the apophenic). It is a way of realising that ‘what we desire in pain is order’. Similarly, the enduring nature of the poem means that it creates a realm where the writer might glean ‘the impression of a life / that cannot be destroyed, only dismantled’, since the poem outlasts the poet. And as John Burnside’s narrators imply in poems like ‘A Normal Skin’ and ‘Husbandry’, there may be something equally disconcerting in the process of detachment that some writing comes to embody.

Poet V put it succinctly:

As a person who’s been through various kinds of addictions...I’ve been addicted to everything. I get over it and then the poetry begins – poetry is the addiction I keep. And it is an addiction. – Poet V

5.8 Summary

In Section 5.1 I discussed the ways in which John Burnside has been characterised as a ‘liminal’ poet and suggested that this might be a limited way of looking at a writer whose work so often involves more deliberate strategies of evasion and, indeed, transcendence. Through considering Burnside’s autobiographical writing (and particularly his experiences of apophenia) in Section 5.2, I have argued throughout this chapter that themes such as the importance of parallel worlds and the negative in his work might be more usefully framed in terms of Hidalgo-Downing’s (2000) concept of negation in literature and that this, in turn, reflects an awareness that the world is infinitely connected (or indeed over-connected), reminiscent of experiences described by apopenics. Thus the negative in Burnside’s work serves a very particular psychological function rather than being the result of a vague ‘liminality’. In Section 5.6 I connected this to the fluid concept of the self in Burnside’s work and to the ways his work often challenges temporal boundaries and the concept of a delineated past, present and

future, relating this to the work of Libet et al (1983) and Turner and Pöppel (1983) on free will and temporality respectively.

In Chapter 6 I will extend these ideas in relation to Burnside's work and demonstrate how his poetry finds parallels in neuroscientific research on memory. This will link to a discussion of how the work of Norman MacCaig (the subject of Chapter 3) and Paul Muldoon (the subject of Chapter 4) also finds parallels in memory research, in particular to notions of memory as a process of reconstruction rather than recall. I will show how all three writers help illuminate the idea that the self is a constructed phenomenon and that fiction plays an important role in memory and self-identity.

Chapter 6 – ‘Or the room where they say he wrote ‘Snow’...’ - poetry, neuroscience and memory.

Normally, what I would do is to allow several ideas to coalesce and form themselves into some central idea and image that's going to result in a poem. Very rarely is it a single idea. It's almost always a combination of things that seem to work toward the point. – Anthony Hecht

This chapter will draw together the work of Norman MacCaig, Paul Muldoon and John Burnside around themes of memory and self-identity. I will look at how the poetry of all three writers may be relevant to discussions in neuroscience and psychology about the veracity and stability of our memories and therefore the nature of the self. In particular, I will show how their work might be pertinent to a field that Levy (2007) calls ‘neuroethics’, or, more specifically, the ethics of neuroscience. Neuroethics concerns the ethical, legal and social impact of neuroscience, including the ways in which neurotechnology can be used to predict or alter human behaviour (Levy, 2007). I will suggest that work in neuroscience and psychology has already drawn attention to the fragmentary and reconstructive aspects of memory and that these ideas are framed differently in the work of the three poets in this study. More specifically, John Burnside calls into question the stability and unity of the person remembering; Paul Muldoon presents the reader with alternative histories; and Norman MacCaig doubts the accuracy of recollection as part of his broader, sceptical examination of human thought, suggesting a less anthropocentric model.

Section 6.2 will give a brief overview of the ways in which poetic narratives might be said to re-shape particular memories through the process of dramatizing them, using Andrew Waterhouse’s poem ‘Not An Ending’ from his collection *In* (2000) as an illustration of this kind of re-writing. With reference to Wegner’s (1994) work on metacognition, it will suggest that the process of writing or reading a poem subtly alters the memory of the person who encounters the poem.

Section 6.3 will examine how Burnside’s poetry uses temporal shifts (often making past, present and future part of the same short narrative) to emphasise the reconstructive

nature of memory and how specific memories might be founded on fiction as much as fact, illustrating Bartlett's argument in his famous work *Remembering* (1932): in this book, Bartlett used memory tests (in particular, getting subjects to recall a Native American story about ghosts) to develop his claim that memory is a process of reconstruction, and that this construction is in important ways a social act, influenced by cultural context. Section 6.3 will also consider how Burnside's work evokes the experience of *déjà vu* and how it relates to recent experimental data on the phenomenon gathered by neuroscientists. The 'liminality' of Burnside's poetry, discussed at length in Chapter 5 (Section 5.1 in particular), can also serve to challenge and destabilise notions of memory as a process of simple recall.

Section 6.4 will consider Wills' (1993) suggestion that Paul Muldoon rejects 'the notion of stable or univocal origins' in his poetic work, weaving mythologies through his histories and how this represents an even more radical take on the idea of memory as reconstruction – how myth might be afforded more significance than so-called 'facts' in Muldoon's narratives and how our concept of the past thus re-shapes our understanding of the present. It will focus on how these ideas function within some of Muldoon's elegies such as 'Incantata' and on how poetry might be said to strive for a kind of immortality through its particular mode of remembering.

Section 6.5 will focus on Norman MacCaig's evocations of the limitations and unreliability of memory. In keeping with his democratic view of the relationship between humans and the natural world, explored at length in Chapter 2, this philosophy in MacCaig's work articulates a version of the Extended Mind Hypothesis, which contends that objects within our environments can function as part of the mind. In turn, this relates to the Gestaltism that underpins much of Muldoon's work.

6.1 What is memory?

In the chapter dealing with memory in his book *Neuroethics*, Levy (2007) reflects on the number of films and books in popular culture that deal with the prospect of memory loss or being implanted with false memories. He suggests that our terror of memory loss stems from the fact that: '...we all recognize, more or less clearly, that our memories are, in some sense, us: our very identities (in one sense that multiply ambiguous terms are constituted by our past experiences behavior, thoughts and desires.' (Levy, 2007: Kindle Locations 1951-1953)

This belief can be linked to philosopher John Locke's proposition that a person is only the same person they were at an earlier time if they can remember the experiences of that earlier individual (cited by Levy, 2007: Kindle Locations 1951-1953). In short, identity is defined as 'the sameness of a rational being', since: 'a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places.' (Locke, 2008. 33-52).

Schechtman (1996) proposes that Locke is concerned with the re-identification question (whether individual identity remains constant over time) but that questions of selfhood often involve what she calls the 'characterisation question' – the question of which mental states and / or attitudes belong to a person. Even so, these mental states are likely to be connected to attitudes held over time. Or, as Levy puts it: 'what really matters to me is not just a matter of what I think matters to me now; it is revealed in my behavior over the long-term.' (Levy, 2007: Kindle Locations 1967-1968).

However, psychology (Bartlett, 1932) cognitive science (Fernyhough, 2012) and neuroscience (Levy, 2007; Gabora and Ranjan, 2013) have shown us that memory is a narrative process rather than something fixed and static that we access. As Bartlett noted in *Remembering*, as far back as 1932, the process is not a re-excitation of fragmentary, fixed traces or elements but a reconstruction, built on the relation of an attitude towards a mass of organised past reactions. As such, it is a process of construction rather than mere reproduction.

It is important to distinguish here between the three different types of memory with which neuroscience concerns itself. First there is procedural memory, which enables us to acquire new skills (for example, motor skills like brushing teeth) and which does not involve conscious recollection; second, semantic memory, the factual knowledge of objects and events in the world; third, episodic memory, the memory of specific events and experiences - something more akin to a personal 'diary' (see Levy, 2007). It is this third category of memory which seems unique to humans ('remembering' rather than 'knowing') and with which this chapter will predominantly be concerned. Humans tend to organise episodic memories in approximately the 'correct' temporal sequence and can use them to engage in a kind of mental time-travel, but also to anticipate and plan the future (Ramachandran, 2011). Yet the manner in which we engage in this 'mental time travel' is not one of simple factual recall.

Levy exemplifies memory processes in neuroscientific terms in *Neuroethics*. Memories are first 'stored' in the medial temporal system in the form of enhanced connections between neurons. These can be accessed in the short term. Memories that persist are those that then go on to be distributed across networks in the cortical regions:

Retrieval seems to work through the matching up of a cue to an engram; if there is a sufficient degree of match, the memory is recalled. The process is mediated by a kind of index, which keeps track of the engrams scattered through cortical regions. (Levy, 2007: Kindle Locations 1998-1999).

Thus, as Bartlett suggested in the 1930s, there is a connection between present attitude and recall of past events. To quote Levy again:

The memories we recall are influenced by the goals we have at the moment of recollection, our intervening experiences and our reinterpretations. Hence, each time that (ostensibly) the same event is recalled, it will in fact be subtly (and perhaps not so subtly) different: first, because the retrieval cue will be different in each case (since the context of retrieval is necessarily different each time), and therefore the combination of stored memory and retrieval cue will be unique; and second because the stored memory itself, the so-called engram, will have changed by the very fact of having been recalled. (Levy, 2007: Kindle Location 1996)

This statement by Levy echoes the work of Schacter (1996) who argues that, when we retrieve a memory, the process is not something analogous to shining a spotlight on it, rather we engage in something more like reconstruction, based on past cues. Similarly, Gabora and Ranjan argue in their discussion of 'neurds' that memories are distributed and their recollection may involve neural 'crosstalk': 'not only does a given neuron participate in the encoding of many memories, but each memory is encoded in many neurons' (2013: Kindle Location 541).

The work of Loftus (2003) suggests that this process of reconstruction is highly fallible and that we can be primed and influenced to recall 'false' memories. Participants in Loftus' experiment were witnesses to a simulated complex event (such as a car crash or a crime). Half of the participants were then given misleading information about the event (for example, a vehicle which was actually blue being referred to as white) and half were not. Participants were then asked to recall the events that they had witnessed

and the accuracy of their responses was compared. The control group who were not given misleading information showed far more accurate recall (in some cases, the deficit in memory performance after being primed with misleading information was up to 30 or 40%).

As Levy says of Loftus' work in *Neuroethics*:

We are highly suggestible creatures, and suggestible in surprising ways. Loftus discovered, for instance, that recall of traffic accidents was sensitive to the questions asked of subjects: if they were asked how fast the cars were going when they smashed into each other, they recalled higher speeds than if they were asked how fast they were going when they hit one another; moreover, they were more likely falsely to recall seeing broken glass if asked the former question (Loftus, 2003). Hundreds of studies have now been published showing that subjects exposed to false information about events they have personally witnessed will frequently incorporate that information into their later recollections. (Levy, 2007: Kindle Locations 2054-2056)

Loftus' work is supported by that of Gazzaniga (2005). Gazzaniga cites a famous 'real world' case of false memory surrounding the 2002 sniper in Washington DC. In the case, 'several witnesses reported seeing the sniper driving a white truck. In fact, the sniper drove a blue car.' (Levy, 2007: Kindle Location 2066). This inaccuracy came about because 'a witness who had seen a white truck near the scene of one of the shootings falsely recalled seeing the sniper in the truck. The media picked up on the false recollection, and broadcast descriptions of the truck. The expectation that a white truck was involved then primed witnesses' memories.' (Levy, 2007: Kindle Locations 2066-2068). Here then, a cue interfered with witnesses' factual recall. Thus Gazzaniga, Loftus and Levy all highlight the different ways that we incorporate false suggestions and information into our memories and create composite memories from similar scenes, leading to inaccurate recollections. If memory is a reconstruction, it is often an imperfect one. This in turn has implications for our conception of the nature of the self, given that we closely relate selfhood to memories and past experiences, a nature which writers like MacCaig, Burnside and Muldoon have always implicitly challenged in their poetic work.

6.2 Not an ending – poetry and the past

When discussing the ‘truthfulness’ or otherwise of poetry, poets often emphasise the ways in which a poem may dramatize its subject matter in order to access a metaphysical truth. O’Driscoll (2006) cites Stephen Dunn: ‘there are degrees of fidelity to the actual. I don’t know a single poet who would hesitate at locating, say, a spousal argument in Paramus instead of Princeton if that better served the poem’s sonics.’ – (O’Driscoll, 2006: 94)

Dunn’s statement belies the ways in which poetry often dramatizes experience in order to emphasise certain aspects of it over others and in order to foreground something the poet wishes to convey. It becomes a fictionalised kind of truth. In interview, Poet W expressed the relationship between poetry and memory as one of ‘marinating’: ‘...(a poem) is made out of words and the words are marinated in memory....creation working on memory produces art.’

The implication here is that the poem requires a combination of recall and invention – creation working on memory. But later, Poet W also implied that poetry attempts to access a mode of reality that is somehow beyond, or even in tension with the imagination:

...(poetry) is a forensic act, it is an act of establishing the real at the expense of the imagined. Instead of being an imaginary act it is an act of redeeming out of too much imagination the actual chartable part of writing...there is an ecstasy of moderation as well as an ecstasy of exaggeration...The art of poetry is trying to put the imagination under control. – Poet W

The phrase ‘at the expense of the imagined’ is particularly striking, because it suggests that the two cannot fully coexist. Poet W seems to moderate his statement as he develops it, going on to suggest that through poems we ‘put the imagination under control.’ The relationship between recollecting the past and inventing the past through poetry is doubtlessly a complex one. Andrew Waterhouse’s poem ‘Not An Ending’ (from *In*, 2000) is a good example of a poem that dramatizes that complex relationship, foregrounding the conflict between the ‘real’ and the imagined and seems to explore some of the same ideas that Poet W identifies in his description of the writing process itself. A discussion of this poem will contextualise some of the ways in which memory is

a thematic concern for poets, leading in to an exploration of the theme in the work of MacCaig, Muldoon and Burnside:

He never lived in that valley
or anywhere else. On the night in question
he did not stand by the river or ignore
the new rain or drop stones into the water.
There were no tree songs around him,
no unidentified birds, no flowing to the sea.

Her eyes were not blue. Those were not her boots.
She walked more quickly. He did not hear
her last word or want to. He may
have shrugged, but never shook.
He had no regrets and would not think
of her again. He would not think of her again.

(Waterhouse, 2000: 16)

This is a poem which seems to make a show of its foregrounded negation in order to question or undermine it, fitting in with Hidalgo Downing's argument in *Negation, Text Worlds and Discourse* (explored at length in Chapter 5) that negation can act as a 'natural foregrounding device' (2000: 197), triggering a conceptual and semantic domain associated with the negative. The specificity of each denied detail in the first stanza ('new rain', 'tree songs', 'unidentified birds') makes us suspect that the subject of the poem did perhaps stand by the river 'on the night in question', but wishes not to remember. This sense intensifies in the second stanza with the descriptions of the shadowy 'her' figure. 'Her eyes were not blue' - how does someone notice the colour of eyes they have not seen? 'She walked more quickly' is ambiguous and could be taken to mean that the 'she' figure walked more quickly than the man. Either way, someone is seen walking; a very particular presence is being recalled. Then the chilling mention of 'last word' convinces us that there was an encounter between two people - 'last word' carrying implications of both parting and death. The line 'he may have shrugged but never shook' seems like a concession or admission, the word 'may' implying doubt in the narrator's recollection of events, or an attempt to disguise the vulnerability implied

in 'shook'. Finally, the last two lines deliberately undermine their semantic message through their form – the repetition of 'he would not think of her again' gives lie to its initial statement; he is already and immediately thinking of her again.

The effect of negation in Waterhouse's poem corresponds with what Gavins and Stockwell (2012) describe as 'negated text-worlds' (a term first used by Hidalgo-Downing, 2000) in their discussion of Simon Armitage's poem 'To His Lost Lover'. They state that 'because the reader must conceptualise the content of negated text-worlds before being able to understand their negative ontological status, these worlds become highly prominent and conceptually resonant' (2012: 38) - Gavins makes a similar argument in *Reading the Absurd* (2013) with reference to Camus' *The Outsider*, showing how the foregrounding of negative propositions draws the reader's attention to the content of the negated text-world as well as the abstract idea of its absence (2013: 37). By listing 'things that never happened', Armitage's poem makes the reader feel the 'loss' of each image as it is negated, thus reinforcing the sense of loss that pervades the poem as a whole (2012: 38). The same effect is at work in 'Not an Ending', as each description of the poem's shadowy 'her' is negated.

This process of negation connects to Wegner's work in *White Bears and Other Unwanted Thoughts* (1994) on the difficulty of suppressing thoughts. Wegner conducted an experiment where people were asked not to think about a white bear and told to ring a bell every time they did. On average, people rang the bell more than 6 times over the five minutes that followed. After they had been asked to suppress the thought, they were then asked to think about it for another five minute period and it was found that the act of suppression then accelerated the frequency with which people thought about the white bear. Thus: 'the irony...is not only that people found it hard to suppress a thought in the first place, but that the attempt to do this made them especially inclined to become absorbed with the thought later on.' (Wegner, 1994: 5).

These thoughts, Wegner suggests, are a kind of 'metacognition' (thoughts about thinking). When we have a 'metathought', the original thought is there within it too: 'As long as we continue to hold the metathought in the conscious window, the thought will be there. The thought and metathought do not run in parallel like automatic thoughts, but rather arrive together in their shared moment of serial consciousness' (Wegner, 1994: 56)

There's something of this process of 'metacognition' and suppression at work and dramatised in Waterhouse's 'Not An Ending'. Whether it's the end of a relationship or – more disturbingly – a murder at the heart of the poem and its attempt to forget, the process of forgetting and remembering is imitated through its structure. It mimics the way we revise, deny and reconstruct events and details in the process of remembering someone or something. 'Not An Ending' also hints at the ways that process might influence and even change the nature of someone's personal reality: through its rhetoric, the poem preserves the departed figure at the heart of it, the speaker of the 'last word'. In many senses, it is 'not an ending'. The event cannot be forgotten, becomes immortalised in the poem itself. It endures in the mind of the reader and writer as much as the fictionalised narrator. This points towards the way that the act of writing poetry might itself change the nature of memory, since the poem itself can often be a productive form of misremembering.

Paul Muldoon has written amusingly about the origins of his well-known, off-kilter sonnet 'Quoof' (the title poem of his 1983 collection): 'Quoof' was a family word for a hot water bottle, something Muldoon had taken to be passed on by his parents: 'a shibboleth of the kind that occurs in the private language of any family'. In the poem, this becomes a symbol for language's limits and possibilities, how the narrator has used the word, 'taken it to so many lovely heads / or laid it between us like a sword'. Discussing the poem, however, Muldoon remarks: 'I wondered a long time about the etymology of this word "quoof". Did it come from Gaelic? From Elizabethan English, like so many of my father's words? According to him, he first heard it from us, his children.' The word itself was an invention. To the poet, then, all remembering is a kind of half-deliberate misremembering. Since our memories are changed by the process of reconstruction we engage in when we remember, might the act of writing a poem change the writer's memory, sense of self-identity or sense of what they call 'reality'? For those who constantly create different versions of the past through writing, is there an extent to which that past becomes literally changed by the act of doing so? Poet Z said of the act of writing: 'it modifies sensibility, too...causes me to be in a state of constant flux. Also, there's something about words that is compelling and that sort of causes swerves in thinking and that is to do with what it is that words actually mean.'

Perhaps the process of reading a poem might also subtly alter the memory of the person reading it, particularly if that poem deals with historical events or with aspects of relevance to collective memory. This is an idea that I will return to in my discussion of Paul Muldoon's approach to writing (and, indeed, re-writing) history in Section 6.4.

6.3 John Burnside's versions of the self

As discussed in the previous chapter, John Burnside's ghostly narrators, negative metaphors, parallel histories (or perhaps non-histories) and lost futures combine to support his idea that the self is not 'a very convincing phenomenon', but rather something fragmented. Given that this is the case, it should not be surprising that we re-construct things differently, create a kind of fiction every time we remember. Dreams and memories are often deliberately merged in Burnside's work. In the prose poem 'Suburbs' (from *Common Knowledge*, 1991), the narrator notes that a 'recurring dream' he has 'is also a memory' in which he or she steps from 'the noise of a party in the suburbs' and encounters a girl in a white dress.

After a while, in the dream and the memory, she is gone. I
walk back indoors and the kitchen is empty, except for an
absence where something has just occupied my place and left
a glass of milk half-finished on the table, some angel of
weights and measures who passed through and has only just
left –

(Burnside, 2006: 2)

Even as he rebuilds these fragments of dream or memory in the poem, Burnside acknowledges that they are 'half ideas'. As the poem develops, the suburbs in question begin to merge with the dream or memory, becoming a place imprinted with the footsteps of 'a / child who has never come indoors and never will', a place of abandoned railway stations that have 'surrendered to the woods'. Finally, as the narrator becomes more and more immersed in the scene, it comes to exclude him, almost paradoxically:

.... I think I am already
present somewhere else, having made a journey of some

kind, as if any journey could end somewhere other than here,
in the suburbs, where everything is implied: city, warehouse
district, night stop, woods emerging from mists, as if newly-
created, like those Japanese paper flowers which unfold in
water, empty back roads at night where, momentarily, a
soughing of wings passes close in the dark, followed by the
tug of silence, the feel of grain fields shifting under the wind,
a lamp in a window beyond, where someone has sat up all
night, drinking tea, remembering something like this.

(Burnside, 2006: 2)

Though the location directly referred to is the suburbs, Burnside's 'here' in the line 'as if any journey could end somewhere other than here' could also be the mind itself, making this line a commentary on the circular nature of remembering, the way that ideas seem to centre around the same scene (after all, the suburbs described in the poem are as much dreamscape as they are recollected place). There's a neat circularity in the movement towards the figure illuminated in the window too, the way the poem focuses in on a person engaged in the act (or rather attempt) of 'remembering something like this'. The scene that has been evoked is simultaneously being remembered by someone else then, even if it is part dream in the first place. The poem is layered with different dreams and memories which combine to produce an impressionistic account of what it feels like to be in the suburbs.

In 'Fidelity' (from *The Asylum Dance*), Burnside directly explores the way that fiction can be converted into memory, fantasy conflated with fact, until the scene we are faced with contains equal measures of both.

It's some
 inevitable end
that one house
 echoes another:

settlements and shifts
 behind a door
accumulations

traces
vacancies.

So when I come in
from work
 and catch you
sleeping in a chair

it's not just you I see
 but someone else
- someone I've never met
 and tried to reach
in every house I knew
 and left behind

a common ghost...

(Burnside, 2009: 55)

Having begun by declaring that all houses resemble others in some way (suggesting that memory blurs the different places we have inhabited, carries 'accumulations' or 'traces' of one house into another), the narrator narrows his focus to a person who, it is implied, also resembles unspecified others. Observed in a passive, sleeping state, one person could almost be anyone. Or not just anyone, but a specific, nameless and faceless other – 'someone I've never met'. This implies that, like our memories of houses, our memories and impressions of people contain traces of others, until they form some impossible, fictionalised 'other' whom we have never actually encountered. People and places are convincing stories we tell ourselves. The unmet person in 'Fidelity' is held up as some kind of ideal (the narrator has 'tried to reach' them 'in every house I knew'). She is

...the other woman
 who arrives

and goes
 before I know
she's ever there...

(Burnside, 2009: 55)

Burnside plays tricks with time in this poem – the woman is gone ‘before I know / she’s there’, but she’s previously been described as almost tangibly present in the sleeping face of another (‘it’s not just you I see). This seems to mimic the way memories are distributed and matched, what Levy describes as a messy process of reconstruction rather than an instantaneous retrieval: contradictions can be held in the mind in the process of trying to remember something. This accords with Burnside’s pronouncement in an interview with Patricia McCarthy (*Agenda*, Vol 45, Spring / Summer 2011) that: ‘Poetry, for me, is one of the means by which we dispute the imposition of linear time, just as metaphor disputes the notion that the world consists of subjects and objects experiencing one another in various kinds of atomised relationship’ (Burnside, 2011)

At the end of ‘Fidelity’, the tension between people as they are in reality and people as we think of them or remember them is brought to the fore. The shadowy ‘other’, cannot replace the sleeper in the chair

...and isn’t you
can no more take your place
than rainfall
or some perfume
on the air.

(Burnside, 2009: 56)

John Burnside’s work often explores the sense of déjà vu at play in poems like ‘Fidelity’, again calling into question the idea that memory is linear, that the past is behind us and the present in front. In some ways, his work expounds the contrary, an idea Michael Donaghy lyrically frames in his poem ‘Upon a Claude Glass’ (from *Safest*, 2005):

A lady might pretend to fix her face,
but scan the room inside her compact mirror -

so gentlemen would scrutinize this glass
to gaze on Windermere or Rydal Water

and pick their way along the clifftop tracks

intent upon the romance in the box,

keeping untamed nature at their backs,
and some would come to grief upon the rocks.

Don't look so smug. Don't think you're any safer
as you blunder forward through your years

straining to recall some aching pleasure,
or blinded by some private scrim of tears.

I know. My world's encircled by this prop,
though all my life I've tried to force it shut.

(Donaghy, 2005: 5)

In Donaghy's poem, the past is something that cannot be forced shut, something that is held out in front of us, something that we keep one eye on as we walk into what we take for the 'future'. Memory and imagination assume a similar position in John Burnside's work. In his poem 'Learning to Swim' (from *The Hunt in the Forest*, 2009), the narrator remembers a childhood experience of nearly drowning, but recalls it in terms of what did not happen rather than what did:

Now, when I swim, I remember what failed to happen:
the body I never found in the glimmer of chlorine,
the casual ascent and the gleam of my cousin's approval;
I dream of the absence I missed and the shiver of longing
that played on my skin for as long as it took me to surface...

(Burnside, 2009: 1)

The memory of the swim is more about what did not occur than what did, an outcome that never was, mythologised and dramatized. Later, the narrator describes it as 'the death I had lost, but would cherish for years / as we cherish the faces of school-friends who will never grow old.' In his memoir *I Put a Spell on You* (2014), Burnside echoes this constructed view of memory:

No memory happens in the past...our memories happen now in the madeleine and tinsane-tinctured present – but it strikes me as peculiar still that my memories have so little to do with historical time... All the summers of childhood are distilled to one afternoon and everything that ever happened in sunlight or June rain happened on that one day. (Burnside, 2014: Kindle Location 3060)

In his work, then, Burnside explores the fictional aspect of our acts of reconstruction, treating it as something more significant than the aspects of our personal narratives that might be considered ‘factual’. He offers a creative parallel to the thesis put forward by Bartlett in *Remembering* (1932) and to the neuroscientific work of Loftus et al. His work suggests the ways in which, as Bartlett puts it: ‘the past operates as an organised mass rather than as a group of elements each of which retains its specific character.’ (Bartlett, 1932: 197). Furthermore, what is sometimes construed as vagueness or liminality in Burnside’s work serves to represent creatively a tendency Bartlett describes in *Remembering* in which we build memories from overall impressions and assumptions:

Suppose an individual to be confronted by a complex situation. This is the case with which I began the whole series of experiments, the case in which an observer is perceiving, and is saying immediately what it is that he has perceived. We saw that in this case an individual does not normally take such a situation detail by detail and meticulously build up the whole. In all ordinary instances he has an over-mastering tendency simply to get a general impression of the whole; and, on the basis of this, he constructs the probable detail. Very little of his construction is literally observed and often, as was easily demonstrated experimentally, a lot of it is distorted or wrong so far as the actual facts are concerned. But it is the sort of construction which serves to justify his general impression. (Bartlett, 1932: 206)

Bartlett suggests that in the initial process of remembering, the subject is guided by what we might call ‘feeling’ (or perhaps ‘attitude’). It is this initial shaping ‘feeling’ that Burnside often creates through his work, as exemplified by a piece like ‘Suburbs’. Furthermore, when someone is remembering, ‘the recall is then a construction, made largely on the basis of this attitude, and its general effect is that of a justification of the attitude.’ (Bartlett, 1932: 207). Burnside’s poems create their own justifications, building coherent imaginative worlds around the processes of remembering and misremembering they involve.

Like much of Burnside's work, poems like 'Fidelity' and 'Suburbs' also poetically represent the experience of déjà vu. Sometimes his work alludes to it directly – as in 'Source Code' from *Common Knowledge* in which 'the same life happens again'. More frequently it is implicit in his evocations of places that are at once familiar and unfamiliar, recognised and unknown, in the landscape of the title poem from *The Myth of the Twin*, where someone is always 'having the dream / I had for weeks'. In this, Burnside's fourth collection, the sense of déjà vu even extends to blurred identities, the recognition of the self in someone else. In the poem 'A lo Mejor, Soy Otro', the narrator describes 'forgetting the measureless need to be myself'

...and never the boy
with the number stamped on his arm
the one in the film
with my face, in my raincoat and gloves.

(Burnside, 1994: 46)

In 'An Operating System', he describes 'a fastness in the mind / wide as a room, but tiny, and self-contained', seemingly yearning for the privacy and finite limits it would provide. By contrast, Burnside's poems often involve slippages and leakages between times and places, experiences and faces, evoking the strangeness of déjà vu, a phenomenon neuroscientists have studied in relation to the role of the medial temporal lobes, where memories and recollections originate. Certain regions of the medial temporal lobes are involved in the detection of familiarity or recognition rather than detailed recognition of specific events. In 2012, researchers from CEITEC (the Central European Institute of Technology) found that by stimulating the hippocampus they were able to induce déjà vu in some patients. In particular, people with smaller hippocampi were more susceptible to experiences of déjà vu, suggesting that the small recall 'errors' implicated in the process are connected to hippocampus size (CEITEC, 2012). It is these experiences, the detection of familiarity rather than the direct recall of specific events, that Burnside's poetry so frequently evokes, concerning itself with the fluidity or memory and, by implication, the fluidity of the self and the uncertainty that provokes in his narrators.

Other writers like Louis MacNeice have evoked *déjà vu* formally through the device of repetition. In 'Déjà vu', from *The Burning Perch*, MacNeice creates a sense of circularity through repeating the phrase 'it does not come round':

It does not come round in hundreds and thousands of years,
It comes round in the split of a wink, you will be sitting exactly
Where you are now and scratching your elbow, the train
Will be passing exactly as now and saying It does not come round,
It does not come round, It does not come round, and compactly
the wheels will mark time on the rails....

(MacNiece, 1963: 2)

Something in the denial of the phrase (the 'not' in 'it does not come round') contrasting with its frequency (it *does* come round in the poem, and then round again) evokes the paradox of *déjà vu* – something at once familiar and new, something that has not happened before but also has. *Déjà vu* in John Burnside's work is more thematic than structural, though his use of what Fiona Sampson describes as 'the expanded lyric' (*Agenda*, 2011: 112), characterised in part by 'long, often stepped lines', 'concertina-ing techniques', 'aural logic' and 'chain link imagery' might be seen to mimic something of the slippery relationship between past, present and future he often explores in his poems. As Sampson puts it: 'John Burnside is a poet of surrender. Far from producing certainties, his poems are continually in flight from it; as if from a false consciousness. Each image is a temporary habitation for, if not meaning, then at least reflective consciousness.' (2011: 114).

Sampson's analysis of Burnside's 'wide-ranging, synthesizing intelligence' seems motivated by a bias against what she views as the 'constraining' influence of a resurgent formalism in contemporary poetry ('much of today's mediocre writing is in free verse yet, though it lacks the disciplined pleasures of strict form, it has internalised the principle of constraint' she argues, because of 'the simplification it offers the risk-averse'). Rather than setting John Burnside up as an innovator in the face of this apparent 'mediocrity', we might more usefully conclude that his use of stepped lines and arrow-like half lines reflects his belief in poetry's power to resist 'the imposition of linear time' and his particular poetic brand of *déjà vu*. In this resistance, he echoes a view of poetry expressed by Hugo Williams in the *TLS* in September 2012, when he

suggested that his own poetry was motivated by ‘a creeping sense of things ending, or being about to end, of happiness being in the past’ which, he says, makes him want to get back to that past by any means possible (Williams, 2012: 46). Poetry, Williams believes, breeds ‘habits of retrospection’, ‘a twin-like existence of self-communing and self-cancelling’ (2012: 46). In this, he believes, it has a preserving or retrograde impulse that is often out of place in contemporary society:

It is inappropriate to say so nowadays, but poetry is in opposition to life as it is supposed to be lived: it denies the values of normal progress, it’s a chit off life. Those in love with it watch as the merry-go-round goes round without them, remembering how they used to love all that. (Williams, 2012: 46)

Poetry to Williams, then, is not always comfortable occupying the present, but preserves a distinctive kind of nostalgia, so vivid as to be akin to déjà vu at times. Few poets evince this more clearly in their work than John Burnside.

6.4 Paul Muldoon’s alternative histories

In the portentously titled ‘History’ (from *Why Brownlee Left*), Paul Muldoon asks:

Where and when exactly did we first have sex?
Do you remember? Was it Fitzroy Avenue,
Or Cromwell Road, or Notting Hill?
Your place or mine? Marseilles or Aix?
Or as long ago as that Thursday evening
When you and I climbed through the bay window
On the ground floor of Aquinas Hall
And into the room where MacNeice wrote ‘Snow’
Or the room where they say he wrote ‘Snow’.

(Muldoon, 2001: 87)

Deliberately flippant in tone (the casual questioning of the opening, the litany of place names, the playful subversion of the chat-up line ‘your place or mine?’), the lightness of ‘History’ disguises its significance as a poem that acts as a small motif for the way Muldoon treats not just memory, but history itself as something provisional, something

that exists through narratives as keenly as through empirical facts. A personal uncertainty ('where and when exactly did we first have sex?') circles in on a specific scenario with cultural relevance – the location in Aquinas Hall which leads into 'the room where MacNeice wrote 'Snow' / Or the room where they say he wrote 'Snow'. Notably, this landmark episode – the writing of the MacNeice poem – is itself, quite literally, an act of fiction – the act of producing a fiction.

It does not seem to matter much to the narrator whether MacNeice really wrote 'Snow' in the room in question – each possibility is presented with equal weight, given equal space within the poem. The very idea that 'Snow' might have been written there is planted before it is questioned and lingers in the reader's mind, even as it is provisionally challenged. The 'bay window' that the couple in 'History' climb through evokes the 'great bay-window' in the first line of MacNeice's 'Snow', inviting the reader to step into that poem before its title is even mentioned. The reference to MacNeice's poem is even more interesting when we consider that 'Snow' can be interpreted as a poem about the nature of the creative process itself (see Cole, *Magma*, 2002): how can the individual make sense of a world which is 'incurably plural', full of 'the drunkenness of things being various'? Muldoon is also a poet who often seems to recognise the world's incurable plurality and 'History' presents us with plural versions of the world; to the narrator, the couple might as well have first made love in any of the locations he mentions. There's a sense of their relationship encompassing all of them. It is a poem which suggests the nature of our reality is provisional, just like our personal sense of memory. The narrator may not be able to answer the question posed in the poem's first line, but that's in accordance with a world where fiction may be as important as fact.

In *Improprieties: Politics and Sexuality in Northern Irish Poetry* (1993), Clair Wills suggests that Paul Muldoon is a poet obsessed with the investigation of origins, which often finds its expression through his interest in etymology. In turn, this interest in naming, language and its origins connects to his interest in how myth and history are intertwined, how fictional creations can have 'real world' effects. According to Wills, Muldoon suggests that 'history is no more true than fiction, since it comes to us filtered through the imagination, which moulds it in turn.' (1993: 234). This in turn calls into question the notion of 'truth' in poetry, since:

Muldoon's work does not depend on the notion of the 'true', a concept he always treats with suspicion. The self-conscious rhetorical form of the work undermines the aura of authenticity and sincerity necessary for the reader's belief in the truth claim inherent in poetic statements...the true cannot be assumed like a mantle, nor arise spirit-like from within – both these modes of claiming poetic authenticity result in delusion. (Wills, 1993: 234).

Wills argues that his treatment of history (both personal and cultural) means we should rethink the term 'political' in relation to Muldoon's work, since 'political' issues in his writing are more to do with the 'relative claims of fiction and fact on the writer's imagination' (1993: 233)

Wills argues that Muldoon's work encourages a questioning of our relationship with the past, that it 'can be read as a thoroughgoing rejection of the notion of stable or univocal origins which...are linked to conservative politics.' (1993: 194). Instead of concepts of personal or national identity, Muldoon offers us instead 'a postmodern identity formation.' (1993: 195). Wills sees an affinity here with the work of another Irish poet, Mebhdh McGuckian and suggests that both writers point towards 'the fragmented nature of Irish historical experience...as the grounds for the inevitable dissolution of origins.' (1993: 195). At the same time, she notes that Muldoon's work relies heavily on both historical knowledge and research (though, notably, this historical aspect is just as likely to deal with Irish mythology, for example, as with recorded historical events). Thus, in Muldoon's work '...it is not possible to choose finally between the demand for rational truth as political motivation, and the arena of fiction, desire and affectivity as spurs to real events.' (1993: 198)

Facts cannot be separated or disentangled from the imaginative and reconstructive processes by which they are perceived, recalled and understood. As the character of Auden says in '7 Middagh Street', 'history's a twisted root / and art its small, translucent fruit', but myth and fiction also act as spurs to history. The root depends on the fruit as much as vice versa. Wills suggests that Muldoon enacts these ideas in his work in poems like 'Madoc: A Mystery' which is framed as a kind of historical fantasy in which different scholars (from Darwin to Julia Kristeva) and poets (notably the Romantics) speak in a series of parodies and imagined dialogues. In 'Madoc...' Muldoon supposes that Samuel Taylor Coleridge and Robert Southey took up their (actual) fancy of founding a Pantisocratic community in North America. The short sections of the poem

are named after different philosophers throughout history and engage in a series of puns and etymological jokes, in what Hofmann (1990) has called a ‘mad triangle of poetry, philosophy and subversiveness’ (Hofmann, 1990) which also makes slant reference to a journey that Muldoon himself made, going from Cambridge to America in 1987, thus subtly merging an element of the personal with the fragmented, quasi-historical, sprawling narrative of ‘Madoc’.

If history is no more ‘true’ than fiction, Muldoon seems to implicitly recognise that our own personal narratives, the reconstructions our memories facilitate are just as ‘true’ as what really happened to us. His work is full of references to deliberate mis-rememberings. Recall the narrator of ‘Sushi’ who, implicitly, is likely to ‘confound / Duns Scotus, say, with Scotus Eriugena.’ Or in ‘Yarrow’:

..as Loyola knelt and, raising the visor of his bucket,
pledged himself to either Ad Major
or Ad Majorem Dei Gloriam, I can’t quite remember which...

(Muldoon, 2001: 346)

These mis-recollections are connected to the kind of Freudian slip he describes elsewhere in ‘Milkweed and Monarch’, when the speaker stands beside a family grave and realises ‘he’s mistaken his mother’s name ‘Regan’ for ‘Anger’.

In his long poem ‘Incantata’, an elegy for a former lover, Mary Farl Powers, who died of cancer, Muldoon explores the boundaries between ‘all that’s revelation, all that’s rune’ as he tries to make her speak through a potato (‘I X-Actoed from a spud the Inca / glyph for mouth’...). The poem journeys through the narrator’s earliest memories of meeting Mary, but also reflects on the nature of recollection itself and how fantasy blurs into fact in the process. Or, to put it otherwise, how ‘rune’ becomes ‘revelation’:

I saw you again tonight, in your jump-suit, thin as a rake,
your hand moving in such a deliberate arc
as you ground a lithographic stone
that your hand and the stone blurred to one
and your face blurred into the face of your mother, Betty Wahl,
who took your falling, ink-stained hand

in her falling, ink-stained hand
and together you ground down that stone by force of sheer will...

(Muldoon, 2001: 333)

The phrase I ‘saw you implies that she was more a vision, or even a visitation, than a thought – a kind of haunting. When Mary is recollected, she has ‘blurred’ into her mother and is engaged in the impossible. The hand and the stone also blurr into one another – the self and the act of creating a version of the self also become one. Later, the narrator reflects on how he wants to preserve her through recollection and through the strange ritual with the potato:

I thought of you again tonight, thin as a rake, as you bent
over the copper plate of ‘Emblements’,
its tidal wave of army-worms into which you had disappeared:
I wanted to catch something of its spirit
and yours, to body out your disembodied *vox*
clamantis in deserto, to let this all-too-cumbersome device
of a potato mouth in a potato-face
speak out, unencumbered, from its long, low, mould-filled box...

(Muldoon, 2001: 334)

The repetitions throughout the piece (evident even here in the repetition of ‘thin as a rake’) seem to reflect the circularity of the narrator’s thoughts as he engages with the difficult business of remembering. In this stanza, the narrator seems disatisfied with the act of memory and its inevitable limitations. What he actually wants is to ‘catch....spirit’, to let the dead woman ‘speak out’ through the strange device of the ‘potato mouth in a potato face’, without having to be built up piecemeal from his fragmented memories and visions and fantasies. He wants this even though he acknowledges ‘you’d be aghast at the idea of your spirit hanging over this vale / of tears like a jump-suited jump jet...’ since there’s ‘nothing over / and above the sky itself’. Shortly after this, the poems becomes a litany of specific memories, piled one on top of the other (from ‘your avoidance of canned goods’ to ‘how you called a Red Admiral a *Red / Admirable..*’), as if the narrator recognises the impossibility of the dead person ever really speaking through him and resigns himself to the cumulative process of memory.

The point of the elegy seems a kind of alchemy – through elegies, the poet really does bring something of the person back from the dead, by preserving their memory (or a version of their memory) in language. Muldoon concludes ‘Incantata’ by revisiting the image of the ink-stained hands: ‘that you might reach out, arrah, / and take in your ink-stained hands my own hands stained with ink’. The subtle reversal (from ‘ink-stained’ to ‘stained with ink’) reinforces both the distance between the living and the dead but also the way that writing (in ink) has made a strange link across the divide, by way of memory. Muldoon has preserved something of Powers by writing about her. As Craig Raine says in ‘A La Recherche Du Temps Perdu’, his elegy for a former lover who died after contracting AIDS:

...And now I have re-membered you.

You difficult, lovely, lost masterpiece,
this is my purpose,

To make you real.

To make you see, to make you feel,

to make you hear.

To make you here.

(Raine, 2000: 41)

Raine seems to imply that poetry, by mimicking the reconstructive process of memory, can in some sense make its subjects ‘here’, in the way that Muldoon does in ‘Incantata’. If our sense of reality, our sense of self is dependent on our memory (see the discussion of Schacter, 1996 and Locke in Section 6.1), then, in some way, rebuilding the memory of a person alters ‘reality’, making them present, defying time. If a person is ‘here’ in memory, and if memory can alter reality, poetry really can immortalise a version of someone. However, given that memory is a reconstructive process rather than a process of recall, given that what the person remembers may not always be the same as what someone else might remember, it is important to recognise that all the poem creates is just that: a *version*. This is something that Craig Raine often fails to recognise in his work, arguing that his poetry captures the ‘truth’ of certain experiences (see Mort, *Adventures in Ventriloquism* in ‘Poetry London’, Summer 2011 for a full discussion of this in relation to Raine’s poetry and remembering).

6.5 Norman MacCaig and doubt

In a fragment called ‘Memory’, unpublished in his lifetime, Norman MacCaig compares his subject to a bird:

Over the turbulence of the world
flies the bird that stands for memory.
No bird flies faster than this one,
dearer to me
than the dove was to Noah – though it brings back
sometimes an olive branch, sometimes
a thorny twig without blossoms.

(MacCaig, 2005: 446)

In this short piece, MacCaig establishes both the significance of memory to our sense of identity (‘dearer to me...’) and its unreliability (‘sometimes an olive branch, sometimes a thorny twig...’). There’s a sense in this closing image that memory is almost something beyond real human control. It seems fitting for a poet who often places more faith in animal behaviour than human behaviour to liken memory to something avian, something that flies free, even if it returns to the source (albeit with unguessed-at gifts). This sense of limited control is echoed in poems like ‘Thinker’ in which the narrator suggests that thought in general, not just memories, have an agency all of their own. The poem opens by noting how ‘thoughts only deceive me’, then likens them to different people – beggars and vagabonds, some standing in wait, some ‘disappearing / into the back lanes of a city’. In each case:

I breed them
but they have no respect for me.
They leave home as soon as they can walk.

(MacCaig, 2005: 484)

Like the bird of memory that flies from the narrator, thoughts roam from MacCaig’s protagonist in ‘Thinker’. But the prospect of their return seems even more doubtful than it does in ‘Memory’:

How I wish they would all come home.
How hard I would struggle to hear
what they would talk about
in the next room, always the next room.

(MacCaig, 2005: 484)

The simple inaccessibility of thought is framed by the repetition of ‘next room’. Even if thought does ‘come home’, it stays beyond a threshold. In contrast to the idea of memory as a constructive and reconstructive process then, MacCaig’s poems often suggest that memory has an agency that is somewhere beyond us. Indeed, in ‘Memory, mother of the Muses’ he characterises it as an external being or force, one which has some control over poetry itself (‘Memory, persuade your daughter to do / what she was born for...’).

At the same time, elsewhere in a poem like ‘A happiness’ he implies there is a constructed element in all perception, particularly in the way we construct the present in relation to an imagined or fictional past:

Each second is birds singing in every tree.
Not real birds. Not real trees.

And my room is mornings stretching on forever.
Not real mornings nor that real forever.

A plough went into the ground. Corn rose from it.
I saw that plough. I saw that corn.

They were real. But for this fragile moment
the plough turns over the soil into the future

where the corn sways
that was cut down long ago.

(MacCaig, 2005: 458)

The last stanza of the poem belies its own illusion: the narrator sees something impossible, ghostly even, but that sense of impossible past is the ‘reality’ of the future. It prompts a subtle questioning of the reality of the corn and the plough in the third

stanza. There's a deliberate contradiction in the phrase 'real forever' in the second stanza too, since 'forever' is an unrealisable concept, even in a poem which blurs temporal boundaries. The poem's title seems to imply that happiness lies in this illusory merging of past, present and future, in the 'fragile moment' of recollection and the human illusion it belies. Elsewhere, in 'Being offered a Time Machine', MacCaig's narrator considers the different possibilities time travel might afford ('I could speak to Socrates...'), but concludes that the movement of time is terrifying:

...It's too difficult. I'd curl up in my Timex
and be scared enough there, watching
the frightening present becoming
the frightening past.

(MacCaig, 2005: 348)

Just like in the 'real forever' of 'A happiness', Time is briefly made concrete here, though it remains something we should fear, something that passes quickly, beyond human control. Indeed, many of MacCaig's poems seem to yearn for that lack of control, for an agency beyond the human – another reason why he often places more faith in animals or in the inanimate than in people. 'On the pier at Kinlochbervie' starts in typically self-reflective and self-critical style, with the narrator saying of his opening stanza (in which stars going out are likened to peanuts being pecked from the sky by 'a bluetit the size of the world'): 'a ludicrous image, I know'. As soon as he has created an analogy, he undermines it. The narrator soon admits 'my mind is struggling with itself'. The world he is attempting to describe seems mysterious and inaccessible:

That fishing boat is a secret
approaching me. It's a secret
coming out of another one.
I want to know the first one of all.

Everything's in the distance,
as I am. I wish I could flip that distance
like a cigarette into the water.

I want an extreme of nearness.

I want boundaries on my mind.
I want to feel the world like a straightjacket.

(MacCaig, 2005: 446)

There is a sense, then, in which the narrator of 'On the pier at Kinlochbervie' wishes that the ludicrous image of the poem's opening were a real possibility, that the world were bounded by some animal deity who pecks out the stars, creating 'boundaries' for the human world below. A kind of God, almost. Again, MacCaig introduces a paradox: he wants an 'extreme of nearness', but also the limits of a 'straightjacket'. He wants to be close to the world around him but also separate from it, even as he goes through the world creating meaning.

There is almost a kind of panpsychism at play in some of MacCaig's poems, an implicit belief in the idea that 'mind' is at the centre of all things, human or otherwise, and that non-human beings and objects can therefore be said to 'think' in some way. Hence the agency that MacCaig often affords to the inanimate, or the consciousness (a superior form of consciousness, even) that he often sees at work in animals. MacCaig seems to subscribe to the idea that all things have an intrinsic nature which humans can only attempt to get close to or uncover. As such, the reconstructive nature of memory is always going to be fundamentally limited because we are dealing with a world that has agency beyond the meanings we ascribe to it. Our minds must forever struggle with themselves. Yet, at the same time, what we create (or recreate) from memory may be more than the sum of its limited, representational parts. 'Connoisseur' is a poem that complicates the idea of thinking of someone else. MacCaig begins with an exploration of the multi-faceted nature of the things we notice around us:

The rain makes a drumming on the roof
and a splish-splash on the road.
Nothing makes one sound only.

That cloud is a camel, a weasel, a whale.
Hamlet was right. Nothing
has only one appearance...

(MacCaig, 2005: 349)

Our perception at any given time is limited, then: we only see one aspect at one time. This recalls the way we process visual illusions (such as the Necker cube, discovered by the Swiss crystallographer Louis Albert Necker, in which a cube seems to switch orientation as we stare at it – see Figure A) and how this demonstrates, in V.S. Ramachandran’s

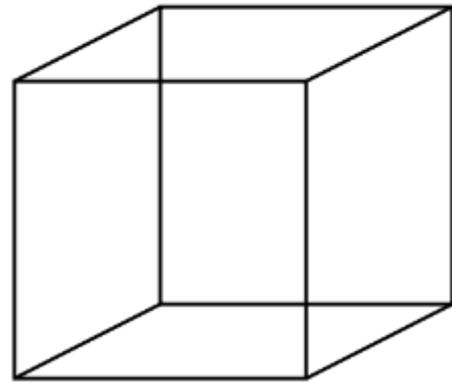


Figure A

words, that ‘perception is an actively formed opinion of the world rather than a passive reaction to sensory input from it.’ (2011:49). This in turn connects to Gestaltism (discussed in Chapter 3, Section 1.4) and the notion that the human eye sees objects in their entirety before perceiving their individual parts, suggesting the whole is greater than the sum of its parts. MacCaig is always reminding us how much we cannot perceive at a given time, how limited our perception actually is. Just as ‘nothing makes one sound only’ and ‘nothing has only one appearance’, so too a person has many facets:

I collect
Your laughter, your talk, your weeping.
I collect your hundred of semblances.

(MacCaig, 2005: 349)

Notice here that the things collected remain no more than ‘semblances’. Rather than attempting ‘to make you hear. / To make you here’ MacCaig’s narrator is engaged in a more piecemeal reconstructive process:

I store you in the cabinet of my mind
I’m a connoisseur, in love with the value only
of priceless things.

(MacCaig, 2005: 349)

The metaphor of mind as cabinet is a particularly telling one. A cabinet is a place where we can store things, compartmentalise them and put them away. As such, it is an artificial construct that does not really reflect the organic nature of the world, only our

way of rationalising it. This seems representative of MacCaig's attitude towards the problem of human thought as a whole. How can a cabinet store an infinite number of semblances, things with more than one appearance? Nonetheless, the poem's ending is more hopeful and redemptive:

Though my eyes blur, I look at these treasures.

Though my hands tremble, I touch them.

Though my heart grieves, I love them.

And a seed falls from a tree and
in its lowly cabinet sets about
creating forests.

(MacCaig, 2005: 349)

The implication here is that memory is something more than its components, something other - impossible, but present, like a forest growing from a 'lowly' cabinet.

Perhaps MacCaig's work can be more usefully framed by the Extended Mind Hypothesis (EMT) than by the idea of panpsychism. This hypothesis, associated mainly with the work of Clark and Chalmers (1998) suggests that it is arbitrary to confine our notion of mind to something contained within the human body, or, indeed, the human skull. Rather objects within our environments can function as part of the mind. As Levy puts it succinctly in *Neuroethics*:

The mind, its proponents claim, should be understood as the set of mechanisms and resources with which we think, and that set is not limited to the internal resources made up of neurons and neurotransmitters. Instead, it includes the set of tools we have developed for ourselves - our calculators, our books, even our fingers when we use them to count - and the very environment itself insofar as it supports cognition. (Levy, 2007: Kindle Locations 439-441).

Since external objects can play a significant role in aiding cognitive processes, the mind and the environment act as a 'coupled system'. Clark and Chalmers call this 'active externalism'.

By embracing an active externalism, we allow a more natural explanation of all sorts of actions. One can explain my choice of words in Scrabble, for example,

as the outcome of an extended cognitive process involving the rearrangement of tiles on my tray. Of course, one could always try to explain my action in terms of internal processes and a long series of "inputs" and "actions", but this explanation would be needlessly complex. If an isomorphic process were going on in the head, we would feel no urge to characterize it in this cumbersome way. (Clark and Chalmers, 1998: 15)

The Extended Mind Hypothesis links back to the work of Damasio (1994), whose research into the guiding influence of emotion on cognition demonstrates how external factors may crucially influence cognitive processes. Patients with damage to the ventromedial prefrontal cortex, which is implicated in the processing of risk and fear, do not get 'warning signals' which ordinarily bias people against certain kinds of actions and are thrown back on purely brain-based rationality when making decisions. Damasio puts forward a somatic-marker hypothesis (SMH), according to which bodily responses are an indispensable guide in beneficial decision-making. His famous case study is that of Phineas Gage, a railroad worker who was damaged in an accident when a tamping iron went through his skull – Gage's everyday cognitive function was relatively unimpaired after the accident but his personality altered dramatically because his long and short term decision making skills had been impaired. Damage to the ventromedial prefrontal cortex impairs the relationship between the brain and the rest of the body. Damasio himself did not subscribe to the Extended Mind Hypothesis, only claiming that the mind is connected to the entire body. However, as Levy points out:

...if we are forced to admit that mind can extend beyond the skull and into the body, there is little – except prejudice - preventing us from extending it still further. If mind does not have to be entirely an affair of neurons and neurotransmitters, if it can encompass muscular tension or heart rate, then why not electronic pulses or marks on paper as well? When these things are coupled, in the right kinds of ways, to the brain, we think better, much better. Why not say that our mind can sometimes, in some contexts and for some purposes, encompass environmental resources? (Levy, 2007: Kindle Location 481-483).

Levy demonstrates how our inner resources are relatively impoverished – much in the way MacCaig suggests in 'On the pier at Kinlochbervie'. Our visual experience is of a world that is internally represented by us, but this relies heavily on external representations. We aren't aware of how much this is the case, because we are not aware

of the ways in which our internal representations are constantly updated by our eye movements. As an example, Levy show how even the inner representation we have of words on a page as we read them is illusory:

In a well-known experiment, subjects read text on a computer screen. They had the experience of reading a stable, unchanging screen; exactly the same experience you have now. In fact, the screen was changing constantly, with junk characters replacing the words as soon as they were read. The only real words on the screen at any time were those the subject was actually reading. So long as the appearance of those words was timed to co-ordinate with the speed of the subject's eye movements, they remained totally unaware of the instability of the page (Rayner, 1998). The experience we seem to have, of possessing a rich internal representation of the page, and of the world we survey, is in fact an illusion. (Levy, 2007: Kindle Locations 492-494).

In another experiment by Simons and Levin (1998), subjects in an experiment failed to notice when the person they were talking to was substituted for another (the experimenters approached passers-by and asked for directions. While these were being given, a door was carried in between the two people and the experimenters used this opportunity to disappear and allow someone else to take their place – most subjects did not notice the substitution). These experimental examples demonstrate a kind of ‘change blindness’, showing how much the external environment can alter without us noticing because we have no stable and enduring inner model to compare it with. As MacCaig puts it ‘nothing has only one appearance’. We exploit the (usual) consistency of our environments rather than attempting the cognitively tiring and costly exercise of forming stable internal representations of it. We store our representations of the world outside of us.

Levy extends Clark and Chalmers’ (1998) hypothesis to include speech as something external which has become part of our cognition. He believes that speech is an external tool which helps our thought, and thus should be viewed as part of the Extended Mind Hypothesis in the way that a tool we manipulate physically (such as a computer) might be. Speech enables us to externalise our thoughts and therefore manipulate, analyse and revise them. The notion of speech as something that should be viewed as external resonates with MacCaig’s suspicion of language (and, in particular metaphorical language), the way he often treats it as something unfamiliar, abstracting and strange,

something that we use but which also uses us, in the same way that the narrator in 'Memory, mother of the muses' seeks to control and coax his source of inspiration, but remains (at least in part) controlled by it.

The constant tension in MacCaig's work between the apparently internal (thoughts and ideas) and the apparently external (animals, landscapes and objects) offers an interesting parallel with the Extended Mind Hypothesis, since he frequently shows how reliant humans are on the notion of the external when formulating our own thoughts. The cabinet image in 'Connoisseur' is deliberately reductive. The mind is not really something that can be contained, though we might prefer to view it in that way. In fact, the cabinet must constantly be opened, must be filled with things 'hoarded' from the outside, things that never entirely add up to the gestalt they are supposed to represent.

6.6 Memories and mind-altering lines

In *Neuroethics*, Levy (2007) devotes a large section of his chapter on memory to debating the moral implications of the use of drugs like propranolol (a beta blocker) in potentially treating and preventing Post Traumatic Stress Disorder (PTSD). As he notes, early clinical trials of the drug have suggested that it could have a role in interrupting cycles of memory over-consolidation, ensuring that memories of traumatic events are not as vivid or as emotionally laden. Levy considers the possible abuse of a drug like propranolol which might also help to lessen emotions such as guilt and remorse and therefore interfere with a process that is (normally) adaptive.

It might be suggested that - as demonstrated by the poems quoted in this chapter - poetry often works in the opposite way to propranolol, enabling the writer (and in many cases the reader too) to over-consolidate memories, emphasising and dramatizing some aspects of an experience over others, enabling the author to dwell on them. Through poetry's treatment and imitation of memory, emotions can be amplified rather than lessened. In some cases, this might have a traumatic effect on writer or reader. As Poet S put it in interview, referring to the suicide of Sylvia Plath:

Poetry is therapeutic, but it is not. Alvarez pointed out that Sylvia had to write these poems, but they were also killing her...his view was that, at a certain point, if you're going in that direction, it will drive you over the edge...I had a number of traumatic experiences in early childhood that I worked through in some of my early poems...I grew up with a history of insanity in my family and

I've always been afraid of going insane, which I'm not...but it's very frightening. In a certain way poetry helps....If a poet chooses to go into their 'dark places'...the problem is when it becomes obsessive...You have to find a balance. If the poet decides that's going to be their theme and they're really going to go fully into that area, I think it can kill them, and that's what I've been very afraid of, actually. – Poet S

To amplify one's awareness of a certain memory, to part-fictionalise it, dramatise it and make it the focus of a poem, could involve an element of trauma. In his essay 'My Marmalade Passion, Or Remembering Proust's Gloves' (2010: *Magma* 46), poet and psychotherapist Alan Buckley suggests that poetry involves not just an inevitable but a necessary degree of trauma, just as therapy does:

Even if a poem isn't blowing our head off, it surely should be delivering at least a sufficiently strong tap on the skull to wake us from our necessary, ongoing trance. Whatever the poem's register or genre there has to be some quality of disturbance, of the reader being engaged by something at least partly familiar before being startled into a different or heightened awareness. Frost's dictum of "no surprise for the writer, no surprise for the reader" suggests that a similar process has to have happened during composition; the analyst Wilfred Bion said that if there aren't at times two frightened people in the consulting room, we will only find out what everyone already knows, and the same applies to the little room of the poem. (Buckley, 2010: 11)

Central to Buckley's argument is the notion that trauma involves an awareness of the interconnected nature of the world:

What happens during trauma is that the mind-body whole of the individual, and all its sensing, perceiving and processing functions, are suddenly overwhelmed with stimulus. It's not so much that possible death makes our life flash before the eyes; rather, in that moment we become totally aware of our environment and our place within it. We are given an almost unbearable dose of reality where everything is connected, which means that despite the mind's best defences the trauma is constantly reactivated; the individual is continually guided back towards the traumatic event....Extreme interconnectedness is, of course, also part of the poet's stock-in-trade. (Buckley, 2010: 15)

He cites case studies in which patients have seemed to adapt well to a traumatic event that they have experienced (such as a near-fatal heart attack) and have ‘moved on’ from the episode, only to feel anxious and experience panic attacks when exposed to certain stimuli that connect in some tangential way to the original episode – the remembering is bodily.

A poem, Buckley believes, can stimulate a similar kind of remembering and associated trauma since ‘extreme interconnectedness’ is also the province of the poet. Lest the claim that poetry can traumatise seems like an exaggeration, Buckley qualifies his notion of ‘trauma’, suggesting that it operates as a continuum:

Trauma is something that exists on a spectrum; anything that suddenly threatens our perceived sense of self-in-the-world can lead to an overwhelming flood of perception and stimulus. Not everyone will have been in a train crash or fought in a war, but most people will have an experience of, say, being small and momentarily losing sight of one’s parents in a crowd – which for a child is as much a ‘whole-world’, life-threatening experience as (a) heart attack. This means that it’s possible to talk about trauma and traumatic process on a very small scale, and my argument is that somewhere within every successful poem there’s at least one moment that mildly traumatises us, that triggers our deepest knowing of how the world may be unmade in an instant. Even if it appears to be re-made in the following moment, we can’t claim that nothing has changed; the poem, which draws us in with the illusion of being a fixed event, has given us a glimpse of how the world is both utterly interconnected, and constantly in flux. (Buckley, 2010: 15)

Thus poetry can unsettle us, traumatise us even by mirroring our processes of remembering, something that John Burnside and Paul Muldoon in particular demonstrate through their mimicry of some of these processes for poetic effect, leaving the reader sometimes doubting, sometimes dislocated. Meanwhile, Norman MacCaig cheerfully parodies the flimsiness of human memory, demonstrating how consciousness can extend far beyond the limits of the body and the presumed bodily location of the mind. All three writers demonstrate how our worlds – and even the coherent narratives we attempt to construct from them – are ‘constantly in flux’. In this, they prompt us to engage in a process of ‘re-remembering’ (Raine, 2000) as we read.

6.7 Summary

In this chapter I have demonstrated how the work of the three poets discussed in my thesis coheres around themes of memory and self-identity, creating a dialogue between the work of all three and the work of other poets as well as neuroscientists and psychologists studying memory function and fully illustrating the principle of dialogism I outlined in Section 2.8 of this thesis. In Chapter 7 I will draw together the different dialogues this thesis has started between neuroscience and poetry around the theme of 'qualia', and suggest starting points for further research as well as reflecting on the scope and necessary limitations of this interdisciplinary enquiry.

Chapter 7: Conclusion

7.1 Summarising the dialogue

In this thesis, I have explored how neuroscientists and contemporary poets often access the same fundamental questions about the relationship between the brain and consciousness in their work, from the ways in which we use language to represent reality (Chapter 3) to the different (and sometimes pathological) ways we make connections between concepts (Chapter 4 and Chapter 5) to the nature of memory and self-identity (Chapter 6).

In this concluding chapter, I will draw these strands together, summarising the argument made in this thesis and suggesting that poetry and neuroscience offer different ways of thinking about the notion of ‘qualia’ (Section 7.2) and mapping unique perceptual experiences. Returning to the analogy that opened Chapter 1 – Coleridge’s image of the mind as a ‘water insect’ – I will suggest that poetry can offer particular ‘diagrams’ of qualia. For this reason, creative writing has become a particular point of interest for neuroscientists working on fMRI studies in the past year. I will briefly discuss two recent studies that have attempted to represent the brains of writers in the process of writing and suggest how these experiments, though limited, might provide opportunities for future research if combined with the framework adopted in this thesis.

The parameters of this thesis have been to set the work of a limited number of contemporary poets (Section 1.3) in conversation with key texts in neuroscience (Section 2.3) in order to establish a dialogic relationship between them (Section 2.10) and to make connections between the work of all the writers in the study (as exemplified by Chapter 6). I have structured this dialogue around key issues explored in the work of the poets and the work of neuroscientists, chiefly considering metaphor (Section 3.4), embodiment (3.5), hemispheric duality (Section 4.3), patternicity (Section 4.5), apophenia (Section 5.3), negation (Section 5.4), free will (Section 5.6), and memory in relation to the concept of self (Chapter 6). I have argued throughout that setting neuroscientists and poets in dialogue around these key issues helps to broaden our readings of the poets and also better illustrate the issues on which neuroscientists focus.

In Section 7.2, I will suggest that these dialogues have all centred around the different ways the poets and neuroscientists in question attempt to represent ‘qualia’ – the immediate and indefinable qualities of sensory experience - in their work.

7.2 Poetry, neuroscience and qualia

According to Ramachandran’s definition (2011), qualia are a particular type of consciousness:

...the immediate experiential qualities of sensation, such as the redness of red and the pungency of curry... Qualia are vexing to philosophers and scientists alike because even though they are palpably real and seem to lie at the very core of mental experience, physical and computational theories about brain function are utterly silent on the question of how they might arise or why they might exist.’ (Ramachandran, 2011: 248)

Thus qualia are both common but mysterious, difficult to precisely define or explain. Ramachandran also notes that qualia and the self are different, yet ‘the notion of qualia without a self experiencing / introspecting on them is an oxymoron’ (Ramachandran, 2011:249). Qualia require a perceiving consciousness to give rise to them as unique experiences but they are not the totality of the self.

Ramachandran’s definition is echoed by McGilchrist (2009) throughout *The Master and His Emissary*, whenever he discusses the relationship between the mind and the brain:

Is consciousness a product of the brain? The only certainty here is that anyone who thinks they can answer this question with certainty has to be wrong. We have only our conceptions of consciousness and the brain to go on; and the one thing we do know for certain is that everything we know of the brain is a product of consciousness. (McGilchrist, 2009: 19)

The reason it is so difficult for neuroscientists (and, indeed, anyone else) to discuss the particular aspect of consciousness that Ramachandran calls ‘qualia’ is because that reports on qualia often depend on analogy:

All attempts at explanation depend, whether explicitly or implicitly, on drawing parallels between the thing to be explained and some other thing that we believe we already understand better. But the fundamental problem in explaining the experience of consciousness is that there is nothing else remotely like it to compare it with: it is itself the ground of all experience.' (McGilchrist, 2009: 19)

Thus, as Ramachandran's quote implied, qualia fascinate neuroscientists and underpin many of the questions they engage with about the nature of individual experience and perception, but they are difficult to discuss in scientific terms. As I have shown in this thesis, lyric poetry can offer a particular 'diagram of consciousness' (Section 1.1, Section 2.2). This makes it uniquely placed to represent aspects of qualia that interest neuroscientists so much. Poets can reflect on the mind's experience of itself as well as on objects of perception, as Norman MacCaig does in his poem 'An Ordinary Day'

I took my mind a walk
Or my mind took me a walk –
Whichever was the truth of it....

(MacCaig, 2005: 164)

In this poem as in many others, MacCaig is able to represent a kind of provisionality - 'whichever was the truth of it' - which neuroscience cannot access. A poem can present us with several possible alternative realities at once, an idea I have discussed in relation to paradox in the work of Norman MacCaig (Chapter 3), duality in the work of Paul Muldoon (Chapter 4) and parallel and negated worlds in the work of John Burnside (Chapter 5). Neuroscience seeks to present single theories. Poetry often seeks to present multiple possibilities.

Thus poets can differently represent the paradoxical, contradictory and unique aspects of qualia that so fascinate neuroscientists like Ramachandran, satisfying McGilchrist's demand for an appreciation of paradox (See Section 3.7). To return to Coleridge's image of the mind as water insect, discussed at the start of Section 1.1, poetry can therefore attempt to explore 'the mind's self-experience in the act of thinking.' As

MacCaig's narrator notes at the end of 'An Ordinary Day', it can discuss 'the nature of the mind / and the process of thinking' (MacCaig, 2005: 164).

Throughout this thesis, I have examined the different ways that poets and neuroscientists try to access particular aspects of qualia, from the experience of trying to formulate linguistic descriptions of objects and landscapes (Section 3.4), to the experience of embodied cognition (Section 3.5), the experience of 'patternicity' (Chapter 4), the pathological experience of apophenia (Chapter 5) and the different qualia associated with memory (Chapter 6). I have shown that contemporary poets and neuroscientists both seek to discuss these remaining mysteries, albeit in different ways. As I have suggested above, poetry focuses on representing these unique experiencing (acting as it does as a 'diagram of consciousness') whilst neuroscience seeks to explain the mechanisms of their origin. But any explanation is enriched by a representation of the phenomenon in question and a reading of any representation can be broadened by a possible explanation. Thus the dialogue between neuroscience and poetry is a productive one.

In Section 7.3, I will briefly review two recent attempts to 'explain' creative processes of reading and writing which lack this element of 'representation' offered by poetry. In Section 7.4, I will explain how the dialogical framework put forward in this thesis might enrich future scientific studies.

7.3 Recent fMRI studies of relevance to this thesis

During the writing of this thesis, there have been two key attempts to structure fMRI studies around the process of writing and the process of reading poetry respectively.

Firstly, research by Zeman et al at Exeter University in 2013 attempted to contrast the 'neural correlates' for reading poetry and prose, concluding that the emotional power of texts like poems is related to activity in a region of the brain associated with responses to music.

Zeman et al used fMRI technology to scan the brains of subjects while they read pieces of poetry and prose in an attempt to identify the differences between their reactions.

They used

...highly experienced readers (university lecturers and postgraduate students of English literature) and selected passages of three consistently contrasting kinds: i) prose (both 'functional' prose, for example passages from a heating system installation manual, and 'evocative' prose, from the opening passages of novels); ii) poetry (both accessible and more difficult sonnets); iii) self-chosen, favourite, passages of poetry, which subjects considered especially moving and/or personally important.' (Zeman et al, 2013: 3).

The sample consisted of 13 faculty members and graduate students from the Faculty of English at Exeter University. Of the 10 participants were lecturers, 1 a postdoctoral researcher, and 2 final year PhD students.

Zeman et al suggested that poetry activates areas in the brain beyond the standard 'reading network' found in the right hemisphere and in the linguistically-dominant left hemisphere. In particular, poetry activates an area of the brain associated with introspection. It also seems to activate the right anterior temporal lobe, a region linked to coherence building, and areas connected to autobiographical memory and even moral decision-making. Crucially, poetry elicits a response similar to listening to music, more so than prose.

As I have argued previously (Mort, 2014), the comparisons attempted by Professor Zeman and his colleagues have methodological limitations (not least the difficulty of making sample texts comparable, the problem of only using experts as research subjects and the role individual linguistic variables might have played), which Zeman acknowledges:

Whilst our method therefore allowed us to examine the reading of poetry and prose naturalistically, the passages from the two genres differed from one another along several dimensions. These include emotionality, familiarity, 'literariness', figurativeness, number of content words, the extent of semantic associations between words, word count, and sentence length. While we controlled for some of these variables, in particular familiarity and word count, further investigation of the individual role of each of these factors is required to isolate the processes underlying our findings. (Zeman, 2003: 20)

Despite these limitations, the study represents the first attempt to identify the distinctive features of brain activation associated with poetry in comparison to prose and to assess brain function while subjects read freely from passages of several kinds.

The second piece of recent relevant fMRI research by Lotze et al (2014) used a custom-built writing desk compatible with fMRI scanners to look at the brain activity of 28 volunteers as they first copied out a piece of writing, then continued a short story in their own words, making up the piece of writing themselves for about 2 minutes. Lotze et al found that some regions of the brain became active only during the creative process, but not while copying. During the creative sessions, some vision-processing regions of volunteers became active, as if they were 'seeing' the scenes they wanted to write. They compared the results from this group with results obtained from doing the same experiment with writers on a competitive writing programme at the University of Hildesheim. When they were planning their writing, these 'professional' writers activated visual areas of the brain, but during creative writing itself the brains of expert writers showed more activity in regions involved in speech, as if they were narrating their stories with an inner voice rather than seeing them like a kind of film. The 'expert' writers also activated the caudate nucleus when they began their creative pieces, whereas the novices didn't. This is an area of the brain which plays an essential role in the skills that come with practice, including activities like board games.

Again, there are methodological problems that might limit the validity of Lotze et al's findings. As I have argued elsewhere (Mort, 2014), it is possible that the activity that Dr. Lotze saw during creative writing could be common to writing in general — or perhaps to any kind of thinking that requires more focus than copying. A better comparison would have been between writing a fictional story and writing an essay about some factual information. Likewise, the idea that students on a writing MA programme represents 'experts' could be challenged and it might have been more appropriate to compare the initial control group with published authors.

As well as the methodological limitations outlined above, I will argue in Section 7.4 that these recent fMRI studies by Zeman et al and Lotze et al are weakened by a failure to account for the context in which the research took place or to incorporate the reflections of creative practitioners themselves, a principle which has been at the heart of this thesis (see Section 1.4).

Similarly, however, my thesis lacks the kind of empirical, systematic approach undertaken by these fMRI studies and its ambitions have been restricted to the analyses of texts and interview data in order to set up a theoretical framework for the dialogue in question. I have only attempted to engage with neuroscience on a purely theoretical basis (often drawing on psychology and cognitive science in the process) and have not attempted to turn any of my ideas into research questions which might offer the potential for empirical investigation in the laboratory – for example, it might have been possible to frame some of my suggestions about the effect of a poem like Andrew Waterhouse’s ‘Not An Ending’ (see Section 6.2) into empirically testable assertions, but such an undertaking was beyond the scope of a three year research project. It might equally have been possible to use some of my interview data to frame hypotheses about the writing process which could have been empirically tested. Again, this was beyond the scope of my thesis but I believe this offers potential for future research combining quantitative and qualitative approaches. In the following section, I will suggest how an approach which situates new fMRI studies within the kind of dialogical approach advocated and attempted in this thesis might provide useful avenues for future research.

7.4 Evaluation of this study and suggestions for further research

The parameters of this thesis have restricted it to the study of key texts from neuroscience, poetry and literary criticism and to the analysis of qualitative interview data (Section 1.4). My aim has been to identify and illustrate areas of common interest between neuroscience and poetry, establishing the framework for a dialogue between the two which can be developed in future research. A future enquiry might attempt a collaboration with researchers working on fMRI studies of the kind attempted by Zeman and Lotze and incorporate the analysis of quantitative data drawn from fMRI scans of, for example, poets at work in the process of composition (adapting Lotze’s model to look at poetry composition rather than creative prose).

However, I would contend that fMRI studies such as Zeman’s or Lotze’s need to be situated within the kind of dialogical framework established by this thesis in order to yield useful results. To create a fuller picture of the experience of composition, for example, it is not enough to just look for areas of neural activation (see Voytek, 2012,

discussed in Section 2.2). This data should be compared with qualitative data drawn from poets' own experiences of the process of composition to identify correspondences or differences. Willems (2013) highlights the problems that can be raised by experimental control: 'am I really a student of the neurobiology of language when I look at brain patterns generated as participants see letter strings flashed on a screen and are instructed to press a button?... We're left with an uneasy feeling: of course, understanding words is part of language comprehension, and of course, watching alternating black-and-white rectangles can be called 'visual perception'. But it's far from the sensation I have when typing this piece, or when looking around my office. It feels like we've thrown out the baby with all the confounding variables.' (Willems, 2013: 218). He does, however, sound a note of hope for the future:

It is encouraging, however, to see that more and more researchers are trying out and developing new technologies for data analysis of less constrained language stimuli. One example methodology is inter-participant correlations, in which the time course of the fMRI BOLD signal is correlated between participants, in order to identify brain areas that are responsive to a story or movie in a similar way across participants (e.g. Kauppi et al. 2010, Lerner et al. 2011, Nummenmaa et al. 2012, Wilson et al. 2008). It is still early days, and the full potential of these new developments has not been explored yet, but the important message is that modern techniques allow one to go beyond the traditional time-lock-and-average style of data analysis, freeing up room for more naturalistic stimuli to be used while retaining the necessary amount of experimental control. (Willems, 2013: 221)

Paying close attention to poets' own accounts of the creative process would also help scientists like Lotze to frame more precise research questions: for example, it would be possible to interview a range of poets about the different experience of composing a poem in a strict form (such as a sonnet) versus writing in 'free verse' in order to frame a research question about whether these different forms might correspond with different patterns of neural activation. Attending to qualitative data drawn from interviews with writers would make researchers less likely to make assumptions about what a piece of creative fiction is (see the discussion of Lotze's methodology in Section 7.3).

Through an exploration of the work of three poets and key texts in neuroscience, this thesis has demonstrated the potential for poetry and neuroscience to enjoy an ongoing dialogue, since both are concerned with representations of qualia, whether through patterns of neural activation or patterns of words on paper. I have framed this dialogue by looking at the work of MacCaig, Muldoon and Burnside and how their poetry shares an affinity with neuroscientific interest in hemispheric duality, embodied cognition, patternicity, apophenia, free will and memory processes. Throughout, I have involved a selection of contemporary poets in my research, interviewing them about their own experiences of the writing process and seeking their opinion about the potential validity of a dialogue between neuroscience and their art form.

The dialogue I have established is necessarily a tentative one and I have made no attempt to add an empirical or quantitative dimension to my work. At times, I have drawn more heavily on my knowledge of contemporary poetry than on the newer field of neuroscience. But, as I have argued in this concluding chapter, my research has coincided with a growing interest in creative processes from neuroscientists working with fMRI in the laboratory. Scientists like Zeman, Lotze and others seem keen to quantify questions about poetry and how we read and write creatively. Neuroscientists excel at operationalising creativity, turning questions about the creative process into hypotheses and research questions that can be empirically tested. The risk of this approach, as Willems (2013) notes, is that they may not always be asking the most appropriate questions. Here, I believe, a qualitative approach can be of use. I believe the potential exists for the notion of dialogicality explored in my thesis to inform future studies of creativity to better situate scientific enquiry in cultural and experiential context, taking the opinions and experiences of practicing poets into account. This thesis has established some of that context for future research and emphasised that any attempt to connect neuroscience and poetry must be a genuine dialogue.

Appendix 1: Transcripts of interviews

This is a sample of 6 interviews with the poets who were included my study. Other interviews are available as MP3 files.

Interview with Poet H

HM: I'll start by asking you a bit about the relationship you think you have with your own poems – how do poems connect to the people who write them?

Poet H: If you're a writer, you go to your own poems and read them out loud to find out if they're working. In that sense, you have the experience of being with them or in them, but at other times the poem seems rather dead to you. And I think it's very important not to respond too much to that feeling of it being dead – it might just be that you're tired, for example. That made me think about the difference between the response a poem gets and how it is achieved. Wittgenstein argues that it's not causal, you can't create a causal link between the work and the response. How a poem affects you is a response, but it is a non-causal relationship, which is quite difficult to conceptualise I think.

HM: And presumably, a relationship mediated by the brain and cognition?

POET H: It must be in the sense that there is mental response, there is cognition taking place. But it seems to me that you train yourself to be attentive to things in poems that other people can't hear or see.

HM: And do you think there's something particular to the way poets read poems that's different from the way a general readership does?

POET H: I suspect that there must be. I suspect not all poets read poems in the same way or even have the same idea of what a poem is. I'm struck by the varieties in people's sense of what the orchestration of a poem might be, the interrelations between

the sonic structures and the meanings indicated... some people's poems are much more like complex interplays of sound, others seem to me to have a much less 'heard' internal structure.

HM: What's your own take on that idea of orchestration?

POET H: I don't think there's any limit to the sensitivity you can develop about how carefully orchestrated something is. And if you over-orchestrate it, it starts to sound corny, over-managed. It sounds a bit like Leonard Bernstein – it's all loud, the orchestra is shouting at you. So there's also the art that conceals art. It's beautifully attuned but you don't notice it.

HM: In my thesis, I'm interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena.... Do you think poets are people who connect more than others?

POET H: No. I don't think they connect more. But I do think they make more connections which is not the same thing, is it? That's a new thought for me. It seems to me that the poet doesn't necessarily need to feel compelled by the connections they make. I noticed you use the turn 'as if' in your poems quite a lot and I do it myself as well. I try to stop myself using the 'as if' turn towards the end of a poem as a kind of counter-factual idea to drive the poem. Muldoon is full of counter-factual assertions and assumptions too. They allow you to make a connection that you don't necessarily believe in, to connect without connecting. I think if you were compulsively connecting, it might be a disease.

HM: That's a very interesting distinction. So you think poets don't necessarily have to believe in their own forged connections?

POET H: No. They think with them. But they aren't necessarily driven by them.

HM: Does this relate to John Searle's distinction between pretended and 'real' illocutionary acts, perhaps?

POET H: Yes, but it's also about freeing thoughts. I often think people must find me very annoying in business meetings because I will just have thoughts in order to reveal what I'm actually saying. I say things to try to reveal the point. I make 'as if' type connections in order to think about or reveal what's going on. I'm not believing it, I'm just using it as a way of having a thought about it. That process releases something. Whereas if you actually believed or were compelled by something, it would be restricting.

HM: In my thesis, I'm looking at Norman MacCaig's ambivalent relationship with metaphor – in his poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?

POET H: I don't have any suspicions of language. I was talking to someone the other day who said they had a good psychotherapist because they enabled her to trust her own feelings. And I said, 'well I listen to my own feelings but I don't trust them'. I use them as a sort of barometer, but they aren't what I think with, they're what I use in order to think. The same is true about language. I don't believe in it in such a way that I think its letting me down, I don't believe that there's a world of thought and feeling out there that I can only capture through language.

I never write down ideas for poems, not because I'm a complete believer in Mallarmé's statement that poems are not made with ideas but with words, rather I think ideas have to come from words, not the other way round. You find the ideas coming out of the words. Veronica Forrest-Thomson took Wittgenstein's notion that 'the limits of my language are the limits of my world' and I think some poets see their job as getting beyond those limits....But I don't think Wittgenstein means that, I think he means there is no other side, there are no thoughts or feelings I could have that are separate from language, there is no other side to be on. When I started writing and had read bits of Ezra Pound and the Imagist manifesto and these sorts of things, I thought 'beware of

similies?...but Roy Fisher noticed in a piece he wrote about me that my work was full of what he called embedded metaphors.

HM: By which he means larger thematic connections in the work...?

POET H: I think he means it's all done by metaphorical thinking. Even though you might write about the snow or the slippery pavements, you're not really writing about those things, you're simply borrowing a set of surroundings in order to be able to write thematically and so all of the surroundings have become metaphorical. You're not thinking 'A is B', you're just describing the surroundings and they're becoming metaphor.

HM: It's not so much a process of construction as we might assume?

POET H: Metaphors are always going to break down. The whole point is that they're only true in a certain light. Metaphors are exact in the sense that you can say the moon is like a piece of cheese but they're inadequate in the sense that the moon doesn't actually smell like a piece of cheese.

HM: I suppose this links to Lakoff and Johnson's work on conceptual metaphor, the notion that metaphor is a figure of thought rather than a figure of speech...

POET H: Sometimes we talk about dead metaphors, but that's not quite right because often they're very alive, it's just that we've stopped noticing them. The trouble with sentences like 'Socrates is a man' is that they might be true but you can't do very much with them. Metaphors are more to do with reconfiguring thought in a different way. I think, again, Wittgenstein was right -If it's true its tautological, so if it's true it's not worth saying!

HM: Do you have to be in a particular mental state to write poetry or can you will that activity?

POET H: No, I don't think I can. I don't want to sound too mystical about it. I don't like to talk about the magic of poetry, not because I don't think it does something

special but because I don't want people to think it's too refined or rarefied, I want them to get involved. Most of the time, I can't write poetry, 99% of the time I can't or don't. I think poetry appears in the gaps of life. Times when you are in transit, perhaps and that gives the opportunity for the mind to drift a bit. I can suspect that I'm going to be in the mood to have the kind of thoughts that might lead to me writing a poem if I go to a place I'm very fond of or where something very dramatic has happened. I suspect the triggers of the place plus the memories of the past will mix together and set something off. The poem I read yesterday about Amsterdam just came from me thinking 'well am I looking for you or am I looking for youth?'

HM: So it's a linguistic association that also stands for something else?

POET H: Yes...Just a tiny slip of the 'th' on the end of the word. The whole poem is built out of that little jump.

HM: Which is the kind of thing Paul Muldoon is hyper-interested in a lot of the time, isn't it....

POET H: Maybe everybody who writes poems is to some degree. You can't generalise too much but I think lots of poets are likely to be set going by something verbal like that and it becomes a kind of synecdoche for a whole range of experience and emotions.

HM: The sense of the entire world being connected....?

POET H: Yes and the sense of possibility. In my book about coming back to England, the world possibility appears a lot. It's very important to creativity I think, just to have the feeling. There isn't a correct word you're looking for, because if there was your work would have a mono-linear trajectory. What you need to be in a creative mood is to have the feeling of branching out. There have to be verbal possibilities, not a verbal route or a destination.

HM: You don't think the brain is necessarily useful to understanding how we read... can knowledge of it ever be useful to how we write poetry, does it diminish the mystery of the creative process too much?

POET H: I don't know much about cognitive science or cognitive anything really but I spent an evening once talking to an experimental psychologist about the problem of the divide between complex decisions and an underlying binary code, the fact that a synapse is either firing or it isn't. She said, if I remember rightly, that they couldn't currently theorise the relationship between the two. I may be wrong. But one of the things that concerns me is that people might try to produce causal explanations of brain activity and responses, as if we could say when anybody's brain is responding in these kinds of ways in their cerebral structure that that was an aesthetic experience.

HM: Because that would be reductive.

POET H: An aesthetic experience requires some kind of monitoring by the person who is having it. It needs to be understood by the person having it in the terms of art.

HM: I guess there might not have been too much attention paid to this in the field of neuroaesthetics, perhaps, the idea that it's not an objective phenomenon when someone has an aesthetic experience, they've got to ascribe some kind of meaning to it.

POET H: They've got to know what they're doing. I don't think the brain 'knows'. It's not a knowing agent.

HM: Does that point towards a kind of Cartesian dualism between the mind and body?

POET H: I'm not sure you would end up with Descartes. There is a problem with the mind and the brain, of course, in that the mind doesn't exist but the brain does. The brain doesn't think, the mind thinks. Or is that just a historical conceptualisation, is it the brain that should be said to think? I don't really mind whether you say the brain is thinking or the mind is, but the idea of the 'I', the subject is a conceptualisation as well.

HM: The only way I'm able to handle this distinction is to visualise the mind as the brain's capacity, to think that the brain enables the mind....

POET H: You could say that when I'm knitting it's my hands that are doing the knitting but of course they're not. It's more than that. You couldn't knit if you didn't have hands but it isn't hands alone. It's the difference between something being necessary and something being sufficient. The brain is necessary for thinking but not sufficient.

HM: And the brain is necessary for writing poems but not sufficient?

POET H: Definitely not sufficient. And the danger of certain kinds of experiment is that they ignore that. My friend Phil Davies up in Liverpool has been wiring people up and getting them to read a bit of Shakespeare, a sonnet or an extract from King Lear or something to see if you can observe the mental activity that occurs when someone has taken in a pun, for example. I'm not sure what he's found out. I think he's trying to prove that reading Shakespeare is good for the brain. I don't think I really need the proof. I already know. We've been doing it for a good reason. And then a scientist comes along and shows that, yes, we've been doing it for a good reason. Did we need to know that?

Interview with Poet A

HM: In my thesis, I'm looking at Norman MacCaig's ambivalent relationship with metaphor – in his poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?

Poet A: There are two approaches that sound contradictory but they're both true in my experience. One is that language is always inadequate in the sense that no poem completely evokes or encompasses what you have a hunch it should, otherwise you wouldn't write the next one. Robert Graves once in a Paris Review interview said 'if we wrote the perfect poem, the world would end'....what drives you from poem to poem as a reader as well as a writer is the idea that no poem can ever encompass what you think a poem should be able to. So in that sense language is inadequate.

There's another sense in which I find it a problematic idea because the idea of language being inadequate or a metaphor being inadequate suggests that it's something inadequate to a certain task and I don't know what that task would be because my practice as a writer is fundamentally exploratory. So I could understand an idea of the inadequacy of language if I had a sense that there was some experience I wanted to capture in vivid detail and I knew what the experience was and I was just trying to find the language to adorn it, the language that would create a vessel to carry it into the mind of a reader. But that's not the way I write. I don't have a preconceived sense of what I want a poem to contain or evoke.... It's about the rhythm of a particular line, or two images coming together, or half a memory combined with something you've just read or seen, and the chemistry between these things makes you think there might be a poem in it. You make something rather than express it, it seems to me. If you think of the paradigm of a poem as someone making rather than expressing something, then I'm not sure what inadequacy would mean.

HM: Yes. The thing that's so fascinating to me about MacCaig's approach to metaphor is that he's always complaining that metaphor doesn't come close to expressing the world but at the same time he's got this gift for very precise, illuminating metaphors.... He doesn't trust language in a way but he also

recognises that, in a sense, it's all we have. It seems you're saying it all depends on the goal...

Poet A: Yes, that's right: what's it inadequate for? There may be a psychological element to this, that some poets do have quite a strong sense of what the poem needs to live up to or needs to evoke and even poets in the so-called 'confessional' tradition might have that: there's something you want to capture about the person you're in love with or the moment when you had a particular conversation and if the metaphors don't live up to something that will conjure that moment as it was then they are inadequate. But I just don't write like that. I never know what I'm trying to say until I fail to say it. It's an exploratory process built on metaphor. So in a sense metaphors can't be inadequate because they're all I've got to make this thing and if I make it in a way that seems interesting then hopefully it will go on to surprise a reader and surprise me.

HM: Can knowledge of the neural or cognitive processes that might underlie creativity ever be useful, do you think or would knowing about these aspects of process diminish the mystery of the creative process too much? I'm interested in whether there are any aspects of the writing process that you find mysterious.....

Poet A: I think a lot of poets are quite superstitious about this, about knowing too much about 'how'. There's a story I read in an interview where Paul Muldoon talks about reading a TLS review of one of his early books and the reviewer was so astute and the review was so detailed he said at one point 'and now I'm going to show you how a Paul Muldoon poem works'. And Paul Muldoon describes reading this and getting about two sentences in and thinking 'bloody hell, he's right' and throwing the paper across the room because the last thing you want to know if you're Paul Muldoon is how a Paul Muldoon poem works, so some poets are superstitious about an element of mystery. Heaney always talks about 'the trance', this numinous word to describe the moment when you're working on the poem. He's said before 'I never write when I'm not in the trance' and when you're in the trance you don't notice time passing...I think most people who write know something about that, that concentrated period of being locked in the poem. What aspects of it are mysterious I'm not sure about. Mystery is a slippery term because there's no question that poems, when they're working at their best, surprise the poet. Every poet who has been writing for years knows that feeling

where you write a poem and it's better than a poem you could have written. Even if that feeling doesn't last, you've pushed it further than you thought you could. The way in which connections come to you, that feels mysterious, how could those connections have come to you? It's like in Auden's 'The Fall of Rome' where you've got these descriptions of a civilisation that's much like ours and then suddenly you're on the tundra and you've got these reindeer moving silently and very fast and you read that poem and think 'how the hell did the reindeer come to mind at that point?'. It's one of those tangential connections that, once you see it, is inescapably right. Of course it has to end with reindeer, unseen, but there's no apparent connection. All that seems mysterious but there are explanations from neuroscience – hyper-association. The fact that it's couched in scientific language doesn't make it any less mysterious to me. You don't have to think that your poems are coming tapped from some divine source in order to think it's a mysterious process. I find the notion of some people's brains being wired for a kind of hyper-association equally mysterious and not very full as an explanation either, it seems like another kind of mysterious language to describe a mysterious process. You think it's nailing something down because it's scientific language but it doesn't seem to get any closer to why the reindeer appear at the end of 'The Fall of Rome'.

HM: Yes. Scientific discourses are just another level of partial explanation....

Poet A: Exactly. The process still seems mysterious. You could get two people talking about that Auden poem and one could say he was just given it as a gift and he wrote it down, the other could say 'no, he was hyperassociating'...they seem equally mysterious and strange to me.

HM: I'm also interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena.... Do you think poets are people who connect more than others? Is poetry a kind of glorified connection-making?

Poet A: Glorified connection making sounds reductive. I think it is a form of connection making but I equally think that of great film makers, great visual artists,

great musicians, so I don't think that's unique to poetry. Poetry works uniquely and particularly intensively with metaphor and in a short space on the page those connections can seem more dramatic and jarring than they would in a longer form like a movie. I think its part of the creative process, I do think that lots of poets have comments on this – there's that thing from Eliot about having an idea for a poem and actually its not that idea that makes a poem, its that idea combined with something else that you didn't think was connected. Anthony Hecht has a great essay as well about a poem about Vietnam he wrote in the 60s and the connections behind that. He describes it...he went to the window and there was snow, he turned the radio on, he knew there were body bags coming back from the war, the randomness of the snow, his child was playing down there...he suddenly thought will my child ever have to go to war? And what are the chances of a deep snow fall overnight and none of us knew about it? The idea of chance and determinism...and suddenly out of all this, the poem comes. The great poems are often the ones that make the most surprising leaps and connections.

Are poets people who make too many connections? Without doing exhaustive studies, its hard to say how much you can separate poets from other people. I think some of things that I've observed in myself and other poets I know very well suggest that that might be the case. But I'm wary of making a plea for poets as a race apart with a special neurological set up. Famously, a lot of poets are desperate hypochondriacs. Now there's something about hypochondria that's to do with connection making and catastrophic thinking...there's something about a hypochondriac that immediately puts one thing together with a set of other symptoms and creates a self-diagnosis....I'm a terrible hypochondriac so I'm speaking for myself here, but I know lots of poets have this way of connecting.

I'm just wary of it because there are all sorts of dangers in the neo-romanticised view that 'poets are born not made'... I'm not saying there isn't such a thing as innate talent, but if one argument from this line of reasoning is that poets have a particular neurobiological set up and if you've got it you're likely to be a poet but if you haven't got it you won't succeed because you're not going to make these same connections, there'd need to be an awful lot of proving to go that far.

HM: There is a lot of interest in the uniqueness and specialness of all artists but, I think, poets in particular and there's a huge amount of literature about the link between poetry and mental illness, for example, the idea of the poet as visionary. It seems to me that those discourses can sometimes be about creating a special status for this activity that, at heart, none of us fully understand.

Poet A: That's right. Most of us who end up writing poetry lifelong feel that it chose them rather than them choosing it. Everyone writes poems at infant school because they have to, but for some people that connection is electrifying and you never lose it. You might walk away from it for a while but you come back to it. The way that poets talk about this, 'I'm much better company when I'm writing, I drive my family mad if I haven't written for a few months....', there's this sense that it's a compulsion, something that has to be fed.

HM: Is that something that's true for your own practice?

Poet A: Yes. I mean I do have periods when I can't write but it doesn't do me any good and I certainly feel like there's a compulsion. And it has to be poems. I write in a number of other forms but that doesn't sort me out, I have to be writing poems sometimes.

HM: Do you have to be in a particular 'mental state' (for want of a better expression) in order to write poetry?

Poet A: That's tricky. I used to think I did. Like a lot of poets I struggle with depression and I used to think I was at my most fruitful in the midst of that. In recent years I've tried to kick against that. Especially with a project like (X)⁵ that contains 150 poems, I found certainly in the last year of it I was writing across all sorts of moods and I could write on trains, something I'd never been able to do before. I think it's because I was so deep into the project that it was almost like picking something up again rather than starting again every time. So recently I've become more confident that I don't have to be in a particular mood. Sorry, I'm not very clear about that.

⁵ Names of collections have been removed throughout to preserve anonymity.

HM: No, that's very clear. I wonder if the interest in states we have to be in to write links to what you mentioned about superstition, the idea that if you knew where a poem came from....

Poet A: You'd go there.

HM: Yes, but also perhaps that you're reluctant to go there because you'd be limiting your own practice.

Poet A: Exactly.

HM: I've often thought myself that poems just 'arrive' but, actually, the times I have just tried to sit down and write poems, it can be just as an effective way of getting poems written. So perhaps we're just very superstitious about our own writing. And have to be, do you think? I don't know, why are poets so worried about writers' block and not writing?

Poet A: I think it's partly because it doesn't feel as systematic as it would to write a novel or a play. I've written two novels and had a sense of a glimpse of what it must feel like to be a different kind of writer.... A lot of novelists might write between 8 and 1, for example. I don't know any poets who can work like that. They do feel like gifts that come to you and you don't always know what to do with them. I suppose that does make you superstitious because if a lot of them come as gifts and you've got to hold that connection in your mind or write it down or lose what interested you then you start to worry what happens if that stops coming, what happens if I don't get that.

HM: Of all the genres you've written in, what is it about poetry that keeps you coming back to it do you think?

Poet A: It beats all the others hollow. I love writing in these other forms but there's no comparison. They all use language but poetry's closer to music than it is to novels, I think....It's something about how difficult it is, I think. How exciting it is when something seems to be working, however fleetingly. Anyone who works with language is working with metaphor but poetry is the finest most heightened use of metaphor and

therefore if you're interested in and passionate about language then poetry is about as far as you can take it....that doesn't mean there's a conscious metaphor-making in the writing process.

People have forgotten how to read poetry because actually....the novel and the film have become such dominant art forms that we're used to reading each text as if it were a novel, which means you don't read the first chapter 6 times and then put it on the shelf, you read it right through and then you put it away. People think a poetry book has to be read like that. You would never dream of listening to a CD like that. Music has to be listened to repeatedly until it works its way into your brain. Poetry should be read like that."

Interview with Poet G

HM: In my thesis, I'm looking at Norman MacCaig's ambivalent relationship with metaphor – in his poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?

Poet G: I think MacCaig is doing one of his special 'pretends' there. You don't get to be a master of metaphor without having a special awareness of its use of dissimilarity.... Things are not 'like' other things in the sense of being identical to them, they're just dissimilarly 'like'... there's often an emotional attunement between the two elements.... It's not just an act of recognition in the way you might recognise someone and say they look like someone else, that's not what you're aiming for with metaphor, you're actually performing a kind of act of translation that has to go in both directions. For me, metaphor is a movement between one language and another language. You've got the language of the world I'm talking about and the language of poetry which is trying to talk about both that world and the process by which you talk about that world.... I think of it as being almost an act of translation.

HM: You're not meaning things in a literal sense....?

Poet G: Yes, it's a space in which you're moving towards or away from dishonesty... that's where all the aesthetic manoeuvring is, the room to think or feel. Metaphor is about a kind of calculated inaccuracy. If everyone agreed on it there'd be no place for subjectivity... If people just said 'oh yes, a hedgehog is like a hairbrush' there'd be no surprise, no unfamiliarity, there'd be nothing at stake. And MacCaig is always gambling with metaphor. It's always 'will this work?' And will it work on a number of different levels? And I'm always more interested in the fact that it is occurring on a number of different levels than a simple 'oh, is that like that?'. Translations of poems are like metaphors. A translation carries over something but it carries it over in lots of different subtle ways rather than the dictionary meaning of each word.

HM: I'm also interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his

autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena.... Do you think poets are people who connect more than others?

Poet G: I think poets are interested in the connections between things and what it means to connect. In the same way that, in order to paint, the hand must be deft and in the same way that, in order to play the piano the fingers must be able to act independently, so too you must be looking for the web of elements that will pull a poem together...you have to develop that tendency. But that doesn't necessarily mean you think the world is connected in a magical, mystical kind of way....there's lots of madness in that way of thinking as well, if the poems are a kind of frenzied linking of things to other things then they've lost their touch. Poets are people who rehearse all that in order to make shape that orient or point the reader towards something in the world. It's not the marvellous moment that all things point towards in an epiphanic sense, its more well if you go down there and turn right you might end up somewhere interesting. So its directional..... You don't write all the time, but you do go through the motions of writing all the time and these are the kind of little obsessive things you have to do and they are the ways that the world speaks to you because metaphor is such a primary language in the way that we negotiate and communicate.

HM: Metaphor as a figure of thought rather than a figure of speech, I guess....

Poet G: Yes. Metaphor is a more fundamental role of thought and all these things of dialogue and translation are more fundamental than we think...what we're doing as poets is taming, controlling gesture in all that within our chaos.

HM: In terms of your own practice, do you have to be in a particular 'mental state' (for want of a better expression) in order to write poetry?

Poet G: I think that's what exercises are for, they allow you access to that space. (The creative space) is immediate and surrounds us all the time and it's as easy to step into as to step out of, its just that most people spend a lot of time stepping out of it....I don't think of writing as a special thing that has to happen at a special time in a special place, I think of it as the ordinary thing that we are doing that needs to be shaped.

HM: And do you think anyone can step into that space?

Poet G: Well, as I say, I think it's easier if you don't spend all your time stepping out of it.

HM: It's like a kind of training?

Poet G: Yes. I think it is possible to train yourself up and slightly harder to train other people up but I think of these things as just what we do.

HM: Can knowledge of the neural or cognitive processes that might underlie creativity ever be useful, do you think or would knowing about these aspects of process diminish the mystery of the creative process too much?

Poet G: No, I don't agree with all this 'unweaving the rainbow' stuff at all. I think actually we are in a very interesting space with neuroscience and the viewpoint that's giving us on the world, particularly in terms of metaphor as a very basic tool of orientation and how language itself is not quite as unique a model of communication as we think, how lots of different creatures have modes or ways that correspond. I don't agree with much in Dawkins but I do agree with him that knowing about this stuff deepens our awe as well as our awareness.

Interview with Poet C

HM: In my thesis, I'm looking at Norman MacCaig's ambivalent relationship with metaphor – in his poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?

Poet C: The funny thing is, I'm always hoping language will be inadequate because I feel the power of the poem is in what its trying to say, we're always looking for the right words and never quite getting it...I'm actually scared to death of writing the perfect poem because I'd never write anything again in my life. I like the idea that words are these...hapless tools we have to use that never quite get there. For me, metaphor is important because its an iron brace we put on words to try and make them do a bit more.

HM: I'm also interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena.... Do you think poets are people who connect more than others?

Poet C: It's almost fundamental to the way I write that I'm rooting for the connections between things. It's that 'only connect' thing, isn't it? That's what poetry is all about for me. I feel that all the time the world is telling me about itself, presenting me with these things which are disparate but which, if you put them together, they'd tell you something about the world. Photographs Matthew Brady took after the Civil War, all these set up photos, photos we now know are set up. He couldn't wait to get rid of them so he sold them on and they ended up being made into greenhouses. To me, that is the world telling me about the world, presenting me with these two disparate things – photographs of the dead and greenhouses – and saying 'if you can put this together....'

HM: And how do those connections happen for you?

Poet C: They're there, they're obvious. If you're looking closely at the world, you see the connections and that's what metaphors are, how two things that should be different are related.

HM: Poetry is a mode of attention?

Poet C: It's that Robert Lowell thing. Religion is an inclination to listen. Poetry is an inclination to take notice.

HM: And so you think there is something distinct about poets in terms of their sensibility, even their brains? Are poets unique in some way?

Poet C: I'm not sure about unique but poets are blighted in some way. We pay attention to things that other people wouldn't pay attention to... Poets see that link, that perceived relevance. Saying it's unique makes it sound like too much of a strength. I'm not sure it is, it's just something we need to do.

HM: And what about the flip side of that, the times when you can't write? Do you have to be in a certain frame of mind to write?

Poet C: I tend to write all the time, but if I'm working on a particular poem, I have to be in a certain frame of mind. But you can put yourself into that frame of mind. If you equated writing poetry with a form of addiction, if you were to carry out your heroin use in a particular place, then going there would make the need to use greater. If a poet puts themselves in a writing context, then the need to write will be more. Inspiration is a cumulative thing: the more you're writing, the more you'll be inspired....The more you write, the more the musculature that makes the poem will be fit.

HM: What about reading, how does that relate to your framework?

Poet C: Reading other people is fundamental. When I'm writing a lot I'm reading a lot too, even though the receptive and creative parts of my brain are different. It's seeing how other writers dealt with the same difficulties I'm trying to deal with. Writers are people who find writing difficult. Because they're dealing with it on a different level.

HM: Can knowledge of the neural or cognitive processes that might underlie creativity ever be useful, do you think or would knowing about these aspects of process diminish the mystery of the creative process too much?

Poet C: When I began writing poetry in my teens I thought that real poets were people who had ideas for poems and then they worked on them... It took me decades to realise most great poets don't know what they're writing until they're engaged in the writing process. But I don't like to think of that as something mysterious...that's just the working process. It's like a sculpture, as Geoffrey Hill said, where you have this hard block of language that you're carving out to make a poem, but the real difficulty for poets is, while you're carving that, there isn't any block there. It's only as you carve that the block comes into existence....So its actually an act of faith more than mystery for me. The only good poems I've written were ones where I had no idea where I was going.... Rather than trying to turn ideas into words, its the words trying to turn themselves into ideas.

HM: Do you think there can be any theoretic use, then, in trying to understand aspects of creativity through neurological or even psychological processes?

Poet C: I do believe you can train yourself to write more by understanding the process. Part of the problem I've had in being such a scant writer is that I've ignored the process for so long thinking that it was like the goose that made the golden egg, died looking up its own arse to find out how its sphincter worked, that kind of idea – if you can write well don't ask what's going on or it will evaporate. But I think you should ask what's going on. Because poetry is a science really. It's a form of examining the world as sparsely and economically as you can. It's not an art as much as a science. And as a science we should examine it – what could we do differently...

It's a war between science and superstition. And I like to think of it as a science that I'm investigating. And it's a highly complex science.... We may never know what the neural contacts are that go on in a poet's head. We may never understand it. But we have to examine it and not treat it like this little airy-fairy thing that you have to nurture and leave alone.

Interview with Poet D

HM: In my thesis, I'm looking at Norman MacCaig's ambivalent relationship with metaphor – in his poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?

Poet D: I always started out from the point of view of knowing that language was inadequate and I was comfortable with that as an idea. I remember reading Aldous Huxley talking about the eye as a restriction rather than something that enabled us to see and I think very quickly I adapted that to language as well – it's ridiculous to assume that 26 letters can help us to explain everything that's here....I've always been comfortable with the idea that I'll work with what we've got and try to make the best of that. That probably says a lot about my approach.

I think I've always seen metaphors as a kind of entertainment....I like that thing that Ezra Pound said about when a metaphor works well – it's not just an understanding but an experience. My feeling is that that's how we perceive the world, we perceive the world as a series of comparisons. If you can make an accurate comparison, or rather one that works, then you are close to activating what's going on anyway within our reception of the world....It's a sensation: you recognise the way that you recognise things. I can understand the idea of becoming tired of any device or way of writing. I think any writer becomes a bit jaded with their own voice or worried that other people are becoming weary of it. So in (X), the metaphors in there are absolutely absurd. They're pointing at themselves and saying 'look I'm a ridiculous metaphor'...

HM: In terms of what you said about metaphor tapping into the way we see the world anyway....I'm also interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena.... Do you think poets are people who connect more than others?

Poet D: I'm not sure that connection and metaphor are the same thing as I categorise them... Poets are definitely in the business of making connections, even imposing connections on things. Metaphor is more specific than that. It's a technique and activity within poetry, a comparison of one thing to another...

I recognise the idea of over-connectivity in poetry, definitely – sometimes I've felt I couldn't begin a poem until I've connected it to an idea, a thought, a significance, another element, connected one word to an equivalent word. But when I think about metaphor as a practice and its literary definition, I think of it as something much more specific, a directly comparative act.

HM: Which is not the same as saying: 'everything in the world is a bit like everything else...?'

Poet D: A connection can just be made by proximity. Ideas can connect with ideas. (Metaphor) has become quite a self-conscious activity within poetry. In fact, I know people who practice certain types of poetry who wouldn't go near a metaphor. It's like you're an avant garde musician playing middle C on the piano – you just wouldn't do it, its considered a bit old school. But I think it's a device which can be an incredibly effective element of communication. It has an immediacy and a sort of humane touch about it. And as someone who is interested in communicating rather than trying to explain the nature of language, I'm attracted to it as a device.

HM: On that note, talking about communication versus explanation.... Can knowledge of the neural or cognitive processes that might underlie creativity ever be useful, do you think or would knowing about these aspects of process diminish the mystery of the creative process too much?

Poet D: There's always going to be a certain amount of mystery around it. We don't know where poems come from otherwise we'd go out and get more. You definitely have to be in a particular mood to write a poem and we don't know how to create that mood... You can come up with all kinds of explanations – its an intensity, it's a kind of pitch, it's a daydream.... Ask any poet and they'll have 5 or 6 ways of describing the atmosphere or mood they need and its always conflicting, its never a solid explanation.

There's no need for poems to exist. It's not like going out and discovering some naturally occurring element. It's more a case of having an urge.

HM: One book that has informed my thesis is Iain McGilchrist's 'The Master and his Emissary' and in it he's looking at culture, both historically and in terms of how we live today, in terms of the bi-hemispheric structure of the brain and he looks at the two different attitudinal modes we have as humans and how we can't call them both to attention at the same time. So he looks at these different modes and how they might be reflected in our culture. Without wishing to simplify the argument too much, he suggests that we live in a world that's dominated by left-hemisphere modes of thinking at the moment. I thought that chimed a bit with what you're saying...

Poet D: We live in a very rational and scientific age and I think there's an urge for poets to shy away from anything that can be explained away....Poetry has always been in conflict with dominant modes and it's often in conflict with what we think of as 'information'....I often come back to thinking that all poems are about the individual, they say what it's like from the individual point of view, rather than when you read a newspaper report of what's happened in Baghdad – they may tell a little story here and there but, essentially, that's telling you how it feels for everybody. I sometimes feel that poetry starts from the opposite end. It's utterly idiosyncratic, but in saying that you sometimes manage to form these links with other people's thoughts or feelings as well. Poetry sometimes feels like a way of opting-out....as the only strategy available to some people. I often get asked about its relevance to today's society. I suppose the implication of the question is why do we need poetry when we have access to so much information and entertainment, most of it online? My feeling is that it comes back to the individual mind – when one individual mind is making a transmission or a projection or a broadcast that they've thought about in a very considered way, I still think that's quite unusual.

HM: Yes, I think Michael Donaghy calls it a 'diagram of consciousness'.... I'm interested in how scientists and poets might be looking at some individual experiences in different but complimentary ways.

Poet D: Scientists are often doing it through metaphor as well. If you think about science, say astrophysics, it's often about modelling.... At a subatomic level, it's about modelling the notion of matter. We have no idea what these concepts like matter look like, so we make them look like other things. I remember being at school and being given models of molecules to look at and they were pink pong balls on bits of string and things like that, those models tend to stay with you through your life. The only way we can talk and communicate about them is to compare them with other things.

HM: Metaphor as a figure of thought rather than speech..... Do you have to be in a particular 'mental state' (for want of a better expression) in order to write poetry? And, if so, what characterises that?

Poet D: I would assume that's true but I wouldn't really know what that frame of mind is or how to get into it. It's certainly not a meditative one, I can't sit there chanting for 20 minutes and suddenly be in a mood to write a poem. I've assumed on occasions it's to do with being not tired, because when I'm tired my brain's not functioning properly....but I also know that I've written poems when I've been absolutely dog tired. I associate writing poems with feeling comfortable, with feeling relatively optimistic, even if I'm writing about pessimistic subjects. I tend not to write about things when I'm still upset about them or concerned, I'm not that kind of writer. I've likened it to dissecting a rat. If I sit down to write, I'm kind of doing it in laboratory conditions. I'm not trying to tell people how I feel, I'm trying to make a work of art and I need to concentrate to do that. Even if I'm writing about something that has undone me in the past, I need to have moved on, I need to have a way of moving on from it. I know some writers like to write in the heat of the moment, they need to have chaos all around them. I wouldn't write a word if my life or my mind was like that.

HM: To what extent do you think a poem contains necessary contradictions?

Poet D: One of the necessary contradictions in a poem is the sense that a reader thinks they're discovering something about you / the speaker but is also being asked to inhabit that position themselves. There's a kind of dual occupancy of poems. There is an inherent contradiction there – what seems to be so confessional is an invitation to

someone else to inhabit and experience. It's also saying 'this might look very particular, but I hope its universal as well otherwise you're going to be excluded from it.

I'm sure at some level this all comes down not just to the mood that you need to be in to write, the atmosphere you have to create to write poems but why you write in the first place. I quite often try and get my students to make a written statement about that – what the hell do you think you're doing, because nobody's asking for these things.... The range of response there is enormous and it goes on to remind me that poetry isn't one thing and there isn't just one reason to make it. I've occasionally thought as someone who makes patterns, metaphors, that unless I can impose those patterns on the world somehow then the world's going to seem too chaotic for me. It's about finding some kind of order in disorder. But every time I think I've established a credible, explicable account of why I write, I write a poem that doesn't fit any of those definitions. It keeps changing....I sometimes think poetry is always going to be a groping towards meaning and significance that ultimately can't be achieved or defined. But that doesn't stop us wanting to howl at the moon or create local conditions of significance which we can live within.

Interview with Poet L

HM: In my thesis, I'm looking at Norman MacCaig's ambivalent relationship with metaphor – in his poem 'No Choice', he says: 'I am growing, as I get older / to hate metaphors – their exactness / and their inadequacy'. To what extent have you found language 'inadequate' in your own practice as a writer?

Poet L: I'm with MacCaig about this. I have use only for deep metaphor. If you say X is the same as Y on a superficially sensory level – looks like, sounds like etc - then all you are doing is escorting us somewhere else, away from the point where you had us standing. So I can enjoy an exact metaphor, or a brilliantly spotted one like a Martian one – for its ingenuity or pure celebration of *noticing* – but I can *only* enjoy it. For me it doesn't flow. It's stuff seen from the window of a train at a station. To say: 'you know what, X looks like Y! You heard it here!' is really to foreground yourself, and I've been trying to travel away from that for many years. Syntax can be metaphorical, meter can be, vowels can be; I do that.

HM: I'm also interested in connective tendencies in poetry, whether poets take the idea of 'Only Connect' too far, perhaps. John Burnside has written in his autobiographical prose about diagnosing himself with apophenia, the almost superstitious linking of phenomena.... Do you think poets are people who connect more than others?

Poet L: Yes I think poets do connect more than others – *this is also that* – but I'm much more interested in the thing found naturally in the wild than sought after and shown off on its plinth.

HM: Do you have to be in a particular 'mental state' (for want of a better expression) in order to write poetry?

Poet L: Yes. I don't know what it is, I just know where and when it is: early, bright, unbothered, and, not, these days, hungover. When I wake early I'm quite *tabula rasa*. I've never been published and don't know anyone. By the afternoon I've remembered everything I know and everything I've done and my soul gets kind of tired and clogged

up. In the early morning you gaze, by afternoon you're glancing around. By the evening I'm ancient and can't even recall what I did with my time.

HM: Can knowledge of the neural or cognitive processes that might underlie creativity ever be useful, do you think or would knowing about these aspects of process diminish the mystery of the creative process too much?

Poet L: Nothing that I've ever suspected might damage my writing – for example teaching or writing criticism or learning more about the brain – ever really *has* done. Why we exist at all is enough mystery to shoulder: once you've accepted that gift and then, in most cases, accepted it's somehow a gift from *nobody* – the wonder that you're actually capable of doing something with your time doesn't seem that miraculous. Knowing that my entire literary career occupies the same neural path as crayoning my first face to impress my mum doesn't make me any less proud or agitated or delighted or stuck with it all.

Appendix 2: Selected quotes transcribed from interviews with poets in 2007

Poet Z

‘The poem changed under my hand quite literally and I found that I was writing about a field conflict...I couldn’t quite see what was at the back of my own mind...this was a complete ambush. In a sense, two things were happening. One, I was being strongly affected by images; secondly I was being ambushed by my own strong feelings that I didn’t know were going to relate to this poem...There were all sorts of things at work there, all of them working in the subconscious, I guess’.

‘Almost all the poetry I write...doesn’t come from intent. My editor at (x) said to me, ‘you don’t really know what you’re doing until you’re half-way through do you?’’.

‘It is a visitation in a kind of way...to not be visited is what all writers fear. Nobody quite knows what happens when images stir lines or provoke lines.’

‘In order to want to write at all, you have to be in the grip of something, whether it’s an idea or an emotion or a recollection or what have you. But the strongest thing you’re in the grip of probably is the desire to write...The constant desire to write that you live with if you’re a true writer...Simply being a writer is important.’

‘Intense concentration has a strange effect...it certainly seems not to happen in real time. Those little electric connections between things that progress the poem are indispensable...Sometimes it’s just the sheer power of words that does it.’

(Speaking of manic depressive wife of a friend) ‘When she was in her manic state would make these astonishing connections between things...there was a driven logic that enabled her to make these connections...I think there’s something of that in poetry’.

‘You find yourself being taken up by something without intending that to happen...there are all these things riding in the back brain...’

‘Rhyme pushes the thing on... I tend to pick up rhymes rather like picking up stitches...it needs that formality’.

‘The controlling intelligence has to be porous and let through instinct...The best poems are often the product of someone building better than they know...they have that sort of finger tip control but they don’t have an iron grip. I prefer to let things fly than have that iron grip. I mean, I’d sooner lose the kite than fly it too close to the earth’.

‘I think I have a view of the world that is coloured by what I do...it’s to do with shades of meaning, it’s to do with interpretation, it’s to do with vision and I think that’s a different way of seeing things...I’m delving into areas that I don’t properly understand myself’.

‘Writing modifies sensibility too...causes me to be in a state of constant flux. Also, there’s something about words that is compelling and that sort of causes swerves in thinking and that is to do with what it is that words actually mean...writers...look at words in a different way...there are hidden meanings in words that have to do with the shape of words and its colour and its weight’.

‘I think I work off instinct a lot...although I don’t want to be anti-intellectual about it and suggest for a moment that it’s not possible to analyse poetry...there is an aspect to poetry of ‘if you don’t know, I can’t tell you’...there’s just something emotionally right about it, there’s something that strikes you in a place that is both vulnerable and receptive and if you break it down somehow it becomes...it reduces and becomes less powerful’.

Poet S

'I always write in an emotional or agitated state...when I write something that's not emotional, it tends not to be a very good poem?'

'I see it as repression. I have images and ideas and urges and desires and I repress them and the tension is between that and the release. I see it as being very similar to dreams, similar to desire...it's a dance between the two.'

'Poetry is therapeutic, but it is not. Alvarez pointed out that Sylvia had to write these poems, but they were also killing her...his view was that, at a certain point, if you're going in that direction, it will drive you over the edge...I had a number of traumatic experiences in early childhood that I worked through in some of my early poems...I grew up with a history of insanity in my family and I've always been afraid of going insane, which I'm not...but it's very frightening. In a certain way poetry helps?'

'If a poet chooses to go into their 'dark places'...the problem is when it becomes obsessive...You have to find a balance. If the poet decides that's going to be their theme and they're really going to go fully into that area, I think it can kill them, and that's what I've been very afraid of actually?'

'I think poetry can kill you...poetry drives poets crazy...Poetry is such a grandiose, difficult, energy-consuming, spirit-consuming activity that I think you sometimes feel as poets - and I think it must have happened to Andrew Waterhouse - , 'I've done all this and no-one cares'. Because the general state of things is that nobody cares about poetry...and I think that can drive you crazy...if you're doing something that you love?'

'Language is what makes us human. We use language to communicate...and poetry is the art and craft of language constantly re-thought, re-worked, refined and made new again?'

'I fully believe that poetry is a way into this new sensibility, that we can actually learn things from poems and think differently...I think that why poetry is so feared and

disregarded is...you read a good poem and it actually raises the possibility that the way you've thought about things...is incomplete.'

Poet W

'I think that imagination works under lots of different stimuli and therefore you can sit down in a particularly ordered way and say 'I shall write something today' without even perhaps knowing what you're going to write. And after all, that is what happened to an awful lot of work which we now see as greatly inspired. It would be difficult to prove for instance that Shakespeare wrote 'Measure for Measure' because it was an obsession, it was rather that he had a new play to produce for the box office...what makes people pick up on themes is indeed a personal thing, but I'm very sceptical of any sort of regulation about how poetry gets written because I think it gets written in so many different ways'.

'Poetry is a matter of relieving an irritation as well as seeking an inspiration'.

'A poet is actually a machine for writing poems and I don't like the idea of a 'poetic temperament'. The only way you can tell a tree is by its leaves and the only way you can tell a poet is not his attitude to life and not his, as it were, conviction about poetry, it's actually the poetry itself.

'(a poem) is made out of words and the words are marinated in memory...creation working on memory produces art.'

'(poetry) is a forensic act, it is an act of establishing the real at the expense of the imagined. Instead of being an imaginary act it is an act of redeeming out of too much imagination the actual chartable part of writing...there is an ecstasy of moderation as well as an ecstasy of exaggeration...The art of poetry is trying to put the imagination under control.'

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