

Phenomenologies of Mars

Exploring Methods
for Reading the Scientific Planetext
in Kim Stanley Robinson's Mars Trilogy

Patrick Peter Cronin

*A thesis submitted to the
Department of English and
the Faculty of Arts and Social Sciences
at the University of Sydney in fulfilment of
the requirements of the degree of
Doctor of Philosophy*

2017

Declaration of Originality

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university or institute for higher learning.

I affirm that the intellectual content of this thesis is the product of my own work, and I certify and warrant to the best of my knowledge that all sources of reference have been duly and fully noted.

Patrick Cronin

Date

Abstract

In 2013, *The New Yorker Magazine* called Kim Stanley Robinson ‘one of the greatest living science-fiction writers’. And in 2008, *Time Magazine* named him a ‘hero of the environment.’¹ Yet, no lengthy study has yet been attempted on any of his fiction. This thesis aims to redress this absence with a long-form reading of one of the high peaks of his achievement: the Mars Trilogy. It considers that what I am calling the ‘planetext’ (or planet-text) is a vital narrative space. It assumes the perspectival form in which the Trilogy is told is crucial to understanding how its planettexts are read. The several viewpoints in the Trilogy comprise the several attempts of this thesis toward understanding not only how the planet is used in the novels, but also how it arranges and functions according to textual principles of readability. My several readings adopt the scientific bases of each of these viewpoints, and develops a sense of the way different characters experience the planet around them as either enabled by science, or confounded by it. ‘Planetext’ is therefore a useful neologism for interpreting how such a vast and multidimensional site as Mars is, or is not, encountered through these sciences.

Understanding the planetext of Mars is therefore a phenomenological task, with the requirement of reading how each character is able, or unable, to experience and comprehend their experiences. A sense of the phenomenologies of Mars means this thesis must take the approach of seeing how different sciences yield different phenomenologies, and different experiences of the planet. By calling Mars a planetext, this thesis investigates the ways in which language, writing, and textuality participate in building the planet of the Trilogy, treating writing as a coefficient of terraforming. Understood as a kind of planetography, or planetary writing, the planetext (or host of planettexts) foregrounds the written-ness of the Martian space in Robinson’s Trilogy. The planetextual space of the novels shapes a variety of readerly paths through the narrative, which are in turn adopted.

As a long study, this thesis understands the planet as a sizeable arena, which challenges the view any one reading can give of it. Acknowledging this as a limitation, its four chapters focus only on four characters, aiming to supplement an overview style of reading the Trilogy with a series of close

¹ Tim Kreider, ‘Our Greatest Living Novelist?’ December 12, 2013. *The New Yorker Magazine*. <http://www.newyorker.com/books/page-turner/our-greatest-political-novelist>; Oliver Morton, ‘Kim Stanley Robinson: Heroes of the Environment 2008,’ Wednesday September 24, 2008. *Time Magazine*. http://content.time.com/time/specials/packages/article/0,28804,1841778_1841779_1841803,00.html

readings. Understanding the textual status of the planet means paying specific attention to how characters either find meaningful access to the planet, or fail to find any. For Ann Clayborne, a geologist who wants to keep Mars uncontaminated and un-colonized, the planetext forms itself as a zone of *différance*, in which the task of interpreting the non-living planet must coincide with her resistance to the terraforming project. With Michel Duval, the Martian psychiatrist, readability is itself questioned as he attempts to overcome his depression and homesickness. For Saxifrage Russell, one of the chief terraformers, a discussion over scientific method takes the path of this thesis away from the troubling and compromised planetexts of Ann and Michel, toward how textual meaning is enabled and opened. With Hiroko Ai, a final theorization of what I call viridical force is proposed as a planetextual function, based around the Trilogy's mention of viriditas and Jacques Derrida's idea of force, to come to terms with how the planet makes itself available to the reader as expansive, rich in possible meaning, and always arranging itself *around* the reader. Between the opening of the planetext and its equivocations, this thesis charts its course.

Contents

Abstract	iii
Acknowledgements	vi
Abbreviations	vii
List of Figures	viii
INTRODUCTION	
The orbit of critical reading	ix
CHAPTER ONE	
Ecology without life: Phenomenology of the non-living world	1
The wandering exorbitant: Phenomenology of the surfaces of Mars	28
CHAPTER TWO	
Archaeology of a method: Michel Duval and the Jameson program	58
Headfirst into the black sun: Depression as Overdetermination	89
CHAPTER THREE	
Modus saxifraga: Saxifrage Russell and scientific method	105
The spur of the mind: Da Vinci Crater and scientific insight	139
CHAPTER FOUR	
Writing the green planet: Viridical force as areographia	161
In the Martian bardo: Dying as the instruction of Viridical life	182
CONCLUSION	
Leaving the planet	211
BIBLIOGRAPHY	213

Acknowledgements

The many thanks I will extend to those who have helped me through the writing of this thesis cannot be overstated. This experience has on all fronts brought such immense changes to my life I cannot begin to measure them. I can only extend my deepest thanks to those who have been a part of it. To all people I have to thank, I cannot thank any of you enough for opening so many doorways onto a new and different world. The greatest memories I will hold of this time is of the people I have met, and the deepening of existing relationships, which has made this the richest experience of my life.

To my loving and supportive parents, none of this could have been possible without your enduring encouragement and support through all the years of my education, especially the difficult ones. And to my brothers and sisters – Michael, John, Elizabeth, Samantha, and my two endearing sisters-in-law, Julia and Carolyn, and to my three lovely nieces Katherine, Nicole, and Emma – I must extend all my love and appreciation.

Without the great supervision of Professor Peter Marks, I doubt this thesis could have come together. Thank you, Peter, for your comments, insights, suggestions, advice, and encouragement in the long time it took me to climb up onto this task and get it done. As you told me, writing can sometimes be a painful disease, and a good bedside manner was often required to get me through it. Thank you, also, Dr. Helen Young, for setting me on the right track in my first year. Without your supervision, I might have floundered and not be where I am today.

Thank you, also, to David Longo, Geoffrey Abeshouse, Jin Hien Lau, Doug Lerpiniere, and Merwyn Lim, for your continuing friendships. The time we spent together has been, and continues to be, an immense help. I cannot thank you enough. Thank you also to Paul Esber, with whom I have shared so many educative experiences since high school. You have all been constant pillars of support.

I must also thank all those with whom I began this degree: Lydia Saleh Rofail (with Stephen Rofail and the late Mocha), Sara Crouch and Craig Johnson, Nat Pree, David Fitzgerald, Tim Steains, Tegan Jane Schetrumpf, Jordan Church, Jessica Sun, and Niklas Fischer. Thank you also to Colette Estelle, Chris Rudge and Adam Hulbert. You have all contributed such value to my life I cannot begin to thank you enough.

I must also extend my gratitude to my second family of PGARC OTC, who helped make this process so much easier and enjoyable; to Han-eol Lee, Sarah Bendall, Mark Pert, Rachel Kennedy, Kimberley Bridgette Dimitriadis, Hollie Pich, Marama Whyte, Emma Kluge, Russell Coldicutt, Dan Dixon, Nathalie Camerlynck, Ben Vine and Emmet Gillespie, Georgie Lawrence, Orla McGovern, Christian Novak, Anna Bolly, and Rhys Herden. To Darius Sepehri for your stimulating conversation and enthusiasm. And, last but not least, the adorable Sally and Luka.

A final dedication must be given to Molly, my dearest friend, whom we lost along the way.

Abbreviations

KIM STANLEY ROBINSON

<i>Red</i>	<i>Red Mars</i> (New York: Bantam Spectra Books, 1993).
<i>Green</i>	<i>Green Mars</i> (New York: Bantam Spectra Books, 1994b).
<i>Blue</i>	<i>Blue Mars</i> (New York: Bantam Spectra Books, 1996).
<i>Antarctica</i>	<i>Antarctica</i> (New York: Bantam Spectra Books, 1998).
<i>Short</i>	<i>A Short, Sharp Shock</i> (Grand Rapids, MI: Anti-Oedipus Press, 2015 [1990]).

FREDRIC JAMESON

<i>Archaeologies</i>	<i>Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions</i> (London: Verso, 2005).
<i>Antinomies</i>	<i>Antinomies of Realism</i> (London: Verso, 2013).
<i>Seeds</i>	<i>The Seeds of Time</i> (United States: Columbia University Press, 1996).
<i>Unconscious</i>	<i>The Political Unconscious: Narrative as a Socially Symbolic Act</i> (New York: Routledge & Kegan Press, 1981).
<i>Postmodernism</i>	<i>Postmodernism; or, The Cultural Logic of Late Capitalism</i> (Durham: Duke University Press, 1991).
<i>M. Papers</i>	<i>The Modernist Papers</i> (London: Verso, 2007).

JACQUES DERRIDA

<i>Grammatology</i>	<i>Of Grammatology</i> . Translated by Gayatri Chakravorty Spivak (Baltimore: John Hopkins University Press, 1974).
<i>Spectres</i>	<i>Spectres of Marx: The State of Debt, the Work of Mourning and the New International</i> . Translated by Peggy Kamuf (New York: Routledge, 1994).
<i>Spurs</i>	<i>Spurs: Nietzsche's Style</i> . Translated by Barbara Harlow (Chicago: Chicago University Press, 1979).
<i>Writing</i>	<i>Writing and Difference</i> . Translated by Alan Bass (Chicago University Press, 1979).
<i>Margins</i>	<i>Margins of Philosophy</i> . Translated by Alan Bass (Great Britain: The Harvester Press, 1982).

List of Figures

Figure 2.1	Diagram of Desargues's Theorem	73
Figure 2.2	The Greimas Square and pyramids of the Alchemists's Quarter	74
Figure 2.3	Vincent Van Gogh, <i>Olive Trees with Yellow Sun, 1887</i>	97

Note: relevant bibliographic detail is given on the specific pages of relevance.

INTRODUCTION

The orbit of critical reading

They were in Martian orbit.... the anticipated world was often more rich than anything real.

– Kim Stanley Robinson

In fact, no-one had immediate access to the world as a planet: what we have is a complex set of data from various recording stations at various points on the surface or above, and a history of such data or comparable information, all needing to be synthesized, interpreted and debated.

– Timothy Clark

This is the spirit in which the various political ‘solutions’ of the Mars Trilogy are also to be evaluated: that they are numerous, and contradictory or even irreconcilable, is I believe an advantage and an achievement in a contemporary utopia, which must also, as Darko Suvin has pointed out, stage an implicit debate with the objections and ideological and political prejudices of its readers.

– Fredric Jameson¹

FROM A DISANCE, MARS is a ‘beautiful’ object with a ‘promise of happiness’ (*Red*, 85), yet the view from orbit gives none of the details which might deliver on its utopian promise. Maya Toitovna’s image from the Ares on the approach to Mars is of the ‘broad peaks’ of the Tharsis Bulge, and their ‘surrounding countryside’, the craters, canyons, and dunes of the red planet, all of which are a ‘rusty-orangish-red’ under a ‘dusty atmosphere’ (*Red*, 84). When it comes time for her to descend onto the planet, she is apprehensive. Her attempts to hold the crew together have ‘failed’, and the descent ‘splinters’ along their own beliefs, perhaps into the literal streaks of their rockets burning through the atmosphere. As soon as the step is taken from orbit down onto the planet, a comprehensive picture is no longer possible. The ‘single trapezoidal window’ of her rocket ‘became a blaze of Mars-colored air’ (*Red*, 91). Yet it is precisely this metaphor of orbit that permits a sense of the critical problems underlying the Mars Trilogy, and the orbit of readings comprising its criticism. It is here around the planetext that nearly

¹ Robinson, *Red Mars* (New York: Bantam Books, 1993), 84-5; Clark, *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (New York: Bloomsbury, 2015), 5; Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso Books, 2005), 409-10.

all critical approaches to the novels have thus far chosen to sit. This study aspires to arrive on the planetext proper, aiming, like Nadia a few pages after Maya's apprehensive descent, to 'hit the ground with both feet solid' (*Red*, 98).

If these epigraphs give any initial sense of the challenges for doing so, it is that orbit is a useful way to begin to understand the range of responses and the numerous readings that have thus far been synthesized, interpreted and debated on the Mars Trilogy since its publication in the 1990s. William J. Burling claimed that of the existing scholarship on Kim Stanley Robinson, 'a sustained, coherent body of commentary in fact has already emerged.'² Up until 2009, the range of interests of Robinson scholarship was not entirely mapped. Burling's edited volume – *Kim Stanley Robinson Maps the Unimaginable* – was the first book to attempt to draw such a picture of Robinson's work, and to give some sense of what has preoccupied critics from the early nineties when criticism on Robinson first started to appear. This timing alone shows the Trilogy had a unique impact on bringing Robinson into critical interest. In 2012, soon after this volume, came an issue of *Configurations* dedicated solely to giving another wide picture, which served as the second major gathering and consolidated this range and diversity of critical interests. Of the seventeen essays in the former volume, nine are treatments of the Mars Trilogy. Of the seven in the latter, only one deals with that work. Yet, of all that has been said about Robinson, one drawback universally applies: all existing readings remain relatively brief, and approach such a large and encompassing narrative unit as a planet with something akin to satellite pictures. The present study makes no claim on the primacy of the Mars narrative above any other work by Robinson. Yet as soon begin here as elsewhere, where the unit of the planet challenges the interpretive tasks of both the reader and writer with a frame too large to permit immediate access, too encompassing to fully explore, and too bound up within its own horizons to allow for uninhibited access. To begin to gain a sense of how the planet of Mars works within the Mars Trilogy to confound or open up its readability, some understanding must be given of how it has thus far been read.

In his seminal essay on the Trilogy, Fredric Jameson pointed out that its length – at approximately seventeen hundred pages – affords the reader an 'analogon' of discursive time to give a sense for the long span of its narrative history (*Archaeologies*, 396). The time dilation of narrative form is a significant subject of its own, and will be explored in chapter 2. Yet, on top of the formal ways with which the Trilogy frames its history, Jameson was also implying a study which might yet attempt to take up a long-form analysis to meet with this immense breadth of story space. In a similar tone, Bud Foote

² Burling, 'Introduction', *Kim Stanley Robinson Maps the Unimaginable: Critical Essays* (Jefferson: McFarland & Company, Inc. Publishers, 2009), 3.

was invoking James Joyce when he said that *Red Mars* is so rich in referential detail ‘people will be digging references out of [it] for decades... *Red Mars*, beneath its deceptively conventional surface, is as recursive and rich in allusion as *Ulysses*.’³ But no such single long-form reading has yet been attempted to grapple with this recursion and allusive depth, nor with the immense scale of Robinson’s red planet.⁴ Even this task is too ambitious for any one reading. But the present study proposes that recursiveness and allusion have more to do with each other than Foote supposes, and both give ways to at least begin to read the planetary narrative across a lengthy study. The ways in which the novels organise the planetext through recursions and allusions of different kinds speaks to its discursive modes within the narrative, what Jameson labelled its ‘autoreferential inscriptions’ (*Archaeologies*, 397), and which go by another name of the Joycean ‘signature’.⁵ It is also with Jameson, rather than Foote, and how Jameson himself is, as a point of allusion, inscribed into these recursive manoeuvres, that this study engages. How such *analogons*, or ‘interpretants’, work as instructions for reading the novels, means they help the reader understand such a challenging and confounding object as the planetext.

³ Bud Foote, ‘Kim Stanley Robinson: Premodernist’, editors Milton F. Wolf and Daryl F. Mallett, *Imaginative Futures: Proceedings of the 1993 Science Fiction Research Association Conference* (San Bernardino: Jacob’s Ladder Books, 1995), 340.

⁴ Precedent does, however, exist for readings of the red planet generally; namely Christopher Palmer’s essay in *Visions of Mars: ‘Kim Stanley Robinson: From Icehenge to Blue Mars’* (North Carolina: McFarlane Publishing Co., 2001), 139-46. ‘Robert Markley’s *Dying Planet: Mars in Science and the Imagination* (Durham: Duke University Press, 2005), and Robert Crossley’s *Imagining Mars: A Literary History* (Middleton CT: Wesleyan University Press, 2005); and Oliver Morton’s *Mapping Mars: Science, Imagination, and the Birth of a World* (New York: Picador, 2003). Other long studies have sought to place Robinson’s work within a larger thematic area. William Katerberg, Carl Abbott, and Patricia Kerslake, all take up postcolonial and Western American criticism, locating Robinson’s Mars Trilogy (Kerslake), and the Three Californias (Katerberg and Abbott): Abbott, *Frontiers Past and Future: Science Fiction and the American West* (Kansas: University of Kansas Press, 2006); Kerslake, *Science Fiction and Empire* (Liverpool: Liverpool University Press, 1979); Katerberg, *Future West: Utopia and Apocalypse in Frontier Science Fiction* (Kansas: University Press of Kansas, 2008). Other studies focus on science fiction, with environmental and/or generic focus: Istvan Csicsery-Ronay Jr., *The Seven Beauties of Science Fiction* (Middletown, CT: Wesleyan University Press, 2008); Eric Otto, *Green Speculations: Science Fiction and Transformative Environmentalism* (Columbus: The Ohio State University Press, 2012); Chris Pak, *Terraforming: Ecopolitical Transformations and Environmentalism in Science Fiction* (Liverpool: Liverpool University Press, 2016); Ernest J. Yanarella, *The Cross, the Plow, and the Skyline: Contemporary Science Fiction and the Ecological Imagination* (Parkland: Brown Walker, 2001).

⁵ See Jacques Derrida, ‘Ulysses Gramophone: Hear Say Yes in Joyce,’ tr. François Raffoul, *Ulysse gramophone: Deux mots pour Joyce* (Paris: Galilée, 1987), 57-143, and ‘Two Word for Joyce,’ tr. Geoffrey Bennington, in *Ulysse Gramophone*, 15-53. Also see: *Derrida and Joyce: Texts and Contexts*, eds. Andrew J. Mitchell and Sam Slote (New York: State University of New York Press, 2013).

Mars-centric scholarship makes up about a third of all existing criticism on Robinson.⁶ An early precedent was set by Carol Franko whose 1997 article ‘The Density of Utopian Destiny in Robinson’s *Red Mars*’ (together with her two non-Mars focused essays), set a standard⁷ for reading Robinson’s Mars narrative as a site of densely packed and folded ‘utopian possibilities.’⁸ Reliant on Bakhtin’s carnival, Franko argued that such events as the death of John Boone ‘transforms utopian destiny in the sense of carnivalizing it – making it dense with time and change, death and renewal, and also dense with stories.’⁹ Published before *Blue Mars*, Franko’s study

⁶ Of all other scholarship on the Mars Trilogy not addressed directly in this thesis, mostly minor or without significant contribution, see: Stan Nicholls, ‘The Colours of Mars’, *Starlog* (June 1993), 58-60, 67, which provides an overview of Robinson’s scope as of *Red Mars*; K. V. Bailey and Andrew M. Butler both offer very brief mappings of the novels: Bailey, ‘Mars is a District of Sheffield’, *Science Fiction Foundation* 68 (Autumn 1996), 81-6; Butler, ‘Heading Toward Utopia: Kim Stanley Robinson’s Mars Trilogy’, *Vector* 189 (September/October 1996), 7-8. So too with Paul Buhle, Peter Quinones, and Jeremy Smith: Buhle, ‘Green Dreams of Space’, *Capitalism Nature Socialism* (June 1998), 125-28; Quinones, ‘Kim Stanley Robinson on Mars’, *Firsts: The Book Collector’s Magazine* (October 1999), 24-31; Smith, ‘A World, Not a Nation: The Martian Utopias of Kim Stanley Robinson’, *Dollars & Sense* (September/October 2001), 55-6. Of notable exception is Walter Benn Michaels interpretation, first appearing in *New Literary History*, briefly mentioning the Trilogy (658), later developing into ‘The Shape of the Signifier,’ where he considered how the signifier of Mars worked in the novels, a point he later positioned in his book-length theoretical text *The Shape of the Signifier*, of which his reading of Robinson made up a chapter; ‘Political Science Fictions,’ *New Literary History* 31, no.4 (Autumn 2000), 649-64; ‘The Shape of the Signifier,’ *Critical Inquiry* 27 (Winter 2001), 266-83; *The Shape of the Signifier: 1967 and the End of History* (Princeton: Princeton University Press, 2006). K. Daniel Cho develops a strong reading of revolution through a theoretical lens, reading the novels as a staging of the ‘tumults’ of modernity in the Trilogy: ‘Tumults of Utopia: Repetition and Revolution in Kim Stanley Robinson’s Mars Trilogy,’ *Cultural Critique* 75 (Spring 2012), 65-81. Of final note is Colin Milburn’s essay in the 2012 Robinson issue of *Configurations*: ‘Greener on the Other Side: Science Fiction and the Problems of Green Nanotechnology’: ‘this essay proposes that the successful confluence of environmental politics with molecular science (green nanopolitics) depends on practicing science fiction in the real world, cultivating a green futurity already in the present’, 53; *Configurations* 20 (2012), 53-87.

⁷ Burling summarises her influence: ‘The first commentator, Carol Franko, established herself in the mid-1990s as an early leading Robinson’s scholar with a pair of articles in 1994 and 1995. Her third essay on Robinson (from 1997) ... builds upon her earlier work’, 5.

⁸ ‘Working the ‘In-Between’: Kim Stanley Robinson’s Utopian Fiction,’ *Science Fiction Studies* 21 (1994), 191-211; ‘Dialogical Twins: Post-Patriarchal Topography in Two Stories by Kim Stanley Robinson,’ *Science Fiction Studies* 22 (1995), 305-22; ‘The Density of Utopian Destiny in Robinson’s *Red Mars*’, *Extrapolation* 38 (1997), 57-65, and ‘The Density of Utopian Destiny in *Red Mars*,’ In Burling, *Kim Stanley Robinson Maps the Unimaginable*, 115-21.

⁹ Franko, ‘The Density of Utopian Destiny in *Red Mars*’, in Burling, 120.

stands out for influencing Robinson's own writing of the final novel, as he told McVeigh in an interview.¹⁰ It is explicitly detectable in the mention of 'dialogic' near the end of *Blue Mars* in which the standard models of the Parthenon of science 'were somewhat like Kuhnian paradigms but in reality (paradigms being a model of modeling) more supple and various, a dialogic process in which thousands of minds had participated over the previous hundreds of years...' (*Blue*, 656). Density is worth keeping in mind when approaching the way in which possible meaning for the reader is contained within the planetext's suppleness, or, as we will see in chapter 3, in its furrowing. Franko's work is useful for giving to the planetext a description of its density.

Published during the same year (1997) was Robert Markley's 'influential' and 'widely cited' 'Falling into Theory', which was 'among the first essays to address in detail the depth and sophistication of Robinson's portrayal of the political intersection of ecology and economics.'¹¹ Thinking of Mars as a 'multidisciplinary object' the dense planetext, according to Markley, can be approached from many directions. But no matter how deep and sophisticated Markley gets into eco-economics, what arises from his mapping of the theoretical terrain of the Trilogy is a similar approach found later in Elizabeth Leane's 'Chromodynamics: Science and Colonialism in the Mars Trilogy'¹²: a focus on the political allegories of science. This is a significant emerging trend, because despite the depth and theoretical complexity of these studies, which extend and explore the rich suppleness of the novels, in the end they must fall, via the allegory, into the gravity of Jameson's 2000 study 'If I Can Find One Good City, I Will Spare the Man: Realism and Utopia in Kim Stanley Robinson's Mars Trilogy' (*Archaeologies*,

¹⁰ 'Bakhtin was brought to my attention by the critic Carol Franko, after I had finished *Green Mars* and I looked up the essay on the dialogic element in the novel after she mentioned it. I wasn't aware of it before. It seemed to me to be expressing with amazing clarity unconscious theories that I'd had about the novel all along... It's always reinforcing to see a clear theoretical expression of what one's been trying to do and I think it actually helped me in figuring out certain problems in *Blue Mars*'; 'Red Prophet, Green Man, Blue Adept: Kim Stanley Robinson in Conversation with Kevin McVeigh', *Vector* 189 (September/October 1996), 4.

¹¹ Burling, 'Introduction,' 5; for Markley's three version of his essay, see: 'Falling into Theory: Simulation, Terraforming, and Eco-Economics in Kim Stanley Robinson's Martian Trilogy,' *Modern Fiction Studies* 43 (1997), 773-99; 'Falling into Theory: Simulation, Terraforming, and Eco-Economics in the Mars Trilogy,' in Burling. *Kim Stanley Robinson Maps the Unimaginable*, 122-43; *Dying Planet: Mars in Science and the Imagination* (Durham: Duke University Press, 2005), 355-84.

¹² Leane, 'Chromodynamics: Science and Colonialism in the Kim Stanley Robinson's Mars Trilogy,' *Ariel* 33, no.1 (2003), 83-104; 'Chromodynamics: Science and Colonialism in the Mars Trilogy,' in Burling. *Kim Stanley Robinson Maps the Unimaginable*, 144-56.

393-416). That Markley, Franko, and Tom Moylan¹³ all published before 2000 only makes clearer Jameson's place within the novels as more than simply a critic of them. In one sense, Jameson's study does not rise too far above Markley's or Leane's, the first of which gives an insightful reading of eco-economics, and in Leane of the political colour-coding 'enabled' by chromodynamics (a peculiar point to keep in mind is how this colour metaphor is brought into her reading entirely from outside the novels, from subatomic physics, and exists in the novels only as the political 'combinations' of the cast of characters). In another sense, Jameson's study sets a precedent that cannot be ignored, but almost has been in every instance, except two.

These two studies, by Kenneth Knoespel and William White,¹⁴ are unusual for glimpsing this new precedent, but they remain only a glimpse. We can begin to understand the full implications of Jameson's reading by first noting the hold he has over the critical field, not merely that he agrees with the general understanding that the sciences of the Trilogy are to be read politically and allegorically. Jameson adds the claim that utopia as such is not achieved in the novels, but awaits 'human history and collective praxis' (*Archaeologies*, 409). That the reader, I will argue in chapter 2, is the main conductor of this synthesis, begins to touch on Jameson's involution into the Trilogy. Density and suppleness in this sense represent something incomplete, even nascent, and ask the reader to supplement it. Before outlining the most severe implication glimpsed in Knoespel and White, one idea in Jameson most clearly expressed is how the rivalries and oppositions among characters 'stage an implicit debate with the objections and ideological and political prejudices of its readers' (*Archaeologies*, 410). The place of the reader in a textual landscape that is supple in allusion and recursiveness, and greatly contested, begins to break through to the reader and to introduce a question over the conduct of reading. White and Knoespel (in 2007 and 2012, respectively) sought to provide some sense of the reader's access into the novels so as to avoid becoming lost in the folds of the suppleness, or between the range of political oppositions. White

¹³ For Moylan's articles see: 'The Moment is Here... And It's Important: State, Agency, and Dystopia in Kim Stanley Robinson's *Antarctica* and Ursula Le Guin's *The Telling*', *Dark Horizons: Science Fiction and the Dystopian Imagination*. Raffaella Baccolini and Tom Moylan, eds. (New York: Routledge, 2003), 135-54; *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia* (Boulder, CO: Westview Press, 2000); 'Utopia is When Our Lives Matter: Reading Kim Stanley Robinson's *Pacific Edge*,' *Utopian Studies* 6.2 (1995), 1-25; 'Witness to Hard Times: Robinson's Other Californias,' in Burling, 11-47.

¹⁴ Knoespel, 'Reading and Revolution on the Horizon of Myth and History: Kim Stanley Robinson's Mars Trilogy', *Configurations* 20 (2012), 109-36; White, 'Structuralist Alchemy in Kim Stanley Robinson's *Red Mars*', *Extrapolation* 48, no.3 (2007), 578-603, and 'Structuralist Alchemy' in *Red Mars*, in Burling, *Kim Stanley Robinson Maps the Unimaginable*, 204-223.

claimed one mode of readerly assistance or instruction is Michel's Greimas square used in *Red Mars*. He applies this to John Boone to uncover the interplay in his narrative between irony and myth, aiming, so he claims, to 'explode'¹⁵ the multiple binaries of the novel. What was missing was another recursion, reading Michel himself with this schema.

One application of Knoespel's study, then, would be to realise and follow this reflexive moment more fully, and turn the 'autoreferential inscription' back onto Michel, the one character who divulges it (I take up this step in chapter 2.). Despite being written after many years of similarly Jamesonian analysis, Knoespel mentions Jameson as rarely as he mentions Michel. Despite claiming 'it is the practice of reading that both uses and moves beyond realism,'¹⁶ referring to Jameson's argument for the 'ontological realism' (*Archaeologies*, 402) of the Trilogy (or their sense of the social constructedness of all natural phenomena), Knoespel fails to connect Greimas with this practice of reading attuned to the inscribing of Jameson's auto-references. Nor does he mention White's argument, which perhaps explains this absence. Once this way of reading the novels' recursiveness is staged between Knoespel, Jameson, and White in the same way readers' prejudices are staged within the novels, a straight forward reading of the Trilogy is no longer possible without serious attention being given to reflexivity. While White comes closest to recognising this troubling element, it is ultimately Jameson who casts the longest shadow, as it is his theoretical work that addresses Michel's recourse to himself, as a man in need of help from his depression. We will be most chiefly concerned with Jameson, therefore.

Discussion of the different paths of reading, as they are contained already in the novels, are local to these studies. Others offer less recursion and more allusion. Shaun Huston began this line of reading by finding in the novels traces of the social ecology of Murray Bookchin. Huston claims that Robinson 'provides a fruitful exploration of what Bookchin refers to as third or free nature, a synthesis of first (bio-physical) nature and second (human social) nature.'¹⁷ Eric Otto detailed the place of Aldo Leopold's Land Ethic in the Trilogy, which serves as an effective doorway into

¹⁵ White, 'Structuralist Alchemy,' in Burling, *Kim Stanley Robinson Maps the Unimaginable*, 205.

¹⁶ Knoespel, 'Reading and Revolution,' 118.

¹⁷ Burling, Introduction, 7; Huston, 'Murray Bookchin on Mars! The Production of Nature in Kim Stanley Robinson's Mars Trilogy,' *Lost in Space: Geographies of Science Fiction*, Rob Kitchin and James Kneale, eds. (New York: Continuum, 2002), 167-79; 'Murray Bookchin on Mars! The Production of Nature in the Mars Trilogy', in Burling, 231-41.

thinking of Robinson as a regional writer of California and the desert.¹⁸ Chapter 1 takes up some of this terrain of desert ecology. William Burling's 2005 essay on the role of the political theory of Ernesto Laclau and Chantal Mouffe in *Blue Mars* serves, as he says, to 'explore... the political thought-praxis arising from considering both texts (*Hegemony and Socialist Strategy* and *Blue Mars*) in combination.'¹⁹ All three, we can see, conduct themselves not only through a combinatory allusiveness, but also by focusing on the 'synthesis'²⁰ that arises out of doing so. Yet, by standing on Jameson's study, whom Burling acknowledges 'represents a milestone in critical understanding of the Mars Trilogy'²¹ – how 'all of the scientific problems described in the novel, without exception, offer an allegory' (*Archaeologies*, 395-6) – the combinatory way of reading, in the end, begs the question of what would happen if we combined Jameson's theoretical work itself with the Trilogy? Allusiveness and recursiveness both lead us toward Jameson's reading.

This question over combination also has critical relevance in the management of the large cast of characters. 'Multiple Perspectives in Kim Stanley Robinson's Mars Series' is the most explicit reading of this kind, in which William Dynes argues

Robinson deploys a wide range of narrative techniques in order to explicate the relationships between individual psychology and scientific, ecological, and political perspectives. These techniques include a narrative tone that permits a range of characterization while still binding the whole within a genuinely comic vision, a point of view distributed among several characters, and both explicit and implicit interrogations of the metaphors that constitute understanding.²²

Despite noting such metaphors, all views are in the end collapsible into one 'point of view' distributed among many. According to Leane's colour spectrum metaphor, these many views coalesce and synthesize into white light. Yet, the ways in which the spectrum either coheres and forms a single view, as Dynes suggests, or remains discordant and irresolvable, is one of the major debates among critics, staging, with not a little irony, the debates and prejudices of characters. The main point of disagreement is over

¹⁸ Otto, 'Kim Stanley Robinson's Mars Trilogy and the Leopoldian Land Ethic,' *Utopian Studies* 14, no.2 (2003), 118-35; 'The Mars Trilogy and the Leopoldian Land Ethic,' in Burling, *Kim Stanley Robinson Maps the Unimaginable*, 242-56.

¹⁹ Burling, 'The Theoretical Foundation of Utopian Radical Democracy in Kim Stanley Robinson's *Blue Mars*,' *Utopian Studies* 16 (2005), 75-96; 'The Theoretical Foundation of Utopian Radical Democracy in *Blue Mars*,' in *Kim Stanley Robinson Maps the Unimaginable*, 157-69.

²⁰ Otto, 'Leopoldian Land Ethic,' 243.

²¹ Burling, Introduction, 4.

²² Dynes, 'Multiple Perspectives in Kim Stanley Robinson's Mars Series,' *Extrapolation* 42, no.2 (2001), 150-64

whether the reader is able or unable to form a viewpoint from the novels based on their multiple perspectives. Eric Otto, for example, claims ‘Robinson’s multi-positional narrative approach attests to his desire to move closer to utopia by encouraging readers to synthesize continually a complex array of political positions.’²³ Ernest Yanarella most strongly holds up the other side, with his claim that the ‘polyphony of subject positions’ is ‘an authorial ruse to exonerate Robinson of the apparent responsibility for choosing or determining the outcome of the terraforming controversy.’²⁴ Both views are useful, but we can only hope to ‘synthesize’, as Otto suggests, the critical viewpoints into a single understanding of perspective by going along not with Otto but with Yanarella, with the caveat that the authorial ruse is not made by Robinson but someone else, namely Jameson. Arising from the various mappings of viewpoints, dialectical binaries, polarities, and discords in and around the Trilogy by various critics is the overwhelming sense with which they cohere not with each other but with the general encouragement (Otto), or ‘temptation to reconcile’ as Jameson terms it, of the reader to synthesize (*Archaeologies*, 409) what they read. The ruse is not to step back from choosing a viewpoint on the morality of terraforming, but to offer instead the viewpoint of viewpoints, the shifting authorial figure who floats from character to character, Jameson himself.

This study therefore goes along with Yanarella for the reason that he, more than anyone, begins to gain a sense of the ‘ruse’ through which viewpoint is managed and problematized. To follow him is also to gain a deeper sense that any summation and understanding of the critical scholarship of the Trilogy must come up against the very same summation and understandings of viewpoints within the books themselves. An interrogation of perspective is a very viable means by which to follow the contours of their suppleness of recursion and allusion. This study considers the irony that a useful way to go about this interrogation is to combine critical understandings of textual reflexivity, allusiveness, and perspectival positions and the trouble all this causes for the reader. It is important, as I have said, to find recourse from this troublesome element.

The other major critical contribution, again found in Jameson, though not creditable to him as the originator, is the critique of scientific ideology assumed in the reflexive move. This will concern us mainly in chapter 3, and in the narrative of Saxifrage Russell, of which Leane claims traces the ‘movement from a reductionist, ultra-rationalist science to one which appreciates the ‘peculiar symbolic logic of the limbic system.’²⁵ Critique of ideology as a bildungsroman was taken up in Sherryl Vint’s reading of

²³ Otto, ‘Leopoldian Land Ethic,’ 254.

²⁴ Yanarella, ‘Terra/Terror-forming and Death Denial in Kim Stanley Robinson’s Martian Stories and Mars Trilogy,’ *Foundation* 89 (Autumn 2003), 18.

²⁵ Leane, ‘Chromodynamics’, 153.

Galileo's Dream,²⁶ and by Markley, who read Frank Vanderwal in the *Science in the Capital Trilogy* as a version of Sax.²⁷ As is clear from Vint and Markley, criticism of other Robinson texts has its benefits for reading the *Mars Trilogy*.²⁸ What is not entirely clear from these studies is how this movement, in which the practitioner of science must find themselves embedded within language, traces an arc through an ironic turn. That this turning is found in the signatures of reading and serves as Sax's therapy after his stroke and subsequent aphasia, positions the *Trilogy's* interpreters and recursive motifs as ways to critique ideology. They aspire to teach scientists about the written-ness of all scientific practice.

It is worth holding in mind Robinson's opinion on this 'pedagogy' of science fiction, given in the interview for *Configurations*, that it and 'the arts and humanities need to be 'science's consciousness'.²⁹ The tension of this consciousness became more apparent in his preface to *Green Earth* (a republication of the *Science in the Capital* series in one volume) where he claimed science is artificial intelligence,³⁰ giving light not only to the allegorical coding of A.I. in science fiction, but also to its suggestion of the mechanism and ethereal awareness of textuality. Its pedagogy – that 'science fiction is play that helps teach us how to act'³¹ – aligns not so much with the mechanisms as with the awareness, what is laid down most clearly in its internal instructions over method. The ways in which the novels propose methods by which the reader can access the narratives within the *Mars Trilogy* is a preoccupation touched on by some critics, but not taken by others who might have benefited from doing so. This study aims to take up this task of combinatorics, so valued in the novels by critics, but rarely adopted within the contestations and interpretations among critics themselves.

²⁶ Vint, 'Archaeologies of the 'Amodern': Science and Society in *Galileo's Dream*,' *Configurations* 20 (2012), 29-51.

²⁷ Markley, "'How to go forward': Catastrophe and Comedy in Kim Stanley Robinson's *Science in the Capital Trilogy*,' *Configurations* 20 (2012), 15-6.

²⁸ Other such studies see in bibliography: Kevin McVeigh (1996); Paul Buhle (2002); Helen J. Burgess (2006); Fred Bush (2002); Adam J. Frische (2005); Alan R. Slotkin (1997); Susan Stratton (2001); Paul Voermans (1999); Philip E. Wegner (2002); Geoffrey Winthrop-Young (2003); James Kneale (2010); Timothy Sweet (2010); Adeline Johns-Putra (2010); K. Daniel Cho (2011); Kathleen Ann Goonan (2012); Istvan Csicsery-Ronay Jr. (2012); De Witt Douglas and Kilgore (2012); Doug Davis and Lisa Yaszek (2012); Eugene Thacker (2012); Bruce Millen Sullivan (2014); Nicholas C. Laudadio (2017); Andrew Rose (2016).

²⁹ "'Science's Consciousness': An Interview with Kim Stanley Robinson,' *Configurations* 20 (2012), 190.

³⁰ 'Science often tells us things we couldn't see as individuals, and fiction can benefit from that infusion of artificial intelligence'; 'Introduction', *Green Earth* (New York: Del Ray Books, 2015), xiv.

³¹ Robinson, 'Introduction,' in *Future Primitive: The New Ecotopias*, ed. Robinson, (New York: A Tom Doherty Associates Books, 1994a), 9.

This is to stake two claims on the debates about and within the Trilogy: that the perspectives in the novels are irreducible as readings (which is assumed in their rehearsal for future readers), and that this lack of resolution among characters is announced through signatures of reading itself. To begin to get a sense of these methodological glimpses of the Martian planetext from a variety of views, this study necessitates a long view, and so dedicates its four chapters to four characters: Ann, Michel, Sax, and Hiroko respectively. By allowing a slow analysis to unfold around this small cast of characters, the limitations and invisible tensions of the orbital reading are overcome by dividing the kinds of analysis it conducts into general text-wide readings and closer readings of individual moments. In the first case, Ann's deconstructive resistance means both halves of chapter 1 maintain this division poorly, as the whole issue that arises from the beach scene (read in the second part: *The Wandering Exorbitant*) is precisely that of the modes by which we as readers can begin to move from character to character. Chapters 2 and 3, however, much more cleanly adopt a theory-practice divide between their two parts. Chapter 4 is brought about on similar grounds to Ann in which sharp textual focus starts to sit within a wider, more expansive planetext. The issues linking chapters 1 and 4, therefore, speak to this variation of the opening and the closing of readings, how we might as readers enter and exit the planetext, work on its horizons and form the planetary unit which distinguishes the Mars Trilogy's immense scale.

Engaging with the characters on their own terms firstly means avoiding the social pressure of the text to view them through other's eyes, most especially Michel's, which, in truth, performs the manoeuvre by which Jameson enters the novels as a reflexive allusion. It means careful attention must be paid to a small cast of characters across a long study, which opens enough space to properly deal with the phenomenologies of the planetext of the Mars Trilogy. While science is my key to understanding these phenomenologies, this thesis makes no claims on science fiction as a genre, nor on environmentalism. Yet both areas of fiction and criticism should not be shut off, but lie beyond the periphery of this account. The hope is that by the end of this study, the reader of *Robinson* may return to the Mars Trilogy, to its criticism, and to other work in Robinson's bibliography with a deeper and more detailed sense of how the planetary unit functions through the range of sciences and readerly strategies. Being the first long study of its kind, with this sense of the satellite criticism, this thesis aims to be the first rover expedition onto Robinson's Mars, where the intimate composition of its rocks can be more rigorously appreciated.

How, then, does all this unfold across this study? In the first place, the four different readings assume that to read Ann from Michel's, Sax's, or Hiroko's perspectives would differ very much from Ann's herself. But it is not as simple as showing *how* each character thinks about themselves, or

what they think of themselves. Each of these readings finds no point in the novels which allows us to exit from the gravity of viewpoint and find ourselves safely in orbit where their collisions and character arcs can be most fully mapped, except for chapter 4, with Hiroko, which makes an important concession. Each view, and to some extent each chapter, is irreducible. This is not a set of four independent readings, and nor are the results and implications so uniformly independent. The first picture this thesis begins to give, in chapters 1 and 2, lies with the varying challenges and outcomes of the way planetexts hide from interpretive conduct, stifle the reader, overcome their methods, and confound the planetext as a meaningful site of narrative events. In the first case of Ann in chapter 1, her own resistance is a purposeful deconstruction of the terraforming narrative as it dominates the novels. The issue over accessing or not accessing the expanse of the planet is therefore announced, or fails to be announced, in the realm of the non-living planet and her status as a geologist. Her narrative underscores all the voices of the Trilogy with a pervasive and largely drowned out silence of the world of rock and stone. In chapter 2, however, the confounding planet takes on the form of Michel's emotional issues and the science of psychology. In its first half, his attempts to philosophise his depression in order to cure it end only by overdetermining its causes, making his self-therapy all but useless to him. In the second half, this overdetermination takes on the form of depression itself. Both cases of Ann and Michel, while focusing on their depressions and the way in which their own planetexts recede from view and meaningfulness, stand quite far apart when it comes to how the planetext moves away from them through their unique interpretants of geology and psychology. Ann's deconstructive geology of resistance does not at all confound the reader in quite the same way as Michel's psycho-therapy. On the contrary, deconstruction will remain effective for holding Ann in view and for maintaining an eye on the deconstructibility of the text, so far as she and her rocky planet can be held in view. It opens some of the more challenging and tense problems over interpretive conduct itself which subsequently unfold, beginning with Michel's method.

Chapters 3 and 4, then, step out of these tensions by which meaning is shut down or rigorously controlled by internal logics, and begin to chart two paths by which the planetext in the Trilogy most effectively opens for the reader, and is produced and generated as a meaningful object. Sax's encounters with Mars serve more than those of any other character to introduce a set of qualities by which a productive scientific hermeneutic can begin to form. This is then taken further in chapter 4 into the strange role of Hiroko in the novels, and her comparative lack of textual focus. Her disappearance coincides not accidentally with the terraforming of the planet. Her religious concept of *viriditas*, recycled from Hildegard of Bingen (1098-1179), is deployed as a coefficient of viridical writing, as dependent

on Hildegard as on Derrida's concept of force. Of all the modes of reading the planetext, viridical force speaks most for its readability, at the same time that it forms itself on a deconstructive bedrock. Chapter 4 therefore turns full circle to Ann's method and viewpoint, only to complicate it within the Martian writing of areography.

To summarise this trajectory in another way, chapters 1 and 2 focus on the problems of forming meaning of the planetext, both for Ann and Michel, and for readers, assuming a readable planet is firstly organised around its textuality. As separate cases, Ann's focus is on the areas of the planetext that cannot be revealed or spoken, but must remain silent, invisible, and in the dark. Her approach therefore provides an ethical method that always takes a sidelong glance at whatever method is speaking loudest and most forcibly in any reading. This leads into chapter 2, where we find this authority of the text announcing itself. But the deconstructive ethic of Ann cannot be forgotten, and so Michel's method can no longer be used without self-consciously noting the movements and tones of the vast shadows it casts across the Trilogy. Where chapter 1 aligns itself through this ethical commitment to Ann's resistance, chapter 2 assumes a similar self-reflexive reading is possible, except that to do so with Michel reveals a terrain of internal tensions over reading itself which eventually close it down. Chapter 3, on the other hand, cannot begin so simply by applying readerly methods to those characters who divulge them, without noting their varying effects. A discussion of Sax asks: what are the features by which scientific methods of reading are made at all possible? It is an attempt to move away from the dead-end of Michel's method for what else might be offered as interpretants in the Trilogy, if readerly conduct is not to collapse under the weight of overdetermination. This stands as the thesis's contribution over method, discussed as a philosophy of science grounded in Sax's character arc. Chapter 4 then finds that Sax's approach to his work need not be limited to him, but discovers another shade in Hiroko's unique role in the Trilogy. Chapter 4 marks out its own distinctiveness by shifting from the strict focus on single characters to a gradual widening of the critical aperture. By the end of the thesis the various approaches previously discussed begin to form the cohesive object of the planetext around viridical force as it occurs across the novels.

The trajectory moves from the complications and disappearances of the planetext to its meaningful formation and expansion. Held together, this study understands that the planetext is inherently expansive, immense, difficult to access, challenging, irreducible, fraught and dangerous, enlightening, educative, responsive, and, most of all, always rising, occurring, recurring, or falling away from the reader's periphery as they move around inside it. These many ways onto the planetext, which attempt at great length and depth to fall from orbit onto the planet proper, all come to understand the planetext as it lies about them: non-linear, available,

diffused, hidden, and expansive. The many forms of the planetext, or the many dimensions of planetexts available, serve as the immense enframing object of the novels. Planetography, or a graphology of the planet, planetary writing, are taken up in each chapter as a form of writing to be read as well as conducted, rendering their unique approaches to the environment of the text to inform new approaches through which to read them, and perhaps other planetexts. They are the models by which we as readers can begin to form a sense of areographia, or Martian writing.

The work of chapter 1 is to open the very idea of planetary writing, or planetextuality, itself. It takes the lead from Ann's approach to the non-living world of Mars and considers how Ann is positioned in the Mars books as their *différential* core, arriving at the conclusion that she maintains their deconstructibility, a point that will serve throughout the thesis. To give a sense of *différance* at work in her way of approaching the geological planet, it is necessary to find Ann always on the edge of the story, walking its margins, setting out for its wildernesses. The first iteration of the planetext concerns a geomedia, or geolinguistics of silence, and the way in which any writing of the planet must first of all possess a sense of non-writing, or hiddenness of the planet that is being written over so forcibly in the form of terraforming. Her antagonistic role in the Trilogy is to raise this issue of written-ness and silence, that we must first encroach on planetexts through their margins. This first half of chapter 1 ends with the naming of these margins as wild spaces, and aims to recuperate wilderness not as a place of original nature, but as an ecology without life. In the long run, non-life will be picked up again in chapter 4 with its discussion of the role of death and dying as a function of viridical force.

Chapter 1 continues into thinking of Ann through these deconstructive dimensions and movements into the margins as a wandering exorbitant, and focuses partly on the role of walking in her narrative and what this says about how such a silent, marginal, and *différential* space as the rocky non-living planet is accessed, or not accessed, seen and not seen. It develops the role of the mongrel wilderness, this time with more focus on the grammatological nature of exorbitance, and the movement of the reader who, like Ann, can choose to move around inside the text with a non-linear trajectory. The nature of horizons as she moves across them and is always held within their ambit, is one more iteration of the skyline or *grammé* of planetography. Looking ahead to chapter 2, the final part of 'The Wandering Exorbitant' considers how this non-linearity is displayed in the final scene of the Trilogy, with Ann walking along a beach. A number of meanings of the beach itself are given, most especially of how it equivocates the sense of an ending, just as the horizon equivocates a sense of sky and land. The reader's fate is here positioned as the issue of what to do when the novels are closed, and proposes, after Derrida, that only once the book has been closed can the text be most effectively opened.

The beach, the horizon, the non-living planet, all function in Ann's planetext as instances of *différance*, the sense with which the non-living quality is never quite without her own sense of being alive, or the horizon is never fully a barrier or a traversable ridge, or whether the the beach is the final destination of utopia, or simply the end of pre-history. The confusion is as much historical as spatial. And so chapter 2 takes up this historicising mode itself in discovering in the narrative of Michel a Jamesonian program of reading. In its first half, it states that Michel is the most likely candidate for Jameson's own *analogon* within the books and the dictator of a method by which to read them. The first half – 'Archaeology of a Method' – interrogates Michel's narrative in *Red Mars* from this angle of interpretation, and focuses on Michel's attempts to manage his depression with philosophy, by theorising it within a scheme which seeks to protect and maintain a sense of rationality. The question, then, over planetextual meaning, is to discover in the interplay of Michel and Jameson a scheme for managing madness and reason, to cordon off depression as an affect inherently inflicting overdetermined unmeaning over Michel's experiences, and to sustain a coherence only within a Jamesonian program.

However, the severe involutions of reading Michel in this way in the end challenge the effectiveness of such a defence mechanism. For Michel, as is explored in the second half – 'Headfirst into the black sun' – never escapes or successfully defends himself from depression. This second half of chapter 2 proceeds more forcefully into this issue of depression, and claims that Michel's depression functions through overdetermination. It focuses on a specific moment in *Blue Mars* when he returns home to his native Provence, and there attempts a similar kind of defensive strategy. Instead of philosophy it is through the very rhetorical allegories of reading itself, of the tension between differing modes of narrative, and his Proustian search for lost time, that depression works to form an overdetermined planetext. The issues with the Jameson program are carried through as overdetermination. Chapter 2 therefore charts two of Michel's failed attempts, in *Red Mars* and *Blue Mars* respectively.

At this point the thesis shifts direction, turning from two iterations of the planetext as a site of contestation, affective assault, loss and failed recuperation, to other modes by which planetexts are made available, accessible, comprehensible, and meaningful. The first path of chapter 3 – 'Modus Saxifraga' – gives a reading of the methods by which Sax deliberately conducts his science. Discussing the very nature of scientific practice, it suggests Sax is describing something very crucial about scientific method when he compares the body of scientific knowledge to the Parthenon, as well as using the ancient method of loci, or memory palace technique, to aid his recovery from aphasia. Instead of reading the arc of his recovery as a critique of science, I argue that it is an occasion to strengthen his reductive science with a deliberate renovation of the house of language

onto the Parthenon of science. This deliberation owes something to two major philosophers and historians of science: Thomas Kuhn (whom Sax mentions directly in relation to the Parthenon), and Paul Feyerabend, whose famous quip over method – ‘anything goes’³² – works to reconstruct a scientific method of plurality, expressed by Sax as ‘throwing together’ (*Blue*, 47).

A deliberation over method is, however, only half of this account of Sax. ‘The Spur of the Mind’, much like the close reading of chapter 2 in *Provence*, focuses exclusively on a few scenes in Sax’s narrative: while he is with math genius Bao Shuyo; while he contemplates Deleuzian cosmology wandering in a valley; and while standing on a cliff pondering the nature of moments. The basic contribution this half makes to Sax’s understanding of the planetext (so far as it is approached through the scientific method) is that any deliberate reading must be combined, or thrown together, with a spontaneous one. This section focuses very specifically on the ways in which thoughts arise in moments of his narrative, and how this arising of mental phenomena, when combined with the arising and changing of planetary phenomena, seems to occur always on the spur, or edge, of one’s sense of place. The planetext is always ‘on-the-tip-of-the-tongue’, always ‘*presque-vu*’, almost seen (*Blue*, 641). These two sections of chapter 3 argue Sax’s planetext is organised around both a very deliberate methodological inquiry and a spontaneous sense of moments.

By this stage it will become clear that the planetext of the Mars Trilogy can be read through its deconstructibility and inherent *différance*. It contains a tension over meaning, found most troublingly in Michel, while another interpretive method lies with Sax. The final chapter continues all three of these arguments, and begins to form a sense of what I am calling viridical force, a combination of viriditas and Derridean force, which functions as the novels’ widest generator of meanings. The first half returns to the issue raised in chapter 1 over deconstructibility, yet supplements it not with reiteration but how it appears to Nirgal and Zo Boone. The nature of viridical force means its greatest proponent, Hiroko, might become its character focus in the same way as the others, except for the fact her perspective is never given. Chapter 4 is therefore distinct in its focus. Instead of serving as the knot of the previous three, it departs through the Trilogy’s deconstructive possibility into thinking of the planetext in a way different from the other chapters. For chapter 1, the focus is on geology and what form interpretation might take if geology were taken up as its guiding logic. Chapter 2 takes a deeper reflexivity, and sees psychology and

³² Feyerabend, ‘Consolations for the Specialist’, *Criticism and The Growth of Knowledge: Proceedings of the International Colloquium in the Philosophy of Science*, London, 1965, volume 4, eds. Imre Lakatos and Alan Musgrave (Cambridge: Cambridge University Press, 1970), 229.

theorization pointing to themselves as another such logic. Chapter 3 begins to chart a different course, and takes up the task of discussing the scientific method itself for building a phenomenology of the planetext. Instead of repetitively applying one more science to one more character, chapter 4 instead begins to depart from a strictly scientific focus, and considers the planetext through its more spiritual or mystical forms. This should by no means be taken as stepping away from the previous readings, but can be understood as being held in tandem with them.

The final section of the thesis – ‘In the Martian Bardo’ – considers the role of dying in the instruction of viridical life. It is the one instance in which this study attempts to expand beyond the strict focus on character, and where it takes up deconstructibility with the clearest aim of discussing how viridical life is always *différential*, always living with a host of Martian ghost memories and previous literary incarnations. Here, Martian literature, and specifically Ray Bradbury’s *Martian Chronicles*, helps give the sense with which the planetext is organised around many other planetexts, and that to search throughout the novels for a viewpoint by which to understand all the others cannot be reached, except through difference. ‘In the Martian Bardo’ returns to its initial point with deconstruction, and seeks to leave the reader with a sense for how death in the Mars Trilogy is one of its most important equivocations of planetextuality, for it both informs and instructs the meaning of viridical life, and does so by disclosing the planet as a bardo space in which writing the planetext must deconstruct its historicism. The strange movement enabled inside the bardo is, I claim, the very act of reading. With this final movement we can begin to return and move through the Trilogy without a strictly linear path. This final iteration of the planetext aims to open its regions to new readers, and to allow for the very act of reading to more fully adopt its role in shaping planetextuality.

CHAPTER ONE

Ecology without life: Phenomenology of the non-living world

Time, to an atom locked in a rock, does not pass.

– Aldo Leopold

Deserts have been shown to resist history and develop along their own lines.

– Patrick White

‘The areophany has always been understood as a green thing, right from the start. I suppose because of Hiroko, because she took the lead in defining it. And in bringing it into being. So the areophany has always been mixed up with viriditas. But there’s no reason that should be... There has to be a red worship of this place that people can learn to feel. The redness of the primal planet... Wanderers’ rights as well, areologists’ rights, nomads’ rights. That’s what areoformation might mean.’

– Kim Stanley Robinson¹

THE CLAIM OF GREENNESS among ecocritics and ecological literature covers, apparently, most of what we are calling the planetext of Robinson’s Mars. Yet, the planetext is not so formally singular, but is *a* planetext, which in the case of Ann is the mark of its *différance*.² The red remainders around green Mars, of which she herself is one, are preserved in the high calderas of volcanoes, or in the outreach of the Solar System on the Uranian moon Miranda. Yet by cordoning off these regions as natural parks, the claim of the green viridical planet is too easily upheld around a chauvinism for life, and a naïve sense of wilderness as original and other. Recent ecocritical attempts have departed for a more prismatic ecology,³ an ecology of stone

¹ Leopold, ‘Odyssey’, *A Sand County Almanac: With Essays on Conservation From Round River* (United States: Oxford University Press, 1970), 111; White, *Voss*, quoted as an epigraph in Patricia Nelson Limerick’s *Desert Passages: Encounters with the American Deserts* (New Mexico: University of New Mexico Press, 1985); Robinson, *Blue Mars* (New York: Bantam Books, 1996), 271-2.

² ‘I shall speak therefore of a letter.’ Jacques Derrida, ‘Différance’, in *Margins of Philosophy*, tr. Alan Bass (Great Britain: The Harvester Press, 1982), 3.

³ Lawrence Buell writes in his ‘Forward’ to *Prismatic Ecology* of the ‘speciousness of reducing ‘ecology’ or ‘ecocriticism’ to ‘green’.’ Later in the volume, Timothy Morton echoes this warning with an equal departure from reductive concepts: ‘Going ‘beyond green’ means going beyond nature... What is required, contrary to

and the inhuman,⁴ to bring into focus what cannot in fact be brought entirely into focus, that the Anthropocene demands not only a knowledge of geology but also of the geosphere in its about-ness, and all that it pulls into view, or cannot pull into view.⁵ An understanding of Ann's geological planet must take into account its exorbitance as we follow her through the *différential* A of her name, the 'anti-' quality and antagonism of her resistance to the terraforming project.

A geological planet is first and foremost a composite of rock, which, even in the early days of the colonizing and terraforming of Mars, sits about the colonists, not a *tabula rasa*, but surrounding them with rocks, dunes, mountains, plains, etc. For the terraformers Sax, Michel, and Hiroko, the 'world awaits composition', and these pieces provide the building blocks. But for Ann, the planet is not a blank slate, nor a dissembled civilization. She is 'surrounded by' a variety of geological phenomena 'each evocative of materialities to come.'⁶ Yet, to call this a redness, as is shown by previous readings of Ann, only makes sense around verdant greenness, and perhaps assumes too much on its behalf. A proper account of what surrounds the claim of colour is less a prismatic variety than a dark ecology, a region of primal wildness in which the preserved spaces of Mars are forced into a mongrelized form, both wild and constructed, and stand not merely to announce social construction (which is assuming too much), but also the inherently exorbitant dark ecology of the lithosphere. To begin to speak about Ann's planetext of stone, to call for her ecology without life, means we

mainstream environmentalism... is ecology without nature.' *Prismatic Ecology: Ecotheory Beyond Green*, ed. Jeffrey Jerome Cohen (Minneapolis: University of Minnesota Press, 2013), ix, 311; cf. Morton, *Ecology Without Nature: Rethinking Environmental Aesthetics* (Cambridge, Massachusetts: Harvard University Press, 2007).

⁴ Cf. Jeffrey Jerome Cohen, *Stone: An Ecology of the Inhuman* (Minneapolis: University of Minnesota, 2015); Cohen (editor), *Inhuman Nature* (Washington: Oliphant Books, 2014); Cohen and Lowell Duckert (editors), *Elemental Ecocriticism: Thinking with Earth, Air, Fire and Water* (Minneapolis: University of Minnesota Press, 2015).

⁵ See for recent precedents Timothy Clark's *Ecocriticism on the Edge: The Anthropocene as a threshold concept* (London: Bloomsbury, 2015); Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013); Cary Wolfe 'Elemental Relations at the Edge', in *Elemental Ecocriticism*, 286-97.

⁶ Cohen, 'Introduction: Ecology's Rainbow', *Prismatic Ecology*, xv. On new approaches to materialities: cf. Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010); *New Materialisms: Ontology, Agency, and Politics*, ed. Diana Cole and Samantha Frost (Durham: Duke University Press, 2010); Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies* (University of Michigan, Open Humanities Press, 2012); Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, tr. Ray Brassier (London: Continuum Press, 2008); Elizabeth Grosz, *Chaos, Territory, Art: Deleuze and the Framing of the Earth* (New York: Columbia University Press, 2008) and *The Incorporeal: Ontology, Ethics, and the Limits of Materialism* (New York: Columbia University Press, 2017).

must have an ear for the very calling of dark regions that always already surround one's reading of them and draw one away from the colourful realm of *logos*.

This first iteration of a planetext follows Ann through a more conceptual purview of her narrative. So far as we are able to name concepts of concern by which to trace her wandering beyond *logos* – refusal of history, precarity of movement along the hard limits of dark ecology, *différance* and the glossolalia of stone and liquid forms, the resistant and dense readability of rock and ice – we are also confronting the appalling surface of the geosphere and how it resists usual interpretive strategies, particularly depth analysis. But this naming of concepts is to also fail at doing so; '*Différance* is literally neither a word nor a concept' (*Margins*, 3) What opens in Ann's experiences, instead, is a geomedia which tasks the interpreting mind as a mediator between the living and the non-living realms of the planetext, on the basis that rock itself is always interstitial,⁷ or in the margins of the viridical planetext. To think like a stone, or like a mountain, become real interpretive strategies for overlapping their appalling surfaces with mental events. The superintending consciousness is prefigured by a surrounding and less locatable planetext of rock. Ann's geological obsession attends to the dark ecology of the exorbitant planetext of stone and ice.

In 'Sur', Ursula Le Guin's short story of alternative history, a group of South American women set out for and reach the South Pole of Antarctica two years prior Shackleton's famous expedition of 1912. The women agree never to speak of reaching the pole, and so their place in history remains invisible and unspoken. The *Yelcho* expedition of 1909-10 is an alternative origin story which 'overturns imperial as well as patriarchal norms'⁸, according to Elizabeth Leane. This overturning, she argues, while invisible, or indeed because it is invisible, is 'utopian'⁹; or as Fredric Jameson might have put it, it is a history that struggles to imagine its own alternative; 'we are condemned to seek History by way of our own... simulacra of that history'¹⁰. And the way for the women of 'Sur' is toward the polar cap. Their path anticipates the Heroic history of Antarctic exploration in an attempt, according to a utopian reading, to overturn this history and seek out an alternative.

Yet, such a seeking runs the 'risk',¹¹ as Elena Glasberg argues, of recapitulating the old imperial narrative of Scott and Amundsen. In her book

⁷ See Cohen, 'Introduction: Ecostitial', *Inhuman Nature*, i-x.

⁸ Elizabeth Leane, *Antarctica in Fiction: Imaginative Narratives of the Far South* (New York: Cambridge University Press, 2012), 100.

⁹ *Ibid.*

¹⁰ Quoted in *Antarctica in Fiction*, 175; from Fredric Jameson's *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 25.

¹¹ Elena Glasberg, *Antarctica as Cultural Critique: The Gendered Politics of Scientific Exploration and Climate Change* (New York: Palgrave MacMillan, 2012), 20.

Antarctica as Cultural Critique, she contours the tension in reading Le Guin's story 'between the possibilities of reform and the techniques of repetition'.¹² 'Sur' is a precarious narrative. And Glasberg mourns the postcolonial historiography that 'retraces the history it critiques', 'reinscribing a global feminist discourse antipathetic to subalternist politics.'¹³ Despite the precarity of 'Sur', it also offers an opportunity to read against this trend, and instead understand the polar expedition as an encounter with the 'limits' of the 'subaltern impulse' to 'become both foundational and global'. I will claim in this line of thinking that a precarity likewise resides in reading the narrative of Ann Claybourne in the Mars Trilogy which offers an alternative to the terraforming arc, and indeed the narrative of the Trilogy as a whole; a claim which will only fully unfold across chapters 1 and 2. Before showing how Ann's narrative offers an opportunity to read against a historicizing methodology, and to instead read it through her experiences of the 'hard limits' of stone, other similarities between Ann and Glasberg's interpretive strategies establish a ground on which to build a sense of a phenomenology, rather than a historiography, of Ann's non-living Mars. We shall begin with this point: Ann's feminism, like the women of 'Sur', begins with refusing history.

She is herself very aware of the danger of imperial recapitulation. When it comes to arguing with Sax Russell, this danger is fully captured in the terraforming project. In their first argument of many across the Trilogy, Sax explains 'deciding to go to Mars is like the first phrase of a sentence, and the whole sentence says—', to which Ann interjects '*Veni, vidi, vici*' (*Red*, 40). Not only is it her wish to leave no footprints on Mars, but her stubborn resistance to terraforming marks it out against history itself. Yet what kind of history does she resist? Her geological work certainly provides us with another kind of history of Mars, yet it is mostly a record of *pre*-history. What we then do with this prefix determines a sort of priority against a human momentum and human history. Even under the potential to carve out a new, non-conquering utopia, there remains too much risk of ruining the original state of pre-colonized and pre-historical Mars. In this way Ann shares with the women of 'Sur' the fantasy of a pre-colonial space, only hers reaches deeper into pre-history.

Sax's analogy to the phrasing of a sentence is interesting for another reason. The decision to colonize constitutes as much a writing as a terraforming; the overlap between the two I shall explore in full across chapters 3 and 4. But the writerly aspect of terraforming suggests if and how Ann's geological stalwartness is a rebellion against language, or a kind of

¹² *Ibid*, 20. Glasberg also states: 'even Antarctica's feminist and postcolonial revisionist exploration history has been overrun' and 'recuperates the ... hierarchies it purports to redress.' xxiv.

¹³ *Ibid*, 20.

language structured around terraforming. By refusing to write the landscape with her footprints let alone with terraforming technology, Ann's resistance opens a better view of the tension between experiencing the planet through non-writing and writing as interfering with the planet. The writerly nature of exploring and terraforming means one path through resistance is an anti-writerly strategy of silence. The occasions when she voices her resistance stand out against most of the time when she does not. Lines such as 'Ann was still not talking' (*Red*, 544) form into strong character motifs. Her love for Simon seems to lie in his almost muteness, as a 'quiet ally of Ann's' Simon maintains a place alongside her, 'committed to pure research and a hands-off attitude' (*Red*, 135). Her refusal of history is enacted through a refusal to speak, a wish to exit language as a social engagement altogether, believing the two are crucially related. In *Green Mars*, after being outside studying the rocky landscape for too long, she experiences a partial loss of speech in 'the return of her glossolalia.' 'Talking was exhausting work, she wasn't used to it' (*Green*, 127; 129). We should therefore not go too quickly or only to scenes of her debates with Sax in which, we assume, her position is most consolidated and heard, but instead to moments when she keeps quiet.

Michel Duval, the resident psychiatrist on Mars, considers this anti-linguistic obsession with the dead matter of rock a 'denial of life' (*Blue*, 52), pointing in one of their therapy sessions¹⁴ to the 'masking' (*Blue*, 251) of her geophilia, hiding what 'she didn't want to remember' (*Green*, 131). Following Michel too faithfully may confuse the exact way in which Ann experiences the presence of death, whether desired or accidental, but it does point us in a direction of an ecology in which Ann's life comes up against itself and the world of lifeless matter. Michel's reading of Ann's resistance as a death wish restricts us to interpreting her wish for aloneness as anti-social, anti-human, and therefore anti-historical. But her escapes into the empty regions of Mars suggest instead that a margin of *differance* is discoverable at the limit of signification itself, the precarious place of wildness which must be masked, hidden, and silent to successfully provide its power of deference and difference. The culmination of Glasberg's reading of 'Sur' is the use of the short story in marking out the hard limit of experiences on the ice of Antarctica with the dream of obliteration. Ann's many experiences with

¹⁴ The full import of this session (*Blue*, 251-5) will be considered in detail toward the close of this chapter, suffice it to say at the outset that he suggests to Ann she 'go back to that point in [her] journey' that was the 'first' cause of her depression, and that her mourning for the loss of 'the world' is a 'displacement so strong' that it is masking the 'personal' reason for her depression (*Blue*, 251-2). Michel estimates her denial of life comes from her 'mistreatment as a girl' (*Blue*, 52). Jameson's opinion of Ann, that she is 'more than an allegory of Melancholy' (*Archaeologies*, 405) in the Freudian sense, brings Michel's diagnosis into a very close orbit of Freud's 'Mourning and Melancholy'. The fact that Jameson is already in this orbit, and that he and Michel share many interpretive features, is a fact to be considered at length in chapter 2.

death on the icy planet provide ‘glimpses of the nothingness, the cold, the non-entity that we might become on the other side of the limit’¹⁵, that is, the limit of signification.

The analogy between history and writing therefore extends to the topology of ice, in which its hardening allows for a density to remain resistant to terraforming and, as a metaphor, to interpretive melting. This is the case, shown by contrast, in the subliming of ice into Valles Marineris at the close of *Red Mars* which brings on a strong feeling of bewildering ‘glossolalia’ (*Red*, 546), the key to which is the verb form of sublime, indicating in this immense flooding of the largest valley in the Solar System, an encounter with an event so huge and overwhelming as to incapacitate expression and comprehension. The issue here is not to set up a ratio in which ice is meaningless and liquid water is meaningful, but instead that ice is silent against the loud jumbled noise of the glossolalic¹⁶ flood. This significant event for Ann’s experience of the planet that is ‘melting under [her] feet’ (*Blue*, 252) will be read in detail below. At this stage, we need only mention how the subliming of rock and ice challenge the coherency of a language, one that appears to be ready-made in its pre-colonial state of silence. Mikhail Bakhtin understood the content of pre-capitalist narrative to be ‘congealed’¹⁷ form, a hardening on which coherency of a ‘general collective creativity and myth’ is made possible. New content, therefore, is a thawing of the old ‘hardened’¹⁸ surface. The great flood, along with other events in the Trilogy, enact what is called in *Red Mars* ‘falling into history’,¹⁹ which is also a melting, subliming, or flooding of history.

¹⁵ Glasberg, *Antarctica as Cultural Critique*, 48.

¹⁶ *Oxford English Dictionary*, Oxford University Press. <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/79171?redirectedFrom=glossolalia+> ; accessed May 28, 2017. Cf. *polyphony* and *heteroglossia* in Mikhail Bakhtin’s *Problems of Dostoyevsky’s Poetics*, ed. and tr. Caryl Emerson (Minneapolis: University of Minnesota Press, 1984), 5-47, *passim*.

¹⁷ Mikhail M. Bakhtin, *Speech Genres and Other Late Essays*, trans. Vern W. McGee, ed. Caryl Emerson and Michael Holquist (Austin: University of Texas, 1986), 165-6. Also see Graham Pechey, *Mikhail Bakhtin: The Word in the World* (London: Routledge, 2007), 148-9; in particular: there is a ‘more or less smooth and automatic issue of form into content in premodern times. Form is conceived as generic pre-understanding or ‘congealed’ content which always precedes the initiatives of those who put it to use... The cultural texts of post-traditional societies effectively turn this situation inside out’, 148.

¹⁸ Bakhtin, *Speech Genres*, 166.

¹⁹ Other significant events of falling are the first space elevator in *Red Mars*, and the comet at the end of Boone’s only chapter ‘Falling into History’. The connotations of these events easily include Heidegger’s turbulence, to render the turbulence of history as an embeddedness of each individual in a social constellation. If the comet means anything along these lines to Ann, it is the feeling of being thrown into the subliming or melting process of history. It is hard not to therefore read the comet as a socially symbolic event; it hardly falls into Mars so much as it is thrown into it in order to accelerate terraforming. Nor is it accidental a social festival (to mimic

To engage the novels through this image of the congealing of water (content) into an icy form implies another image, this time used by Freud to speak about melancholy as an ocean of unintegrated content beneath the apparently icy surface. ‘Precipitation’²⁰ is the way the content registers on the top of the surface, and suggests itself to the analyst. The benefit of reading Ann through ‘Sur’ and Glasberg is to focus on this hardening of speech as a keystone to the experience of the non-living planet, and that more importantly there is value in ‘forgoing signification’²¹ as a step of resistance, preferring the non-representation of material rock and ice. There is no chance for precipitation to occur. As will be developed here and in chapter 2, psychoanalysis imposes into this margin of resistance, establishing a masculine penetrative desire to give meaning where, to the anxiety of the analyst, there is none. In their combat of readerly strategies, Ann’s affection for the silent sea of the North Pole regions only makes sense to Michel as a death wish.

This means the non-representational fell-fields of rock which Ann traverses in her journey to the north pole of Mars (a subtle restaging of ‘Sur’) is a clearing in which language itself does not operate properly either as congealing or precipitation. It is a plain of *différance*, only with a difference: the ‘pure graphic’ of *a* in Derrida’s term, as he claims, can only be ‘read’, or ‘written’, ‘but it cannot be heard.’ The polar regions are even more brutally silent, in which writing and reading are both pulled into the same impossibility as speaking. In the same sense in which Derrida claimed *différance* was ‘neither a word nor a concept’ (*Margins*, 3), going to the polar regions is a hope to put off or delay terraforming, hoping not only to study the regions while they are still untouched, but even retrieve some reason for halting terraforming altogether. These fell-fields of rock as they existed before terraforming are wildernesses, and therefore provide a means to deconstruct dominant methods and languages that repress larger clearings of experience. Glasberg articulates the clearing of ice as a surface on which nothing can be

the Bakhtinian carnival that opens the Trilogy) occurs around the event as its gathering point and socially symbolic act of history impinging on the red planet (*Red*, 364-82). For turbulence see thrown and thrownness (*geworfen[heit]*) in Martin Heidegger’s *Being and Time: A Translation of Sein und Zeit*, tr. Joan Stambaugh (New York: State University of New York Press, 1996), *passim*.

²⁰ Jonathan Flatley summarises Freud’s idea of precipitation as when ‘the ‘character of the ego’ is constituted by these losses as a kind of ‘precipitate of abandoned object cathexes... [Freud] is placing the melancholic mechanism at the very origin of subject formation.’ ‘Modernism and Melancholia’, in *Affective Mapping: Melancholia and the Politics of Modernism* (Cambridge: Harvard University Press, 2008), 49. I will refrain from fully accounting for Freud’s melancholia and the idea of precipitation here as it will feature below as well as in chapter 2. Suffice to say that precipitation indicates an uneasiness between form and unintegrated content, which thus seeps onto the surface as precipitate.

²¹ Glasberg, *Antarctica as Cultural Critique*, 47.

written: 'Ice is not to be written and not to be read. It is not to be captured within pages. It is not a book; certainly, it not *like* a book.' '*Antarctica as Cultural Critique*', she continues 'is a book of ice that instead opens horizontally'.²² To mimic the striations of ice in the ice core sample, the book of ice is an example of how, in reading the geological obsessions of Ann, a book of stone can be articulated along a horizontal line; as Patrick White put it in *Voss*, the line of the desert.

To approach the Trilogy with a method consistent with Ann's geology is to approach the horizon of the pre-terraformed Mars through Glasberg's hope for the 'chance for ice to be just ice'.²³ Yet the conduct of such a method has a precipitous edge, the edge of a quarry pit, the archaeological site, in which ideology is exposed as striations. This point is very useful for describing Ann's method as a conduct toward the planet that gives a chance for stone to be stone and nothing else. What can be said of ice and Antarctica can be repeated on an icy planet, and on Ann's particular interpretive strategies for experiencing the rocky deserts of Mars. Glasberg's approach to the iciness of ice is non-representational, and so in approaching the stoniness of stone, Ann's geology as a method without representational language involves experiencing the horizon of rock as a surface without depth. Her stone book 'resists', as Glasberg said of her own ice book, 'reading as detection of data and truth'.²⁴

This kind of detective reading is evinced in Jameson, in which the 'ground bass of material production' is 'ultimately detectable only to the elaborate hermeneutic Geiger counters of the political unconscious and the ideology of form' (*Unconscious*, 203). It is most of all taken up within Michel's psychology (chapter 2), and speaks both to relating surfaces and depths, as well as political psychoanalysis as two joint modes being resisted in Ann's narrative. It is of value, then, in the lead up to chapter 2, and for the sake of this argument, to discuss these modes and how they relate to Ann's resistance. This inquiry hinges on the relating of different scientific methods. It is significant that Jameson's description of the detective mode should precede a quotation we find repeated in the context of Robinson (*Archaeologies*, 400): Marx's advice to Feuerbach in his *German Ideology*, a critique or detection of scientific ideology: '...but where would natural science [geology, in this case] be without industry and commerce? Even this 'pure' natural science is provided with an aim, as with its material, only through trade and industry, through the sensuous activity of men' (*Unconscious*, 203).²⁵ Jameson significantly places this not in discussion of Ann, but toward critiquing the naïve realism of Sax Russell and his 'astonishment' at encountering the 'resistance' (*Archaeologies*, 400) of reality

²² *Ibid*, xiii.

²³ *Ibid*, 130.

²⁴ *Ibid*, xiii.

²⁵ Karl Marx and Fredric Engels, *The German Ideology* (Moscow: Progress, 1976), 46.

to be comprehensively known. Speaking against the ‘mystery stor[y]’ approach of realism appears to confuse the detective mode of critique of ideology between *The Political Unconscious* and *Archaeologies of the Future* (*Archaeologies*, 400). More importantly, while Sax’s resistance, a kind of bumping up against reality, is disfavoured, Ann’s resistance is a different kind of bumping up against reading as detection of ideology. The astonishment of this encounter gestures to some other quality of the surface which fails to yield depth. Far from suggesting Ann’s narrative constitutes a realism, there is present in it a hard granite surface which cannot be broken. The only means at Jameson’s disposal of interpreting the vacancy of the wilderness of the rocky planet is to dialectically fill it in with a political production, a human presence. The mystery story of criticism speaks far more to the critic’s own astonishment at a narrative which refuses to be excavated. Glasberg’s striations of ice are found on Mars in the ‘layered terrain’ and ‘stratified stacks of sand’ (*Green*, 37), in the ‘fluting and stratification of cliffs’ (*Green*, 113), and in the ceilings of the underground tunnels where ‘dry ice’ is ‘lightly streaked by stratification’ (*Red*, 571). Ann’s reading as a resistance against depth analysis betokens two things, that the hardness of stone has its own resistant density²⁶, and that Ann conducts herself toward the planet of rock as a reader of surfaces, an approach which embodies this density.

But the core, to return to Glasberg’s ice core sample, is only a density of more surfaces, a striation of lines without words. Likewise, geological striation presents a horizon of lines without language carved in stone due to fault movement or glaciation. Ann’s wish to obliterate thoughts by focusing only on the up-close phenomena of rocks is played out through her silence, forgetting to speak, not wishing to, performing a resistance against languages of depth analysis, glossolalia (which more resembles a smorgasbord), and even density as supple polyphonic striations. ‘She focused on her work, or tried. She fought to see nothing but rock, to think like a stone’ (*Green*, 125). Her silence suggests that to speak would be to recuperate what she has already thrown away. Stephen Pyne said the ice of Antarctic ‘relentlessly simplifies whatever ideas are brought to it’,²⁷ which resembles the image of

²⁶ Carol Franko used this term to describe the Bakhtinian polyphonic dimension of *Red Mars* as a textual density, a kind of folded compression of utopian possibilities. Taking John Boone’s death as an example: ‘Boone’s death transforms the theme of utopian destiny... making it dense with time and change, death and renewal, and also dense with stories’. I am using density in a different sense to Franko to indicate the inaccessibility of the compressed matter of the novels, at least as far as Ann’s perspective is concerned. While Franko’s metaphor of density stands for a rich and supple source of possibility, I am using it to indicate a granite-like limit. Franko, ‘The Density of Utopian Destiny in *Red Mars*’, *Kim Stanley Robinson Maps the Unimaginable: Critical Essays*, ed. William J. Burling (Jefferson: McFarland & Company, Inc. Publishers, 2009), 120.

²⁷ Leane, *Antarctica in Fiction*, 10; Pyne, *The Ice: A Journey to Antarctica* (Seattle: University of Washington Press, 1986), 153.

the continent as a 'smorgasbord' Robinson puts in the opening of his novel *Antarctica* (*Antarctica*, 1). It is worth addressing briefly some of Robinson's Antarctic images to elucidate the common ground of pre-terraformed Mars and the southern continent.²⁸ Leane fits Pine's statement into the sense that 'Antarctica strips everything superficial from a person, leaving their core exposed,' a process resembling the psychoanalytic mode of interpretation. It is worth following Leane's criticism of this view into supposing instead the ice performs some 'dissolution of the boundaries between body and environment' in experiences with the ice, rather than structures of the kernel-shell or congealed content. This is, as she says, a 'theorization of icescapes quite different from Jameson's'.²⁹

However, the 'feminist utopic fantasy'³⁰ to successfully refuse history by escaping from its language is a danger in itself. Glasberg reminds us 'Le Guin's female expedition cannot entirely escape history'.³¹ But, she goes on, while they leave no footprints 'they do leave inscriptions for one another on the ice'.³² Rock and ice suggest their own language, but one that cannot be unmasked, melted, or dug up. Ann's journey to the north pole in *Red Mars* is echoed in Valerie's passage to the south pole in *Antarctica*, a parodic retracing of the heroic age expeditions.³³ The similar stripping away which the ice seems to demand as a prerequisite to 'seeing' it – which Ann accuses the terraformers of never doing – constitutes, in *Antarctica* at least, a going Palaeolithic. This is a reparative move to recuperate a pre-modern³⁴ lifestyle which Robinson has explicitly advocated as being 'a cobbling together of aspects of the postmodern and the paleolithic'.³⁵ Critics Sherryl Vint and

²⁸ Leane states: 'Robinson's awareness of the parallels between Martian and Antarctic colonization, both in terms of the physical environment and the potential for utopian politics, is evident in the [Mars] Trilogy.' 49. Cf. Leane, 'Reading Aldiss and Penrose's *White Mars* as 'Science Fiction', *Foundation: The International Review of Science Fiction*, vol. 34.1 (2005), 18-25; 'Antarctica as a Scientific Utopia', *Foundation: The International Review of Science Fiction*, vol. 32.89 (2005), 27-35.

²⁹ Leane, *Antarctica in Fiction*, 11.

³⁰ Glasberg, *Antarctica as Cultural Critique*, 37.

³¹ *Ibid.*, 38.

³² *Ibid.*

³³ Retracing the expeditions of the Heroic Era function in *Antarctica*, argues Leane, to satirize them: 'The Antarctic adventure tours available in the near-future world of Kim Stanley Robinson's *Antarctica* satirize this trend.' Cf. Robinson, *Antarctica*, 227-258; 321-431.

³⁴ For an early though not fully developed sense of the overlap of Robinson's Palaeolithic and his postmodernity see Bud Foote who coordinates Robinson in the pre-modern, the modern, and the post-modern. 'Kim Stanley Robinson: Premodernist', editors Milton F. Wolf and Daryl F. Mallett, *Imaginative Futures: Proceedings of the 1993 Science Fiction Research Association Conference* (San Bernardino: Jacob's Ladder Books, 1995), 329-40.

³⁵ Robinson, 'Introduction', *Future Primitive: The New Ecotopias*, edited by Robinson (New York: Tom Doherty Associates Books, 1994), 11.

Mark Bould found this Palaeolithic attitude the most troublesome hypocrisy of *Antarctica*. Their detection of its ideology reveals that this ‘feral’ Palaeolithic lifestyle is only sustainable on the lifeline of Capitalist production.³⁶ In an odd way, it is this umbilicus which Ann seeks to cut, the clearest correlative being the fall of the first space elevator, that immense ‘umbilical cord’³⁷ tethering Mars to the harbours of space. Short of calling Ann a Palaeolithic, she does at least share a movement toward pre-modernity as a disposing of apparatuses and prostheses for a more focused attention on what predates the human era. The overriding irony is that leaving Mars un-terraformed puts Ann under greater necessity to rely on breathing masks and oxygen tanks to get around. Michel advises she ‘go out at low altitude and walk free in the air, a simple dust mask only... To experience the freedom it [terraforming] gives us, the bond with this world – that we can walk on its surface naked and survive’ (*Blue*, 252). His attempt to remove her more substantial mask of resistance, however, makes the irony of reliance on the breathing mask and pre-modernity less hypocritical, in that what is truly being resisted is not technology itself but logocentrism. The freedom to walk the surface naked and survive appears to be exactly what she wants, yet it must be bargained at the cost of losing the essential bare rockiness of Mars. In the same sense does the *techné* of a geological language stand within a complicated *différential* middle zone, what we will soon see as geo-mediation.

This cutting of reliant ties, freedom from ideology, and her intention to focus on nothing but rock, makes her a culprit of world reduction, a term Jameson used to critique Le Guin’s ‘fantasy [in *The Left Hand of Darkness*] of escaping from the history of capitalism’.³⁸ Jameson defines his use of reduction as pointing to

³⁶ Following the frame of Antarctica and Mars as wildernesses which are nonetheless sustained by the bounties of the cities and factories, is a point also made by Patricia Nelson Limerick in her book on the western frontier *The Legacy of Conquest*. The frontier and the wilderness, of course sharing a sense of movement away from modernisation, and yet are tethered to it every step of the way. Another way to approach the wilderness of the Mars Trilogy is via the analogy to the American frontier, an approach Carl Abbott takes up in ‘Falling into History: Imagined Wests in Kim Stanley Robinson’s ‘Three Californias’ and Mars Trilogy’, *Western Historical Quarterly* 34.1 (Spring, 2003), and *Frontiers Past and Future: Science Fiction and the American West* (Kansas: University of Kansas Press, 2006), passim. Limerick, *The Legacy of Conquest: The Unbroken Past of the American West* (New York: W. W. Norton & Company, 1987), 17-34.

³⁷ Patricia Kerslake, *Science Fiction and Empire* (Liverpool: Liverpool University Press, 2007): 162.

³⁸ This summary derives from Gib Prettyman’s answer to Jameson’s reading of Le Guin, arguing that interpreting Le Guin’s ‘world reduction primarily as symptomatic reaction ignores the real limits that the ecological framework raises’, and that a full recognition of these limits enables a ‘healthier’ ‘eco-logic’ rather than ‘ego-logic’ in response to Capitalism. Prettyman makes this point on the basis of the role of Daoism in Le Guin, which provides a kind of ego-critique. Even in this

a principle of systemic exclusion, a kind of surgical excision of empirical reality, something like a process of ontological attenuation in which the sheer teeming multiplicity of what exists, of what we call reality, is deliberately thinned and weeded out through an operation of radical abstraction and simplification... (*Archaeologies*, 271)

The only way to get a hold of the social reality teeming around, and behind, the planet Gethen, it seems, is to interpret it alongside the jungles of J.G. Ballard – jungles being the dialectically opposed topos of the snowy ice planet of *The Left Hand of Darkness*. Likewise, does Hiroko serve Jameson to spin the wheel of dialectical interpretation (*Archaeologies*, 407),³⁹ and keep him from realising how much Ann would be at home on Gethen, a fantasy space of world reduction. The social ontology put forward in *The Political Unconscious* dictates that a reductive zone, or in Ann's case a reductive focus, closes off meaningful access to the teeming multiplicity of socially constructed reality. It would seem that as a way of reading, her focus would also close off textual meaning to the reader. Jean Paul Sartre gives a less explicitly social image of an ontology of teeming experience in *Nausea* when he observes: 'I realized that there was no half-way house between non-existence and this flaunting abundance.'⁴⁰ The fact that his abundance is in the habit of 'hiding itself' (here Sartre is paraphrasing Heraclitus),⁴¹ only means that to try and reduce it without obliterating it altogether is an act of reducing the world to a half-way house. Sartre and Jameson seem to suggest that experience is only meaningful so long as the multiplicity of history (for Jameson, history is also in the habit of hiding itself) is confronted and uncovered. Ann's focus on stone can only produce meaning according to this hermeneutic more than mere fantasy if she is reinstated into the social reality of Mars, if she insists on the import of Hiroko's viriditas, Sax's efforts to terraform Mars, and Michel's

analysis the reader ought to notice a faint dissatisfaction with the suspicious hermeneutic. As with above, Gethen is not allowed simply to be Gethen, it must be historicised as a zone of wish-fulfilment. Prettyman, 'Daoism, Ecology, and World Reduction in Le Guin's Utopian Fictions', editors Robinson and Gerry Canavan, *Green Planets: Ecology and Science Fiction* (Middletown: Wesleyan University Press, 2014), 66, 73.

³⁹ '... the only way to do justice to this significant philosophical component of the Trilogy is to grasp the anti-humanism inherent in all ontology... But we cannot yet assess this anti-humanist ontology until we take account of its great alternative, the 'areophany' of Hiroko, who stands for greenness – viriditas – and life, and whose vitalism thus seems to oppose Ann's death urge in all respects'.

⁴⁰ Sartre, *Nausea: The Wall and Other Stories, Two Volumes in One*, tr. Lloyd Alexander (New York: MJF Books, 1998), 128.

⁴¹ *Ibid.* 'Nature loves to hide', *The art and thought of Heraclitus: An edition of the fragments with translation and commentary*, Charles H. Kahn (Cambridge: Cambridge University Press, 1979), 33; alternate rendering: 'The true character of a thing likes to be in hiding.'

psychoanalytic probing; the subjects of each of my chapters. However, the *différance* of her going paleolithic makes her world a kind of halfway house, or put another way, there is no hermeneutical core or logocentric house, but only a halfway space.

To attempt such a retrieval of Ann from her escape into the wilderness is to go against her wishes and her own methodology. How ought we then act to the non-consensual nature of the ‘narrative temptation to reconcile’ (*Archaeologies*, 409) which Michel offers to Ann in a therapy session? This temptation, which shall be the subject of chapter 2, derives in this session from his advice that she address her depression as a ‘displacement’ of causes: ‘You claim the destruction of the primal Mars is the source of your depression. I think the philosophical reasons cited by people suffering depression are masks protecting them from harder, more personal hurts’ (*Blue*, 251).⁴² When we take up Michel’s reading of Ann, we find ourselves in Jameson’s *Archaeologies of the Future* where he states that Ann’s ‘mask of anger’ is an ‘allegory of melancholy’; ‘indeed, she comes to stand for death’ (*Archaeologies*, 405). This masked standing in the narrative which both Michel and Jameson suggest is the reason why she is depressed. It is not what she thinks it is. The interpretive temptation is to ‘reconcile’ the political meaning of Ann’s mourning and to unmask her anger in order to discover the social dynamism of the novels. Her use of the slang term ‘shrink’⁴³ expresses her hostility to the psychoanalytic process, at least when thought of as reducing the density of her depression to a single or first cause. To psychologize Ann’s political unconscious itself is a world reduction which shrinks a non-living Mars to the right size of a human skull.

⁴² Cf. Cohen, ‘Love and Strife’, *Stone*, p. 19-27.

⁴³ Consider, for example, one possible derivation of ‘shrink’ from Thomas Pynchon’s *Crying of Lot 49*, in which Dr. Hilarius, Oedipa’s psychiatrist, goes mad as a result of discovering that he worked at a Nazi concentration camp in Buchenwald ‘inducing insanity’ in the Jewish prisoners. Some overriding incapacity of psychoanalysis is indicated in this discovery of Dr. Hilarius’s past, that what the Freudian analyst finds is only a pernicious shrinking of Jewish heads (and to this we can refer to the term’s previous meaning used by anthropologists observing tribal societies who, they observed, shrunk severed heads as trophies*), and as a result only serves to induce madness in the doctor himself. Ann’s comment to Michel, chafing against his methods – ‘do you think people get interested in studying psychology because they’re troubled in the mind?’ (*Blue*, 254) – carries much the same disenchantment with the hope of psychoanalytic freedom as with Pynchon’s depiction. Pynchon’s taking of the word from an anthropological background points us in the direction of Freud’s work on primitive cultures in *Totem and Taboo: Some Points of Agreement between the Mental Lives of Savages and Neurotics*, tr. James Strachey (United Kingdom: George Routledge & Sons, 1919), 43-44; Pynchon, *The Crying of Lot 49* (Philadelphia: J. B. Lippincott, 1965).

* *Oxford English Dictionary*, s.v. ‘headshrinker’, Oxford University Press. <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/336931> (accessed November 29, 2016).

The surface of the text is by no means a new innovation, and yet it has served, at least since Jameson's *Political Unconscious*, as a dialectical lid to the depth of the social text. Lifting the lid attempts to 'restore to the surface of the text the repressed and buried reality of this fundamental history.' It is at the deceiving surface therefore 'that the doctrine of a political unconscious finds its function and its necessity' (*Unconscious*, 4). In the 2009 issue of the journal *Representations*, critics made cases against Jameson's doctrine, in favour of the surface itself. Stephen Best and Sharon Marcus head the issue outlining a variety of options of what a surface reading might entail.⁴⁴ The relevance for us is the basic orientation against depth analysis, and yet it is a relevance which seems to have evaporated since 2009.⁴⁵ Little is written on the explicit terms of surface analysis, and the exceptions only appear to address the overall relevance of the new approach to specific fields of study.⁴⁶

Despite this lack of consolidation, the surface reading approach can help clarify what is happening in the narrative of Ann Clayborne across the Mars Trilogy. Take for instance the language Best and Marcus use to characterise the Jameson critic: 'Jameson's image of the critic as wresting meaning from a *resistant* text or inserting it into a *lifeless* one had enormous influence in the United States, perhaps because it presented professional criticism as a strenuous and heroic endeavour'⁴⁷ (my emphasis). By positioning Michel as just such a critic or analyst, the mode of approach of wrestling with a resistant

⁴⁴ Best and Marcus, 'Surface Reading: An Introduction', *Representations*, vol. 108, no. 1 (Fall 2009), 1-21. These include: 'surface as materiality'; 'surface as the intricate verbal structure of literary language'; 'embrace of the surface as an affective and ethical stance'; 'attention to surface as a practice of critical description'; 'surface as the location of patterns that exist within and across texts'; 'surface as literal meaning.' 9-12.

⁴⁵ A selection of other attempts with far greater purchase on criticism, less explicitly evoked as 'surface' analyses, speak to move against the wresting and insertion of meaning. Cf. Rita Felski, *The Limits of Critique* (Chicago: University of Chicago, 2015), 'From Literary Theory to Critical Method', *Profession* (2008), 108-16, 'Critique and the Hermeneutics of Suspicion', *M/C Journal*, vol. 15, no. 1 (2011) <http://journal.media-culture.org.au/index.php/mcjournal/article/view/431>; Heather Love, 'Close but not Deep: Literary Ethics and the Descriptive Turn', *New Literary History*, 41 (2010): 371-91; Eve Kosofsky Sedgwick, 'Paranoid Reading and Reparative Reading, or, You're so Paranoid, You Probably Think This Essay is About You', *Touching Feeling: Affect, Pedagogy, Performativity* (Durham: Duke University Press, 2003), 123-52; Susan Sontag, 'Against Interpretation', *Against Interpretation and Other Essays* (New York: Octagon Books, 1982), 5-14.

⁴⁶ Take for instance the 'surface reading' issue of *The Eighteenth Century*, vol. 54, no. 1 (Spring 2013): Lisa A. Freeman, 'Why We Argue About the Way We Read: An Introduction', 121-4; Stuart Sherman, 'Pluralistic Predilections: Surface Reading as Not-Altogther-New Resource', 133-8; Kristina Straub, 'The Suspicious Reader Surprised, Or, What I Learned from 'Surface Reading'', 139-43.

⁴⁷ Best and Marcus, 'Surface Reading', 5-6.

patient and inserting meaning, forces itself rather starkly against Ann's role in the narrative as a woman, and a rebellious woman at that.⁴⁸

The issue with this is that it is hermeneutical entrapment. It demands we read Ann Clayborne against her terms, treating them instead with suspicion. The equivalent of the safe in the Mars Trilogy is the rocky planet and its supply of rocks and boulders, which also resist access to their depths due to a hardness; and in fact their depths are only a series of stratified surfaces. In both cases, these metaphors pre-condition the experience of the texts more generally. And the safe establishes not only the text as a resistant lock but also the need for a coda that will open it. Yet metaphor itself need not be abandoned. Mary Thomas Crane, in her article in the surface issue of *Representations*, directs our attention to George Lakoff's work on the embodied mind,⁴⁹ and how 'we can only think about abstract things because we can understand them in terms of concrete spatial experience.'⁵⁰ The metaphor 'goes beyond literal mirroring, or representation, of external reality',⁵¹ and begins to organise and structure one's very thinking process. To be invited to crack the narrative logic is itself suspicious, and in the case of Ann, we need to be suspicious of such an invitation. When it will come to Michel, the reader ought to be all too willing to indulge him. The embodied mind will be of use

⁴⁸ Other texts which set such a violent and invasive precedent for the psychoanalyst are Dr. Hilarius in Pynchon's *Crying of Lot 49* (see footnote above) and Mark Rutland in Hitchcock's 1964 film *Marnie*. In the latter of the two, Marnie's resistance to Rutland (which is overcome in the infamous honeymoon rape scene) is structured according to the cracking of safes, allowing for a kind of epistemology of the safe to coordinate the psychoanalyst's non-consensual theft of its contents. Hitchcock's well-documented Freudianism however ultimately entraps the epistemology of the safe, in the first place as it is Marnie who breaks and enters, that she must commit the crime upon herself, suggesting also the safe of the movie itself is something that needs or deserves to be broken into and must then be committed to a therapy-method. Her resistance is therefore confused, the clearing up of which would both get rid of her resistance to the analyst and demand she comply with her husband, who are one and the same. This is worth pointing out as a case of the text itself supporting the unmasking (or undressing), the wresting, and the insertion of meaning, of a male-analyst overcoming a female-patient even at the interpretive level. Psychologist characters, as will be shown in chapter 2, are often positioned in the interstices of the text, speaking directly to the reader as well as to patients, or acting upon them with an influence on the reading of the text itself. *Marnie*, directed by Alfred Hitchcock (1964; California: Universal Studios, 2012), BLU-RAY disc.

⁴⁹ Cf. George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980); Lakoff and Johnson, *Philosophy in the Flesh: The Embodied Mind & its Challenge to Western Thought* (New York: Basic Books, 1999); Francisco J. Varela, Evan Thompson, and Eleanor Rosch, *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge, Massachusetts: MIT Press, 1993).

⁵⁰ Crane, 'Surface, Depth, and the Spatial Imaginary: A Cognitive Reading of *The Political Unconscious*', *Representations*, vol. 108, no. 1 (Fall 2009), 80, 76-97.

⁵¹ Crane, 'Surface, Depth', 80; Lakoff, *Women, Fire, and Dangerous Things: What Categories Reveal About the Mind* (Chicago: University of Chicago Press, 1987), 271-86.

later in thinking about Mars as a mirror, and the exercise of finding oneself reflected in its surface, yet here it suffices to claim two elements of the rock's embodiment in Ann: that it generates a geo-thinking, or geology of mind; and, that it is a substance that gives no reflection and is non-representational.

First the geology of mind. The clue to Michel's advice lies, ironically, out in the open where Ann's reasons for depression are already socially symbolic, while the personal hurt is apparently repressed (rather than the typical account of the opposite). The outcome of having Michel already perform our interpretation in inverted form, so as to hide it, deserves a longer discussion about Michel's conduct toward his patients, and ours toward him, in the next chapter. But, Ann's curt answers, sometimes only one word (*Blue*, 251-5), push back against his attempts to shrink her mind. To avoid the temptation altogether points to a way in which her geological habit 'to think like a stone' (*Green*, 125) is a suggestion of her own way of wandering the planet. A new stratifying of mental experience (of both ours and Ann's) is available as an interpretive method to overlap the narrative, different from a surface-depth reading. Such a way to express this approach is Jussi Parikka's term 'psychogeophysics', the labelling of 'psychology as plate tectonics of the mind'.⁵² Psychogeophysics fits into the constellation of Gregory Bateson's ecology of mind,⁵³ and Robert Smithson's 'A Sedimentation of the Mind',⁵⁴ the latter of which describes the 'abstract geology' of his 'earth projects' artworks as the 'discrete regions of art' into which the 'earth's surface and the figments of the mind have a way of disintegrating', recalling the dissolution of body and environment; 'One's mind and the earth are in a constant state of erosion, mental rivers wear away abstract banks, brain waves undermine cliffs of thought, ideas decompose into stones of unknowing...'⁵⁵ and so on. Psychogeophysics and abstract geology allows us to approach the rocky planet not as a site of excavation, but to form a stratifying of mind, or mental experience, on top of the planet, the experience of which is an erosion or weathering. This means as a geo-phenomenology, experiencing the planet is far more like a geological process than the human structure of Freudian unconscious projected outward into the environment.

In Parikka's *Geology of Media*, such a way of framing experience is located in the materialism of media studies, with the caveat that her book presents 'a

⁵² <http://www.metamute.org/community/your-posts/what-psychogeophysics>. Cf. 'psychogeophysics – a sort of speculative aesthetics for the connection of technology and society with a special view to the geophysical – that offer insights to earth media arts'; Parikka, *Geology of Media* (Minneapolis: University of Minnesota Press, 2015), 5, 59-82.

⁵³ Bateson, *Steps to an Ecology of Mind* (Chicago: University of Chicago Press 2000).

⁵⁴ Smithson, 'A Sedimentation of the Mind: Earth Projects', *Robert Smithson: The Collected Writings*, ed. Jack Flam (Berkeley: University of California Press, 1996, 100-33. Cf. *Grain*, in *Textures of the Anthropocene: Grain Vapour Ray*, vol. 1 (Massachusetts: MIT Press, 2015), 13-32.

⁵⁵ Smithson, *Grain*, 15.

different kind of temporal and spatial materialism of media culture than the one that focuses solely on machines.⁵⁶ Parikka's geomeia focus is consolidated in Smithson's paper when he goes on to make a 'conceptualization of technology' in a way 'nothing less than anti-McLuhanian'⁵⁷: 'The manifestations of technology are at times less 'extensions' of man (Marshall McLuhan's anthropomorphism), than they are aggregates of elements. Even the most advanced tools and machines are made of the raw matter of earth.'⁵⁸ In this regard, Michel's mediation of Ann's mental disorder constitutes his hermeneutic as an anthropomorphic technology of reduction, an insistence the problem lies in her personality, and not on the loss of the world. Smithson also appears to anticipate the ten-kilometre wide 'magnifying lens' sited around Mars's orbit in *Green Mars* that had 'the simplicity, elegance, and heft of a Palaeolithic tool' (*Green*, 138): 'today's highly refined technological tools are not much different in this respect from those of the caveman.'⁵⁹ Sax is the one who placed that hefty tool in the sky to accelerate terraforming (to later take it down at Ann's behest). By this stage he has also begun to incorporate some of Ann's perspective into his own. But before drifting too far from our focus on Ann, in this same moment of seeing the soletta lens Sax displays both a sense of the language of rock and a dissatisfaction with Michel's ways of thinking, a Clayborne-like stream of thoughts. Again, Sax and Smithson are on the same page when it comes to the rocky nature of language: 'Knapp, knapp. Spall. Spallation. Language was so beautiful. Rocks striking rocks, in the ocean of space' (*Green*, 419); 'words and rocks contain a language that follows a syntax of splits and ruptures. Look at any *word* long enough and you will see it open up into a series of faults, into a terrain of particles each containing its own void.'⁶⁰ The ocean of space and the void of each word connect to one another through what Smithson calls the *Site* of the world and the *Non-Site* of the artwork. The *Non-Site* is composed through the decomposing of the *Site*; by faulting and rupturing, rocks come free and allow the wandering artist or geologist to collect them into a 'canvas bag full slate chips for a small *Non-*

⁵⁶ Parikka, *Geology of Media*, 3. Parikka places his work in line with the elemental media studies of John Durham Peters. In a book published after *A Geology of Media*, Durham Peters explored a similar analogy between geology and media in *The Marvelous Clouds*, making a case for an atmospheric understanding of media, and the atmosphere itself as a space of information exchange. *The Marvelous Clouds: Towards a Philosophy of Elemental Media* (Chicago: University of Chicago Press, 2015); cf. for Peters, *Geology of Media*, 3.

⁵⁷ Parikka, *Geology of Media*, 5.

⁵⁸ Smithson, *Grain*, 15.

⁵⁹ *Ibid*, 15.

⁶⁰ *Ibid*, 25.

Site. This enables them to ‘contain this ‘oceanic’⁶¹ site’ and to carry into the ‘limits’ of the art-fragment the ‘limitlessness’ of the geological world.⁶²

By backgrounding McLuhan and bringing to the surface the mediation of rock and stone, geology presents itself as its own kind of medium. This approach carries two significant aspects to express the relation between the artwork-text and the world, suggesting a mutual horizon of experience. When put in geological terms, the assembly of an artwork transfers bits and pieces, arranged so as to ‘contain’ the oceanic experience of the planet as a whole. And yet, most importantly, this is a containment which is not suspicious of surfaces. It discloses rather than reduces the planet itself. When it comes to aligning this method with the methods by which planets compose and discompose themselves, the planetext is a ball of accreted matter in which these pieces of rock collide and roil into a cohesive shape – ‘rocks striking rocks’ (*Green*, 419); ‘rocks banging together in space, and then coming back and holding together’ (*Red*, 94).⁶³ Enlarging the view of the artwork into the planet itself speaks to the geomeia approach of paint as ground-up and liquefied rock painted onto the face of a rock itself (rock on rock, in the example of cave art, or the chemical reactions used to colour the bricks at Underhill in *Red Mars*).⁶⁴ And secondly, this analogy between the planet and the text that collects⁶⁵ and accretes is a perfect example of Ursula Le Guin’s carrier bag theory of fiction; Smithson’s canvas bag. The specifics of her essay will be deployed when necessary, but at the outset I must mention her analogy between the planet as a gathering place with the novel form: ‘A book holds words. Words hold things. They bear meanings. A novel is a medicine bundle, holding things in a particular, powerful relation to one another and

⁶¹ *Ibid*, 18; the idea of ‘oceanic’ experience derives from Freud’s *Civilization and Its Discontents* as well as ‘Mourning and Melancholia’, two texts which bear out the problems of the suspicious reading, and will be dealt with in detail below, and in chapter two.

⁶² *Ibid*, 29.

⁶³ This account of the accretion of Mars in its very early history, ‘five billion years ago, is tied to an image of randomness, carried through from the end of the previous chapter. ‘The die was cast’ of ‘The Voyage Out’ leads into the ‘rocks banging together’. The ‘mysterious warp’ of gravity by which the ‘pile of rocks’ that made up pre-Mars is held with the chaos of dice rolling (*Red*, 94).

⁶⁴ Arkady suggests to Nadia in ‘The Crucible’ in early in *Red Mars*: ‘It’s easy to color bricks... Add manganese oxide from the magnesium smelting and you have pure white bricks. Add carbon left over from the Bosch process for black. You can get any shade of red you want by altering the amount of ferric oxides, including some really stunning scarlets. Sulphur for yellows... And then with these colored bricks, you build walls that are all mosaics’ (*Red*, 164-5).

⁶⁵ Also consider Mars as a ‘complex multidisciplinary object’; Robert Markley, *Dying Planet: Mars in Science and the Imagination* (Durham: Duke University Press, 2005), 4-5.

to us.’⁶⁶ Le Guin echoes the relational language Glasberg stated was established by the South American expedition at the south pole. The carrier-bag planetext is not a series of obfuscations, neither at the surface of the bag, nor its interior.

In terms of non-representational experiences of silence and *différance*, a question suggests itself: how is Ann’s phenomenology formed through an ethical attitude toward the environment of the non-living Mars? Among some ecocritics, ecology without life has been argued over in the case of the disappearance or appearance of the human subject within the landscape. An assumption of Ann’s geological purity is that the planet stands alone, without the human presence, yet as Sax and Zo remind her: ‘the beauty of Mars exists in the human mind... without the human presence it is just a collection of atoms, no different than any other random speck of matter in the universe’ (*Red*, 177); ‘There is some new thing created at the contact of photon and retina, some space created between rock and mind. Without mind there is no intrinsic worth’ (*Blue*, 540). Ann indulges neither of them, but their advice remains relevant. Ecocritic Lawrence Buell suggested that one ‘goal of a [green] poetics’ is to ‘relinquish the superintending human consciousness’,⁶⁷ and avoid this human presencing and gifting of worth, without which rock would be meaningless and insignificant. Simon Estok, however, questioned how it could work in such an ‘eminently human area as writing?’⁶⁸ For Emily Bitto, Buell is overlooking a basic phenomenological point that there is a difference between the world out-there and how it arises in consciousness, giving further grounds for the *différance* of mind and rock through a geomedia and materiality of mind.⁶⁹ A proper eco-phenomenology therefore should focus on this very experiencing of experience itself, and textual analysis ought to point as much to the human consciousness as to the rock on which she stands. The mistake Estok and Bitto locate in Buell’s goal to relinquish is the invisibility or silence of the experiencer, which can even be put in terms of a reduction. Just so does Jameson speak about the dialectic of desert and human production, or presencing, in Robinson. Like his reading of Le Guin, in which the ice deserts of Gethen only made proper sense beside the jungles of J. G. Ballard, so too does he claim the desert (‘the emptiness of people’) is only ‘brought into being and generated by the emergence of the fact of the human’ (*Archaeologies*, 400). The superintending consciousness is a participant

⁶⁶ Le Guin, ‘The Carrier Bag Theory of Fiction’, eds. Cheryll Glotfelty & Harold Fromm *The Ecocriticism Reader: Landmarks in Literary Ecology* (Georgia: University of Georgia Press, 1996), 153, 149-54.

⁶⁷ Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge: Belknap-Harvard University Press, 1995)164; Bitto, 255.

⁶⁸ Simon Estok, Letter. *PMLA* 114 (1999), 1096.

⁶⁹ Emily Bitto, ‘Simple Fact of Light and Stone’: The Eco-Phenomenology of Anthony Lawrence’, *Australian Literary Studies* vol. 23, issue 3 (2008), 255, 251-63.

in the generation of the wilderness. The puzzling image that occurs in this solipsism is that the ground of the wilderness may not exist until the foot of consciousness falls on it and leaves a footprint. The ‘anti-humanism inherent in all ontology’ (*Archaeologies*, 407) only makes sense through a depth analysis of uncovering the human production at the root of, or beneath, the wilderness of the hill.

It is clear Ann’s ethical attitude depends on a careful management of both the superintending human presence in the wilderness, as well as the way in which this wilderness surrounds, and as we will see, prefigures this human figure. In one moment of *Green Mars*, while travelling across a Mars in the middle stages of terraforming, Ann stumbles on a mobile drilling operation, its drill ‘tower pok[ing] over the horizon’ with its ‘giant caterpillar tracks’ ‘flank[ing]’ its ‘massive base’ (*Green*, 123). Such an imposition fits far more the presence of the Wallace Stevens’s jar that sits on the wilderness of the hill⁷⁰ (*Archaeologies*, 400) than any other image, except the ‘Mars jar’. Part of what distinguishes Ann’s perspective in the Trilogy is her sense of the about-ness of the geological past, which, as Wallace would write, ‘surrounds’ the drilling tower. After noticing this tower, and spending a little while looking, detailed geological and geo-historical exposition interrupts the action of the drilling, while she thinks back to Mars’s Noachian past, to ‘collisions’ and ‘impact basins’, ‘vaporised’ rock, ‘perturbations’ and accretions’. In the present, all this geological history is being thawed out of the underground ‘permafrost ocean’ to create another ocean, filling ‘Vastitas Borealis’ (*Green*, 123-5). But Ann gives us an important interim of its surrounding wilderness past.

She sees what is also being slowly lost to the drilling rig are the concepts themselves of nature and wilderness, along with her hope they could have stood independent from human activity. But it would be a mistake to leave her ecological ethics at the foot of the drilling operation, and simplify her wilderness as a naïve deep ecology. The rig too easily slides into Jameson’s ontology of humanization, that no human can be any less interfering than the drilling tower, and risks an anti-Ann reading. This moment ought to be held alongside a more explicit reference to a ‘Mars jar’, when Michel is travelling through the new construction sites around Underhill, early in *Red Mars*:

They stood at one end of the great trench. Thirty meters deep, thirty wide, a kilometer long. The south side of the trench was now a wall of glass, and the north side of the trench was covered with arrays of filtering mirrors, alternating with wall-mesocosms, Mars jars or terrariums, all of them together a colorful mix, like a tapestry of past and future. (*Red*, 212)

⁷⁰ ‘It made the slovenly wilderness
Surround that hill.’

Wallace Stevens, ‘Anecdote of the Jar’, ed. Holly Stevens, *The Palm at the End of the Mind* (New York: Random House, 1967), 46.

Michel much later relates this image to Ann, in a therapy session, in the form of an 'alembic', recalling the 'crucible' of her journey to the North Pole in *Red Mars*. 'The alembic', he claims, 'stands out there all around you' (*Blue*, 253) It surrounds her, like Wallace's jar in the no-longer wilderness which '[takes] dominion everywhere'.⁷¹ This is the idea on which her ethical attitude demands a careful management of the alembic of super-intention, without allowing dominion to take hold and 'sprawl' too far over the planet. This challenge cannot be approached on the grounds, for example, laid out by Leane, who reads Ann against Sax's 'mastery' and 'dominance' of the planet, leading to a view only of polarities in which 'for Ann, the planet is its own place', while 'for Sax, 'The planet is a lab'.⁷² To adopt Jameson's use of Wallace and the human presencing of the wilderness means we can invoke Derrida's famous quip, *il n'y a pas des hors-texte* (*Grammatology*, 158), to reconfigure the issue, to instead read: *there is no outside-lab*; or, *there is nothing outside the jar*. The figuring of the wilderness, the configuring by the figure, or drilling rig, in the wilderness, in this Derridean sense, at first would signal no wilderness is possible, that all rock and ice must rise up to meet the superintending consciousness of the alembic/jar/lab-like mind. In this sense, the wilderness too easily complies with the human figure digging into it. By folding it eternally into the mastery of the laboratory, there is no space left for an ethical attitude of non-life. So then a Derridean manoeuvre of wandering outside *logos* must take into account the loss of this margin of resistance, not necessarily as an ontological margin but a critical one in which the jar comes to represent a way of standing in relation to the planet's disclosure, and interpreting its expanse only inside the *logos* of the alembic. The phallogocentric form of these jars, rigs, and alembics is not lost on Ann, who imagines their sprawling across the planet as masculine *logos*, 'like a world covered in semen' (*Blue*, 260).

How then is her ethical resistance built on an ecology without life in a similar sense to Tim Morton's ecology without nature? During the time of the publication of the Trilogy, ecocritic and historian William Cronon headed an attempt to 'rethink wilderness' in *Uncommon Ground*,⁷³ with an observation very much in line with Jameson's reading of Wallace Stevens, that the wilderness appears only around the superintending jar of modernisation, the city, the urban zone, civilization, inhabited regions, and so on. His critique is an unmasking: 'wilderness hides its unnaturalness

⁷¹ *Ibid.*

⁷² Leane, 'Chromodynamics: Science and Colonialism in the Mars Trilogy', in *Kim Stanley Robinson Maps the Unimaginable* (Jefferson, North Carolina: McFarland & Company Inc., 2009), 151

⁷³ Cronon, 'Introduction: In Search of Nature', ed. Cronon, *Uncommon Ground: Rethinking the Human Place in Nature* (New York: Norton, 1995), 23-56.

behind a mask that is all the more beguiling because it seems so natural.⁷⁴ The beguiling factor is the way in which the wilderness mysteriously appears to rise up to meet the human presence and form itself as a greater region. To take the appropriate path into the wilderness, to retain the national park ethic would, it seems, to recuperate the mask. But Cronon offers another approach which helps clarify Ann's ethics, following Thoreau who said that 'wildness [as distinct from wilderness] is the preservation of the World'⁷⁵, and, Cronon reminds us, 'can be found anywhere.'⁷⁶ Wildness is the reappearance of wilderness without the unethical naivety of relinquishing human presence, as something closer to an enframing of city and wilderness, a wider ground that does not so much rise up but encompass the human. An ethical approach is the 'unending task of struggling to live rightly in the world – not just in the garden, not just in the wilderness, but in the home that *encompasses* them both.'⁷⁷

Ann's ethical approach to the planet serves well as a retrieval of a wilderness ethic without the naïve deep ecology of its earlier form. Even with Cronon's critique considered, a need remains to conserve wilderness regions (and even produce more of them)⁷⁸ in which the need to dominate can be relinquished. Such spaces might be called mongrel wildernesses. But instead of thinking of wildness as a blend of two topologies, mongrelizing rather takes on a crucial deconstructive dimension in the unique experience in 'Ann in the Outback' (*Blue*, 249-282) in which wildness is distinguished through the threatening inclusion of death.⁷⁹ This arrives most forcibly in the form of a polar bear. On the one hand the bear takes up its place in the line of life-threatening experiences (the great flood (*Red*, 535-69), and the long runout (*Green*, 111-35) being the others) in being described with this same motif of water. The bear 'flowed over [the canyon walls] like a white nightmare, a thing beautiful and terrifying, the liquid flow of its muscles loose under thick yellow-tipped white fur' (*Blue*, 262), living up to its name of '*Ursus maritimus*, ocean bear' (*Blue*, 263). Ann however finds out later how Harry Whitebrook

⁷⁴ Cronon, 'The Trouble with Wilderness; or, Getting Back to the Wrong Nature', *Uncommon Ground*, 69.

⁷⁵ Henry David Thoreau, 'Walking', ed. Henry S. Canby, *The Works of Thoreau* (Boston: Houghton Mifflin, 1937), 672; Cronon, 'The Trouble with Wilderness', 69, 89.

⁷⁶ Cronon, 'The Trouble with Wilderness', 89.

⁷⁷ (my emphasis); *ibid*, 90.

⁷⁸ Cf. Edward O. Wilson, *Half-Earth: Our Planet's Fight for Life* (New York: Norton & Company, 2016).

⁷⁹ For deconstruction and death see: Derrida, *Demeure: Fiction and Testimony*, tr. Elizabeth Rottenberg (Stanford, CA: Stanford University Press, 2000); Derrida, *Cinders*, tr. Ned Lukacher (Minneapolis: University of Minnesota Press, 2014); Derrida, *The Gift of Death and Literature in Secret*, tr. David Wills (Chicago: University of Chicago Press, 2007); Derrida, *The Work of Mourning*, ed. and tr. Pascale-Ann Brault (Chicago: University of Chicago Press, 2003).

designed it, along with many other animals, to fit into the Martian geography. Being a sizable predator with a feeding region too large for the present habitat, the bear must be fed at ‘feed stations’ (*Blue*, 262). The animal is domesticated inside the logos of a semi-humanized planet. And yet, it presents itself in Ann’s field of vision as a danger not so simply caught within the life-giving impulse of viriditas. The snowy landscape is already white, and the whiteness of the bear, together with the ‘distinct’ way in which its inner life appears ‘luminous, as if lit from within’, makes the bear a kind of *différential* mongrel (especially after she likens it to a large dog) of whiteness (or mystery, death, purity) and greenness (viriditas, the ‘spark’ of life, terraforming).

The bear also presents a middle case, as despite its danger it cannot so easily be coupled into her misanthropy. While Michel ascribes her wish to think like a stone to being mistreated by men in her childhood, she considers her affections for men to be grounded in their ‘obdurate endurance’ and their ‘mineral stubbornness’ (*Blue*, 279), which lends some psychological analogy to her mode of resistance as embodying an object unable to yield or comply. Yet, the bear cannot be roundly condemned as men can, and at least some of her fear for her life also allows an indulgence of her supposed death wish to better comprehend the ‘strange’ appearance of the bear in all its whiteness. She can therefore find a greater equality with the bear than she ever could with any man, save those with obdurate minerality:

...the bear was fast and the terrain nothing to it, but she too was an animal, she too had spent years in the back country of Mars, many more years in fact than this young bear, and she could run like an ibex over the terrain, from bedrock to boulder to sand to rubble, pushing hard but perfectly balanced, in control of the dash and running for her life. (*Blue*, 263)

As a threat of death, the bear episode should not be read as Ann’s conversion from white to green, or indeed red to green, or that she has been frightened out of her ethical position, but rather that it deepens it to be included into living forms. As a non-living ecology, the new sense is not for the bear as such but its connection with the wild that turns it mongrel. And this wild, like for Aldo Leopold,⁸⁰ is encountered in the form of animality and death. In the

⁸⁰ It is worth considering Leopold’s sense of the wild in supplement to Eric Otto’s contribution to an understanding of a land ethic in the Mars Trilogy, as Otto’s reading draws out a quality by which this seldom perceived region not only in the mountain, but of the mountain itself, can be perverted in the critical act of reading. ‘The Mars Trilogy and the Leopoldian Land Ethic’ brings *A Sand County Almanac* into the context of the Trilogies’ various attitudes toward the planet. Otto attempts to synthesize these views in the solvent of the land ethic ‘in order to construct a viable model for ecological sustainability and an egalitarian relationship between all of nature’s components.’ The problem that arises by the end of his essay is over the attempts, or non-attempts, the Trilogy makes toward synthesizing the polyphony of its views. The synthesis Otto offers is simply a gesture to the community itself, human and ecological, the stage of the debate. But if we

Sand Country Almanac, after hearing a ‘deep chesty bawl echo[ing]’ down a mountain (that impassive object that carries the lifeworld on its mineral surface), Leopold recalls Thoreau: ‘Only the mountain,’ Thoreau wrote ‘has lived long enough to listen objectively to the howl of a wolf. The ‘obvious and immediate hopes and fears’ that ‘bleed’, ‘scuffle’, and ‘die’ on the mountain merely occur on its surface, hiding some ‘deeper meaning.’ How he comes to ‘think like a mountain’ is not by any strenuous analytic, but by shooting a wolf and seeing ‘a fierce *green* fire dying in her eyes’ (my emphasis). He explains that I ‘realized then, and have known ever since, that there was something new to me in those eyes – something known only to her and to the mountain.’ But this is a something forever in shadow. In seeing over time the ‘newly wolfless mountain[s] in ‘state after state’, an ethical attitude grows against the culling of the surface and its extensive shadowy regions beneath it. Leopold does not quote Thoreau’s ‘preservation’, but instead its ‘salvation’, in finding the wildness to be ‘perhaps... the hidden meaning in the howl of the wolf, long known among mountains, but seldom perceived among men.’⁸¹ Ann’s bear is of the same realization of life as seen and heard from the mineral view of the mountain.

The surface of the mountain and the deeper meaning are here quite distinct from the surface/depth analysis that contrasts Ann and Michel. The depth of the shadowy wildness of the mongrel planet is, again distinct from deep ecology, as Tim Morton argues in *The Ecological Thought*: ‘In a response to deep ecology, I once called [dark ecology] ‘depthless ecology’: either unimaginably deep or having no depth at all – we can never tell. In the end, I decided to call it *dark ecology*.’⁸² This is very much an encounter with the exorbitant regions in the dark of his hyperobject and suggests that the flatness of rock and the depth of inner animal life, when juxtaposed in this way, point to a region unimaginably deep and flat at the same time. The image of Ann’s encounter with dark ecology that best shows this mongrelising of life and death is in the muddy remainder of the brash ice that washes up on the beaches of the North Sea, in *Blue Mars*. Indeed the ‘white waste’ of these beaches (anticipating the final beach scene of *Blue Mars*, to be explored at length in the next section) accentuates the component of the remainder which one ecocritic found in the Derridean environment. In approaching the

characterise this stage as wild, the critical issue over synthesizing becomes problematic. The stage is the quarry pit to be populated with critical jars or mesocosms of readings. ‘The Mars Trilogy and the Leopoldian Land Ethic’, *Kim Stanley Robinson Maps the Unimaginable*, 243.

⁸¹ Aldo Leopold, ‘Thinking like a Mountain’, *A Sand County Almanac: With Essays on Conservation from Round River* (New York: Ballantine Books, 1966), 137-41. Cf. Cohen, *Stone*, 2.

⁸² Original emphasis. Timothy Morton, *The Ecological Thought* (Cambridge, Massachusetts: Harvard University Press, 2010), 59; cf. *Ecology Without Nature*, 181-97, *Dark Ecology: For a Logic of Future Coexistence* (New York: Columbia University Press, 2016).

‘dominion of the jar’, Roy Sellars picks up on the sense of waste which is developed in any reading of a text, that due to the about-ness or enframing of language and Being, the environ, or ‘round about’, of a text is its waste, alluding to the sense in which any single reading produces, or leaves behind it, a mountain of rubbish it deems irrelevant to its reading.⁸³

Sellars quotes Nietzsche as giving him this approach: ‘The worst readers are those who behave like plundering troops: they take away a few things they can use, dirty and confound the remainder, and revile the whole.’⁸⁴ The lesson of Sellars article most worthwhile recycling into Ann’s narrative is that this plundering is inevitable, as his own lifting of Nietzsche’s quote itself shows.⁸⁵ Our quoting of Ann, what she says to Sax or anyone else, is, in the first sense backgrounded by her silence, which I have tried to alternatively focus on. But even here, the cutting of quotations leaves much of the planetext unspoken for and unheard. The ‘slurry of ice and mud and sand’ of ‘beached flotsam’ which wash up from the North Sea must, as remainders of the old Mars and the churning of the ocean, be positioned against the vaster and unseen rock and ice of Ann’s planetext. To extend her ethical dimension, then, is to read her chapters and others, constantly with this remaining dark ecological (or anti-logical) space about oneself. The ‘dirty remainder’ of the brash ice leaves her with the impression of a bomb site. The beach was ‘now a no-man’s-land of frozen mud and dirty ice, as if bombs had devastated some sad army’s trenches’ (*Blue*, 260). The plundering troops have ravaged the planet.

As for reviling the whole, dark ecology and the remainder function to speak against various ecologies such as the ‘woman as planet’, or other ‘simplistic analogies’ Ann feels undermine her sense of the lithosphere. It is at such a moment on the waste of the beaches that she is reduced to the frame of her body, and comes to revile to such a degree the physicality of her biological life: ‘her rib cage moving violently, as during labor contractions... This was her body.’ The ‘remains of the seals’ on the tundra in one sense foreground this physicality, and in another are more flotsam washing up from terraforming. Her scorning of the ‘woman as planet’ analogy is the planet-wide expansion of a biological ecology, ‘a world covered in semen’, or one at least that ignores dark remainders outside of *logos*.

The crucial role of Ann’s silence, therefore, is not merely a stalwart stubborn rockiness, but also how it incorporates dark ecology without incorporating it, how it speaks for the remainder of the planetext without

⁸³ Sellars, ‘Waste and Welter: Derrida’s Environment’, *Oxford Literary Review*, vol. 32, no.1 (2010), 38-9, 37-49.

⁸⁴ Nietzsche, ‘Assorted Opinions and Maxims’ 137, *Human All Too Human*, tr. R. J. Hollingdale (Cambridge: Cambridge University Press, 1996), 245.

⁸⁵ Sellars, ‘Waste and Welter, ‘If as readers we are programmed to act like Nietzsche’s plundering, waste-generating troops, will it even be possible to avoid dirtying and confounding whatever remains?’’, 46.

speaking. This is an inherently deconstructive mode, as will soon be shown, which wanders outside the *logos* into the 'shadow of civilization'.⁸⁶ It must now be clear how a shadowy enframing of the planetext is also a region of dying. As critics Eubank and Gauthier claim:

Precisely because finitude is given over to us in language, we lose the instinctive knowledge of dying. Nature knows how to die, but human beings know mostly how to kill as a way of failing to become their ecology. Because we alone inhabit the *logos*, we alone must learn the lesson of dying time and time again. Yet we alone fail in the learning... when we do not speak our death to the world, we speak death to the world. And when we speak death to the world, the forest's legend falls silent.⁸⁷

Out of this we ought to characterise Ann's ethical commitment to the silent and infinite dark of the non-living planet. And to follow it into her going to Miranda, one of the moons of Uranus, kept 'as wilderness. A climber's world... Looked at and nothing more. A natural [mongrel] world of art' (*Blue*,

⁸⁶ Robert Pogue Harrison, *Forests: The Shadow of Civilization* (Chicago: University of Chicago Press, 1992). Harrison relates the 'shadow of civilization' as a conceptualizing of the heliocentric view which helps revert the raw material, already brought to light as raw material, back into a dark ecology. Harrison's conceived shadowland is the forest, and after branching studies such as Sharif S. Elmusa's 'Ecological Bedouin', the desert of Mars too can be conceived beyond its typical 'desertification' as another shadowed topos. Desertification 'connotes ecological disaster' and waste, much as it connotes raw material, both of which put the desert in need of a chance for deserts to be deserts in all their 'complex and rich ecology', and which might yet come under threat of prospecting terraformers. Elmusa, 'The Ecological Bedouin: Toward Environmental Principles for the Arab Region' *Alif: Journal of Comparative Poetics*, no. 33 *The Desert: Human Geography and Symbolic Economy* (2013), 12; 9-35.

This sense of an encompassing home is developed by Cecil L. Eubanks and David J. Gauthier, who seek to give a chance by which this play of light and shadow, a stepping into and out of the spotlight of the wild and the civilized need not be dialectically rotated, meaning that one must succumb to the other, but how an attitude of hospitality can arise out of an 'appreciation of the tension that exists between home and homelessness.' Reminiscent of Leopold's feelings upon shooting the wolf and seeing the shadowland in her eyes, Harrison ends his book with an appeal to thinking like the mountain witness, an attitude to take to thinking like a stone. The appeal here of the hospitable mountain is not toward wilderness nor to a building which may be built on its slopes, but its wildness as the exterior of *logos*, a region of dying. 'The Politics of the Homeless Spirit: Heidegger and Levinas on Dwelling and Hospitality', *History of Political Thought*, vol. xxxii, no. 1 (Spring 2011), 146; 125-46.

⁸⁷ Pogue Harrison, *Forests*, 249. Cf. 'The provincial dweller knows that if you pull a rock from out of the ground and turn it upside down, you are likely to find on its underside a covert world of soil, roots, worms, and insects. A nonprovincial dweller either never suspects or else tends to forget such a thing, for the stones that make up his city have already been abstracted from the ground, wiped clean, and made to order. A province, in other words, is a place where stones have two sides', 246.

536). As will be shown in chapter 4, Miranda is also a site of special interest for discussing the heliocentrism of interpretive conduct, the play of light and shadow, as it relates to viriditas. As for other mongrel spaces, Ascræus Mons and other volcanoes serve to maintain an ethical altitude, the height at which it is was agreed terraforming would cease to impact. ‘... the high places would look like this forever. Climbing the great slopes would be like travel into the prehuman past, into pure areology, into the areophany itself perhaps, with Hiroko or not. People had talked of securing a dome or a tent over these calderas... Empty greenhouses’ (*Blue*, 280). Yet, as Cronon reminds us, it is incorrect to cordon off such places as preserves, as what ought to be preserved or sanctified through salvation is not the constructs of civilization, nor desert itself but the ‘home that encompasses both’: ‘This silent rock, this nature about which we argue so much, is also among the most important things we have in common. That is why we care so much about it. It is, paradoxically, the uncommon ground we cannot help but share.’⁸⁸ All the same, such spaces as Miranda and the high calderas of volcanoes work to remind one of the encompassing about-ness of the planetext toward which they aim to elicit an ethical commitment. It is essential that such zones be kept not so simply as remainders of a pre-terraformed time, but as reminders of the infinite stony exorbitance of the planetext; its vast, non-living, dark ecology. It therefore remains for us to speak of Ann’s wandering into the dark of *logos*, giving her the status of a wandering exorbitant.

⁸⁸ Cronon, ‘Introduction’, 56.

The wandering exorbitant: Phenomenology of the surfaces of Mars

spare, austere, stripped down, silent, stoic, rocky, changeless.
Sublime...Mars rolled, proof of the otherness of the world, of its stony
vitality.

– Kim Stanley Robinson

I might caress her, pass my hands slowly over her, but, just as if I had
been handling a stone which encloses the salt of immemorial oceans or
the light of a star, I felt that I was touching no more than the sealed
envelope of a person who inwardly reached to infinity.

– Marcel Proust

Here or there we have discerned writing: a nonsymmetrical division
designated on the one hand the closure of the book, and on the other
the opening of the text... The question of writing could be opened only
if the book is closed. The joyous wandering of the *graphein* then
became a wandering without return.

– Jacques Derrida¹

TO CLAIM WITH CHRISTOPHER Palmer, Amy Clarke, or Robert Markley,²
walking is a staple way of experiencing the red planet in the Mars Trilogy is
an understatement. It is matched only by scenes of debate in which the
'ideological and political prejudices' of characters are rehearsed for its
readers, and 'collective zaniness... from late night parties all the way to
revolution itself' take place (*Archaeologies*, 410, 404). Yet, Jameson leaves aside
the narrative priority of trekking individuals or small groups, choosing to
contrast them with 'collective euphoria' only through the abstract term of

¹ Robinson, *Red Mars*, 96; Proust, *Remembrance of Things Past – The Captive*, tr. C. K. Scott Moncrieff (London: Chatto & Windus, 1972), 248-9; cf. Mark Epstein, *Open to Desire: The Truth about What the Buddha Taught* (New York: Gotham Books, 2006), 124; Derrida 'Ellipsis', in *Writing and Difference*, translated by Alan Bass (Chicago: University of Chicago Press, 1978), 294.

² Christopher Palmer, 'Kim Stanley Robinson: From *Icehenge* to *Blue Mars*, in *Visions of Mars: Essays on the Red Planet in Fiction and Science*, ed. Howard V. Hendrix, George Slusser, and Eric S. Rabkin (North Carolina: McFarlane Publishing Co., 2001), 139; Clarke, 'Martian Odysseys: Travel and Narrative Unrest in Kim Stanley Robinson's *Red Mars*,' *Fantastic Odyssey's: Selected Essays from the Twenty-Second International Conference on the Fantastic in the Arts*, ed. Mary Pharr. (Westport, CT: Praeger, 2003): 133; 'Falling into Theory: Simulation, Terraforming, and Eco-Economics in the Mars Trilogy,' in Burling, *Kim Stanley Robinson Maps the Unimaginable*: 139.

‘perception’ (*Archaeologies*, 404). These perceptual and introspective moments, to use his words, most often occur while walking, wandering, or travelling over the Martian surface, and the role of walking as a form of reading, or aiding the generation of meaning, is the first case to explore of reading the face of the rocky planet. Hiking is therefore the chief means of experiencing wildness, wandering away from the light of *logos* into its shade, the regions in orbit around it. The first case of wandering takes place in ‘The Crucible’ in *Red Mars*, when *logos* is at its smallest and least developed as the construction site of Underhill. As they return from the north, the ‘disgust’ of the industrial quality of these early days strikes Nadia: ‘it had the disordered, functional, ugly look of Chelyabinsk-65’ (*Red*, 159). Nearly the whole planet is under the shadow of wildness. And the northern regions provide a place where the geological timescale of the surface ‘goes from millions of years [as on Earth] to billions’, where Ann and Nadia set out. ‘It’s such a big difference it’s hard to imagine’ (*Red*, 137). The value of wandering into these regions is the unique access it gives to these unimaginable, distinctly Martian, places.

‘Western philosophy finds its beginnings in walking, with the Peripatetic philosophers³, who walked boldly out of the dark and deep realm of myth and into the lighted house of *logos*.’⁴ David Macauley sets out for this other realm in his essay on the phenomenology of various kinds of walking, as the ‘less recognised side’ of environmental theory and practice that is ‘concerned with our movement over, about, around, and even *within* the earth.’⁵ He reminds us his path is not in search of *logos*,⁶ but a wandering away from it. And as such should we frame Ann’s venturing out onto the rocky planet. The

³ Merlin Coverley clarifies the misuse of this term, that the transliteration of *περίπατετικός* (Peripatetic) ‘meaning ‘of walking’ or ‘given to walking about’, in fact ‘derives its name from the *peripatoi* (περίπατοι), the colonnades or covered walkways through which Aristotle is alleged to have walked while lecturing... It appears that the Peripatetics owe their name not to their philosophy, but to the setting in which it was conducted.’ *The Art of Wandering: The Writer as Walker* (Great Britain: Oldcastle Books, 2012), 22-23.

⁴ David Macauley, ‘Walking the Elemental Earth: Phenomenological and Literary ‘Footnotes’, in *Passions of the Earth in Human Existence, Creativity and Literature*, ed. Anna-Teresa Tymieniecka (New Hampshire: Springer Science + Business Media, 2001), 15-32, 27. Cf. Jennie Harrison Bunning: ‘Walking’, Rebecca Solnit wrote, ‘is how the body measures itself against the earth.’ But what am I to do when the earth itself is hidden? And what if my body, denied the anchor of the horizon line, begins to vanish too?’ ‘The Playground of the Gods’, *Lodestar Anthology*, issue 7, accessed July 18 2017, <https://lodestarsanthology.co.uk/2017/03/the-playground-of-the-gods/> Solnit, *Wanderlust: A History of Walking* (New York: Penguin Group, 2000). Cf. Geoff Nicholson, *The Lost Art of Walking: The History, Science, Philosophy, and Literature of Pedestrianism* (New York: Riverhead Books, 2008); Frédéric Gros, tr. John Howe, *A Philosophy of Walking* (London: Verso, 2014); Joseph A. Amato, *On Foot: A History of Walking* (New York: New York University Press, 2004).

⁵ *Ibid*, 15.

⁶ ‘Some might say this was also a step in the wrong direction’, *Ibid*, 27.

shadow-desert of the north pole of Mars with its ‘empty petrified sea of black dunes’ (*Red*, 198) can help ‘auto-deconstruct’ the ‘tensions between physical stasis and transit’⁷ by gesturing to the dark ecology of the rock. Wandering into such non-logocentric dunes of *différance* is ‘almost always positioned circumambiently with respect to a focal and relatively fixed point of departure and return.’⁸ The northern expedition must finally come in sight of the ‘plumes of smoke’ (*Red*, 159) of Underhill in their return journey, and only with the deepest regret. Ann tells Nadia ‘I don’t want to go back... I don’t want this trip to end. I’d like to keep traveling all the time, down into the canyons, up to the volcano rims, into the chaos and the mountains around Hellas. I don’t ever want to stop.’ (*Red*, 156). Such a return journey is bound to elicit some feeling of the useless nature of wandering.

G. K. Chesterton claimed ‘there are two ways of getting home; and one of them is to stay there.’⁹ He was lamenting the view that staying-in affords, that is, no proper view at all of the house of *logos* in which one lives. Wandering from the house for a little while, instead, can provide according to Chesterton a value beyond what it alone can offer, that it is ‘part of some such gigantic figure, on which he has always lived, but which was too large and too close to be seen.’¹⁰ The planet may take the place of this gigantic figure, but Chesterton’s view, like Jameson’s, is to wander only for the sake of turning back. The itinerant wanderings of the Trilogy most often serve as a stepping away from some social or political issue, and if this view holds, they must at some point fold back into the social. For Jameson, at the level of the reader’s path through the novels, the scientific and the social moments stand apart at two levels while the reader moves back and forth between them through ‘interpretive alternation’ (*Archaeologies*, 396).¹¹ The northern expedition might be one level of this swing. Yet, while the Jameson-view holds well with Chesterton in that getting out of the social spheres provides a better view of them (and so contrariwise of the scientific), the aim here is to focus on the dark shadow of the social spheres without recourse; ‘a wandering without return.’ To focus instead only on the exorbitant regions of the non-human which are in orbit around them.

When, in *Blue Mars*, Sax remembers Oscar Wilde distancing himself from socialism because it will ‘take up too many evenings’ (*Blue*, 434), he makes a literal move in this direction by stepping out of Da Vinci laboratories (now

⁷ *Ibid*, 15.

⁸ *Ibid*.

⁹ Chesterton, *The Everlasting Man* (San Francisco: Ignatius Press, 2008.), 9.

¹⁰ *Ibid*.

¹¹ ‘The coherence of any serious and extended engagement with cultural experience depends on a productive coordination between contingency and theory; between chance encounters and an intellectual project. It is true that we always try to resolve this tension one way or the other... But the vitality of the engagement depends on keeping the tension alive (*M. Papers*, ix).

deep into socialism) to find ‘the rumpled land’ of ‘the world’. It is important to note that the time in which he steps out into the planet happened in the ‘meanwhile’ (*Blue*, 438),¹² in the ‘intervening time’, or ‘on the other hand’.¹³ Wandering at such times to ease the stress of sociality renders it, in the cases of Ann and Sax, with an ‘exquisite unusability’ and ‘sublime unemployment.’¹⁴ As such, it is recognisably a useless exorbitant, as well as a wandering into the sublime exorbitance of the wild desert without recourse to its social or economic value. By positioning Ann and the rocky world both in orbit around the central narrative of terraforming and social symbolism, they both maintain the Derridean status of an exorbitant.¹⁵

Crucial to this kind of wandering is its mark of freedom from the social sphere. It is the terms with which Peter Sloterdijk described Jean Jacques Rousseau’s own solitary walking; an act that took Rousseau out of the stress of the political into a unique freedom. Reminiscent of Glasberg describing the mutedness of the book of ice, Sloterdijk writes:

The subject of the ‘Fifth Walk’ is neither a cognitive subject nor a willed, entrepreneurial or political subject. It is not even an artistic subject. It had nothing to say, it has no opinion, it does not express itself and it has no project. It is neither creative nor progressive, nor is it benevolent. Its new freedom is revealed in its ecstatic unusability for any purpose.¹⁶

If we bear Ann in mind as the ‘subject’ of this passage, she gains an exorbitance as a useless figure wandering in orbit around the social world. When combined with Glasberg’s glacio-linguistics, we now have both a subject and a topos (distinct from the functionality of Underhill) with which

¹² *Oxford English Dictionary*, c.v. ‘mean’, <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/115439>, accessed December 07, 2016.

¹³ *Oxford English Dictionary*, c.v. ‘meanwhile’, <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/115488?redirectedFrom=meanwhile>, accessed December 06, 2016.

¹⁴ Peter Sloterdijk, *Stress and Freedom*, trans. Wieland Hoban (Cambridge: Polity Press, 2016), 22.

¹⁵ ‘*But what is the exorbitant?...* Starting from this point of exteriority a certain deconstruction of that totality which is also a traced path, of that orb (*orbis*) which is also orbitary (*orbita*), might be broached. The first gesture of this departure and this deconstruction, although subject to a certain historical necessity, cannot be given methodological or logical intra-orbitary assurances. The *departure* is radically empiricist. It proceeds like a wandering thought on the possibility of itinerary and of method. It is affected by nonknowledge as by its future and it ventures out deliberately. To *exceed* the metaphysical orb is an attempt to get out of the orbit (*orbita*), to think the entirety of the classical conceptual oppositions...: the opposition of philosophy and nonphilosophy, another name for empiricism, for this incapability to sustain on one’s own and to the limit the coherence of one’s own discourse, for being produced as truth at the moment when the value of truth is shattered...’ (*Grammatology*, 162).

¹⁶ Sloterdijk, *Stress and Freedom*, 23.

to understand Ann's wandering, and the gaining of the sense she is 'the most useless person'¹⁷ on Mars. But by what means can we speak about this act of movement around the planet as the chief means by which the book of stone is read and experienced as wildness, alterity, and pure surface?

To begin with, wandering is key to experiencing wildness for wildness is only accessed by leaving the populated zones, the built cities and towns, and the construction sites. At the level of language, her travels are a wandering away from *logos*, and so to come by an understanding of her experiences of the planetext, we too must step out from the light of *logos* into Pogue Harrison's shadow of civilization. Places of wildness – the north pole, Miranda (a moon of Uranus), the highlands of Tempe Terra – are wild either by virtue of being travelled prior to terraforming (north pole in *Red Mars*), or being kept as mongrel reserves (the highlands and Miranda, both in *Blue Mars*). As a point of contrast, these experiences in Ann's narrative counterpoint her perspective given priority in 'Shikata Ga Nai', at the end of *Red Mars*, in which she and the other primary characters watch the great flood pour into Valles Marineris, one of the novels' more spectacular displays of terraforming. Such an event is not only a vivid example of the loss of red Mars (*Red*, 550), but 'enforced togetherness' (*Red*, 91). Ann is stuck in a rover with her colleagues until she leaves one night, hides behind a rock, and attempts suicide (*Red*, 566-7).

Her narrative, and her guiding principles of silence and wandering, takes its place in orbit around the central narrative of terraforming. In deconstructing this core focus of the novels, this other exorbitant narrative is brought into view as its circumambience, a narrative which seeks to develop a sense of darkness and alterity, and experiences with the 'salt of immemorial oceans' and the 'light of a star' which ironically cannot be seen at once diffuses such light and positions one into the immemorial infinity of the oceanic scale. This is the key, I argue, to a phenomenology of Ann's experience of stone, a reading of the surface that reaches not into a hidden depth but into an infinity of the surface or as Morton suggested, a surface which might also be infinitely deep, the same infinity by which Emmanuel Levinas developed an understanding and hospitality for the face of the other.¹⁸ When expressed through Ann's persistent and obsessive wandering, a geo-phenomenology of the surface is the reading of a closed book, but one which at the same time, as Derrida claims, opens up the joy of wandering its surface.

The final parts of this chapter will find Ann on the beach at the close of *Blue Mars*, and considers the beach itself as understood (at least in Ann's experience) through what is in orbit around it, including the meteor she is

¹⁷ *Ibid.*

¹⁸ Levinas, *Totality and Infinity: An Essay on Exteriority*, trans. Alphonso Lingis (London: Martinus Nijhoff Publishers, 1979), 187-97.

reminded of which impacted Mars and made the Hellas Basin, on whose shore she comes to stand. In considering the tide of the beach as a phenomenon of the moon (the gravity of the other), the fragmented stones of its sand, and a reference to Galileo, drawn into view is the issue over the invisible pull of orbital objects: moons, other planets, meteoroids, and comets, and suggests their legibility as wanderers within a dark ecology; the Ancient Greek for 'planet' and 'wanderer' share the same term (πλανήτης). It marks them out as always in the margins, or in orbit around the core of the narrative (the project of terraforming). It is in this final analysis that Ann's phenomenology 'to think like a stone' (*Green*, 125) can be applied to the rocks in the sky, wandering through their elliptical or exorbitant orbits. It is therefore a consideration that the outback wildness of Mars is also applicable to the other rocks of the Solar System, when she comes to find herself at home on the Uranian moon, Miranda.

This second reading of the final beach scene engages the issue of itinerancy, or the errancy of this textual wandering, in which the planetext as it lies about Ann and the reader is not only wild and in the dark, but textual. That is, the strain of textual focus on Robinson alone begins to come into question as the beach itself, as the final scene of the novel, brings out the problem of where to go when the book is finished. Derrida claimed only when the book is closed can the text be opened. The liminality and the textual about-ness of the beach suggest several approaches, firstly that other such beaches in Robinson play into it as a site of entry and exit between two topographical domains. Secondly, that the beach has other entry points, and that it is partly defined by its lack of controlling everything pushed up onto its shore. In this sense, Wells and Foucault, both of whom end texts with images of beaches, allow themselves to be invited through this opening of the planetext, where they sit in orbit around it. And thirdly, the question of the ending is precisely that of ending itself, if it signals the final arrival at utopia, or if, as suggested in the closing and opening of texts and books, the beach is rather a meta-textual entry and exit point with no clear line separating them. In the case of the reader, the closing of the book marks the change in site in which the planetext's utopian qualities are finally opened, which in this case take the form of exorbitance. Of course, the departure from the textual makes no claims on exiting from textuality itself. It is simply that the borders which frame the book no longer so forcibly contain it. With the beach, the edge suggests itself without a clear sense of if it is the beginning of something or the end. In utopian terms, it is unclear whether the reader has just finished a utopian novel, or if only now can they embark on utopia.

To state this again in terms of the itinerant epigraphs: the alterity of the planet, the 'otherness of the world', is a sealed 'envelope'. Yet the 'stony vitality' is less hidden inside the envelope than it is the face of the envelope itself, which 'reach[es] to infinity', contains the 'salt of immemorial oceans',

and the 'light of stars'. The opening of the *planetext* occurs when the envelope of the 'book is closed'. Only then can Ann set out freely as its 'wandering *graphie*'. And if the *graphie* itself of 'Ann' suggests any meaning on its surface, then even the serifs of 'Ann' give her feet with which to wander. Beginning to speak of Ann through a grammatology means the gramma of the serif form (the feet of the letters) fall in with the parallel lines, or *grammé*, left by the tracks of her rover (*Red*, 154). The value given to wandering therefore is of a movement over and around meaning, which aims for what is hiding about the *grammé* and grammas of written language. And we must remember much of the *planetext* is in the habit of hiding itself.

How the salt and the light are enclosed within the rock means, first of all, an eclipse of the face, which has moved and cast most of the immemorial ocean in darkness. A sense of how Ann encounters the face of the planet as a specific and individual surface, with a disclosed infinity behind, it is found on the very important phenomenon of the *planetext*'s horizon. On two occasions, Ann is seen, from a distance, uniquely positioned to gaze at what is invisible and beyond a representable field of vision. In *Red Mars*, during their expedition to the polar north of Mars, Nadia sees Ann 'on the ridge of the dune to the west, waving down at her, a black silhouette against a blood-covered sky' (*Red*, 140). And in *Blue Mars*, Sax likewise finds Ann 'on the horizon' where he knows he 'would never catch her', referring both to a literal and character catching, their differences as people and political representatives perhaps too insurmountable: 'there on the horizon was a figure walking westward over a knoll: Ann. Had she been circling the horizon, walking and walking?' (*Blue*, 707, 710-1). For Nadia and Sax, she steps both at a unique distance from them and on a vantage from which to see past the limits of sight comprising the horizon. But both displaced sightings of Ann suggest a silhouetting must eclipse her as she climbs the ridge, that this is not so easily imbricated in Nadia's sight alone, but with Ann's in which the blackened dunes, and that circling the horizon apparently has no end, allowing only perpetual walking and a sense the view from the ridge is never fully given, only deferred.

The line of the horizon cuts Sax off from Ann's viewpoint, literally and thematically. It suggests their green and red politics do not share a vantage. As another advocate of green viridical force in the narrative, Zo Boone also cannot help lecture Ann on the special angle of view at which consciousness appears and touches the horizon, like the colours of a rainbow, at a twenty-three degree angle (*Blue*, 540). A similar moment in Zo's narrative introduces a second shade of the horizon which helps bridge these different worlds of Ann and everyone else from the individual blacking out or silhouetting, to the social mechanism of the face. Her face becomes an opportunity for seeing the façade of the planet of otherness and stone, the features of which take the shape of being weathered. Hers is, in Proust's words, the 'sealed envelope of a person who inwardly reached to infinity':

In person Ann Clayborne proved to be indeed as withered and sun-dried as Russell... Her skin was a nut brown, and marked by wens and warts and scars where skin disorders had been removed. A long life spent outdoors, and in the early days too, when UV bombardment had been intense; in short, she was fried. A bakehead, as they said in Echus. Her eyes were gray, her mouth a lizard slash, the lines from the corners of her mouth to her nostrils like deep hatchet chops. Nothing could be more severe than that face. (*Blue*, 523)

But the visibility of the face is a troublesome frame of reference. After all, Ann's accusation against the chauvinism of the greens (*Zo* included) is 'why when they look at the land [they] can never see anything but [their] own faces' (*Red*, 158). The face seems also to betray what is around it. Its façade is an eclipse. For this reason the portrait takes the form of a topology, 'sun-dried' and 'withered' (or 'weathered' to use Sax's terminology; *Blue*, 68) by the high quotient of UV radiation. The eclipse of Ann's face resides only in the ambience of the ultraviolet of outdoor living, which has baked and scoured her skin to the point of severity. The marking of her wens and warts and the 'deep hatchet' lines only make this legible to a point. In the first sense, they are traces of skin disorders, and in the second sense, the ultraviolet rays which dry and burn her skin with radiation are not visible, and so make for an invisible light.

With this proximity of the face and the surfaces of rock and stone in mind, it is helpful to turn to Levinas's ethical approach to the face to begin to gain a sense of how dark ecology appears, or fails to appear, at the surface, and why its horizon is divulged only to a wanderer on its ridge. For Levinas, the face appears like the façade of a building, the beauty of which is 'constituted' through 'indifference', 'cold splendour, and silence.' It 'captivates by its grace as by magic, but does not reveal itself.' To gain some sense of Ann's *différance*, some ground must be opened for her indifference, not political indifference, or lack of feeling, but a political feeling for the geosphere which is essentially indifferent, cold, and silent. Such a face, and such a place, must keep itself unrevealed, like the 'dark corners of cathedrals.' Such pockets of darkness, according to Levinas, 'denote the state of being that precisely has no façade'¹⁹ which is found most unequivocally on the face of the rock. His ethics is built on a trust for its horizon, beyond which the realm of the stone-other has no limit, and consequently cannot be adequately represented. The clue of these appearances of Ann in the distance is how her unique vantage involves blacking out, the removal of a face or distinguishing features, to properly approach the infinity of stone. To reiterate Derrida, this is the closing of the book which opens the planetext. Levinas introduces the horizon to begin to talk about the face of the other. 'To see is hence always to see on the

¹⁹ Levinas, *Totality and Infinity*, 192-3.

horizon.²⁰ Ann herself comes to stand in relation to other characters out on the border between what is seen (Ann), and what is not seen (what Ann is at that moment seeing); and hence her refrain they have not ever seen Mars. For Sax especially, the horizon on which she stands is the edge of her disappearance and her unknowability. For Levinas, the experience of horizons is always held within the light of the sun (seeing what is available to see), and the sun itself as an object that cannot be seen.²¹ The peculiar logic of *différance* makes this a sun which always shines but fails to bring light, the only mode of seeing by which we can trace Ann's walking are the many marks and scours of UV radiation on her face.

As having its own unique horizon, 'the face is present in its refusal to be contained. In this sense it cannot be comprehended, that is, encompassed.'²² Ann's face is therefore illegible to the degree it obscures the regions of her ethical commitment. Her pocked and scarred face does not stand totally for the stone planet, or even represent it, but effaces it by way of indicating the other's inherent infinity. The eclipse of the face is nonetheless a social currency. As Levinas writes: 'The idea of infinity is produced in the opposition of conversation in sociality. The relation with the face, with the other absolutely other which I can not contain... is nonetheless my Idea, a commerce.'²³ To replace Jameson's totalizing of the social with Levinas's infinity allows for Ann's resistance to be maintained with a greater sense of hospitality for her silence, and consequently for the muteness of the planet. Levinas continues: 'The 'resistance' of the other does not do violence to me... The first revelation of the other... does not consist in grasping him in his negative resistance and in circumventing him by ruse.'²⁴ This support for the 'positive structure' of an ethical attitude toward the other is useful to place in contrast to the ruse of the suspicious hermeneutic of Jameson, the need to distrust the surface, with a positive trust of the dark of the face. Her scarring by radiation is therefore the currency of her commitment, the cost she is willing to pay for the planet.

The peculiar *différential* mode of light by which the stone planet is eclipsed and seen is recognisable in the feature of the black landforms of the polar north. In one case, dense blackness takes on the form of an ocean. The 'great northern dunes,' which have the quality of a 'petrified sea', on its 'waves of blackish sand' gives the feeling of 'coming on the shore of a sea.' The 'huge frozen waves' of the 'barchan dunes' evokes the sense of 'paddle-wheeling over a black sea that had frozen at the height of a titanic storm'. (*Red*, 139) As a lava plain, its 'black surface' owes to the 'volcanic silicates' – 'obsidian, flint,

²⁰ *Ibid*, 191

²¹ *Ibid*, 192.

²² *Ibid*, 194.

²³ *Ibid*, 197.

²⁴ *Ibid*.

some garnet' (*Red*, 141). Vastitas Borealis, the lava plain on which they are travelling, is 'cratered', and makes legible periods of successive meteor impacts before the planet eventually cooled.²⁵ The cratering of Borealis is not unlike the scours and pock marks of Ann's face, allowing it to fall under the same eclipse of darkness and black waves. The titanic storm of meteoric impact, now frozen, suggests some prior violence.

The hardness of the ocean-dunes signals a crucial element to its black surface as a substance dense enough that light cannot penetrate it. A key element to a phenomenology of stone therefore is the role of colour in Nadia's experience of the sun setting over the black dunes, and the limit of the surface which the sunlight picks up as it sets:

The sun touched the horizon, and the dune crests faded to shadow. The little button sun sank under the black line to the west. Now the sky was a maroon dome, the high clouds the pink of moss campion. Stars were popping out everywhere, and the maroon sky shifted to a vivid dark violet, an electric colour that was picked up by the dune crests, so that it seemed crescents of liquid twilight lay across the black plain. (*Red*, 141)

In this gradual losing of light, the horizontal line becomes blackened, and throws the dunes into shadow. Twilight, more than any other time besides sunrise, makes this mode of seeing particularly obvious as a transitional phase between two realms in which objects seen and not-seen are not easily placed. The realms then move through these objects as points of contact. The black dunes at first appear to incorporate the sky as the visible dome shifts into a darker colour from maroon to violet. But the dome also appears to evaporate and sit in the background to the high clouds with their own mossy pink crests and ridges. As the stars begin to show, the throwing off of the dome for infinite blackness, and the feeling of a cold shadowing of the planet itself into this blackness, is undercut by the way in which the electric violet remainders of colours are sprinkled over the dune crests to resemble the sparkle of starlight. This peculiar moment of exchange of qualities between the sky and the dunes seems only apparently to manage the contact of land and sky without any complication. But the liquid twilight is a suggestion of the melting of northern ice, and even more so of the way the crescents of the wave-like dunes catch sunlight. The touch of the sun is passed over to the more distant starlight which figuratively brushes the dunes themselves. In a very important sense,

²⁵ The italicized prelude to 'The Crucible' gives an account of the role meteors played in melting and thawing the red planet, very early in its history: 'Smaller stones fell every day, so that the largest surfaces on Mars are saturated with cratering, the landscape a palimpsest of newer rings obscuring older ones, with no patch of land untouched. And each of these impacts released explosions of heat that melted rock; elements were broken out of their matrix and fired away in the form of hot gases, liquids, new materials... But all that went away. The planet was too small, too far from the sun. The atmosphere froze and fell to the ground' (*Red*, 95).

this image understands the touch of the human mind to work on the same helio-metric of contact and exchange. It suggests Nadia's mind forms itself on the northern deserts out of the flash of light, and touches the dunes much like the displaced specks of starlight, forming its own unique horizon. This is in keeping with Sax's logic: 'the beauty of Mars exists in the human mind'. Reminiscent of Boone's 'we are all the consciousness Mars has ever had' (*RM*, 2), he explains that all the time watching the red planet from Earth, studying it, and telling stories about it, 'that's what makes Mars beautiful. Not the basalt and the oxides.' 'Without the human presence it is just a collection of atoms' (*Red*, 177). Yet it is the 'touch' of the human finger under which Ann feels on the beach in *Blue Mars* she will dissolve away into the atom-like particles of sand, becoming literally areoformed along with the breccia and rock of the Hellas basin into the matter of the beach. When viewed from Ann's point, which is not directly given in the above passage from Nadia's chapters but is only on the horizon, the basic frame of colour and light is shown to blank out a very crucial dimension of the geosphere.

Critical engagements with colour in the Trilogy, a subject which cannot ever be avoided entirely, all neglect blackness. A reason may be that it resists the core mode of depth-analysis and the goal of liberating a colour-politic from opaque objects. The inner-dimension into which the depth-analysis of light peers is not here wanted, for the simple phenomenological reason that photons are halted by the density of the rock, and so fail to give off any colour. The point of view Nadia has of the rock hardly makes a difference if stood at twenty-three-degrees or anywhere else. The experience of the rocky world has no privileged point of view, but one that wanders and skirts its surface. Its overriding logic of phenomena is invisibility, or the darkening of sight, rather than a sunny point of focus. The view of the rock itself, however, is what Nadia is introduced to, via Ann. Her sensations during this moment on the dunes point to a feeling of inner density, a solidifying of her body into a kind of rock:

All of a sudden the past sheered away in her head and she turned in circles like a little girl trying to make herself dizzy, without a thought in her head. Weight seeped inward from her skin, and she didn't feel hollow anymore; on the contrary she felt extremely solid, compact, balanced. A little thinking boulder, set spinning like a top. (*Red*, 142)

Solidity is replaced by the end of *Blue Mars* with a transparent sandy corporeal embodiment²⁶ of the beach, which for Ann leaves her, unlike Nadia above, with a feeling of dissolving away, and of light passing through her.

²⁶ If we think of this change as a freezing, rather than a melting, Nadia turns to stone almost as if under the eyes of Medusa, but her movement suggests it is a liberating petrification. Hélène Cixous's hope to inspire a feminine writing through women taking possession of their own bodies: 'Write! Writing is for you, you are for you;

The very nature of horizons and the light touch of consciousness makes it a phenomenon forever compromised. Ann is never quite able to escape onto the black rocks with a total loss of humanness. The beach itself, as we will see, is both a point of conclusion and of departure in which the challenge of a compromised Mars is retained in her mind with the most amount of interpretive difficulty. This only seems compounded by the very equivocation of the horizon itself, and the non-linearity of the grammatological project. Yet it is an equivocation by wandering. To wander on the horizon of the planet is to both always step up onto its permeable ridges and escape over them, yet to always find oneself caught inside its field of vision. Once the non-linearity of grammatology is noted, the vertical line of the space elevator which rises out of the black volcanic rock of Pavonis caldera in the opening of *Blue Mars* (in Ann's chapter) is the drawing of a sky-*grammé*, or sky-line, a vertical horizon. Not only does it cut the sky much like tracks of Ann's rover cut the dirt, but it does so out of defiance of the volcanic rock of the caldera. By no accident did Jameson recognise the elevator cable as the bridge over the 'trench' (*Archaeologies*, 412) between the two planets, Earth and Mars. The politics of the cable is by no means easily resolved, as 'Peacock Mountain' demonstrates. This second Clarke elevator is not pulled down, despite the Reds taking siege of Sheffield at its base. Nor should it be handled in the way of some critics, one of whom called it 'the most awful (in both senses of the word) technologies in *Red Mars*.'²⁷ To Ann, the elevator cable even takes on a dark and invisible shape, giving to it a sense of its compromising centrality, as well as a literal guardrail of discourse (*Grammatology*, 158) both inside and outside the novels:

Nearly invisible, in fact, and yet its existence dominated every move they made, every discussion – every thought they had, almost, speared and strung out on that black thread connecting them to Earth. (*Blue*, 8)

your body is yours, take it,' most certainly speaks to the sexual nature of Nadia's sense of embodiment: 'Beauty could make you shiver! It was a shock to feel such a physical response to beauty, a thrill like some kind of sex. And this beauty was so strange, so *alien*' (*Red*, 141). To consolidate the strangeness of this feeling, feminist theoretician Irigaray made the point in 'The Ethics of Sexual Difference', to magnify and focus on the feeling of what cannot be seen, a move to step out of a heliocentric bias of visibility into an affect or touch of the unseen. Cixous, 'The Laugh of the Medusa', *Signs: A Journal of Women in Culture and Society* 1, no.4 (1976): 876. Also see Luce Irigaray, *An Ethics of Sexual Difference*, tr. Carolyn Burke and Gillian C. Gill (New York: Cornell University Press, 1993), 151-6. Cf. Ann Rosalind, 'Writing the Body: Toward an Understanding of L'écriture Feminine,' *Feminist Studies* 7, no.2 (1981): 247-63.

²⁷ Eric Otto, *Green Speculations: Science Fiction and Transformative Environmentalism* (Columbus: The Ohio State University Press, 2012): 116; cf. Kerslake, *Science Fiction and Empire*, 162-4; *Archaeologies*, 412.

At this point, Ann's deconstructive potential crosses over into the structural directions of readings. While critics abandon it as a political and colonial object, the centrality of the elevator has just as much effectiveness as a guardrail of discourse, a trail reaching out of the novels into the reader's space. Every discussion and every thought – spearing linearity suddenly takes on the form of an invisible organisation of the planetext, the sky-*grammé* which forms a textual horizon, and supports at its summit what I have called the orbital perspective of Robinson criticism.

With this in mind, before coming to the final beach episode, it is useful for seeing how the grammarology effectively cuts the linearity of the reader's sky-*grammé* in favour of a more itinerant wandering. Wolfgang Iser's 'wandering viewpoint'²⁸ of the reader as a phenomenology of the itinerant reading method is one point of entry. He accounts for the reader's experience of the planetext as they move about inside its horizon at any given moment of comprehension. Yet, Iser's wandering is a straight line, and the reader's movement is by and large linear in his account. But another option is available to explore the surface, one not predetermined by lines on the road. In *Red Mars*, as the northern expedition make their way back south, the experience of return is quite different from their errancy: 'the landscape itself was altered, split left and right by the parallel lines of cross-hatched wheel tracks...all marking 'the way.' It wasn't wilderness anymore.' (*Red*, 154) To go into the wild, simply, is to err away from linearity. It stands that Iser's phenomenology can benefit from a contact with grammarology.

The use of thinking of wandering as a way of reading, one which is attentive to the infinity of the stone surface, is complemented by Iser's account of the phenomenology of the act of reading. The basic structure of the reader's wandering viewpoint is that their 'position in the text is at the point of intersection between retention and protension.'²⁹ Each individual sentence correlate prefigures a particular horizon.' 'The reader's wandering viewpoint is, at one and the same time, caught up in and transcended by the object it is to apprehend.' In terms of the object of the stone world, we can appropriate Iser's words, when he writes: 'The relation between text and reader is therefore quite different from that between object and observer: instead of a subject-object relationship, there is a moving viewpoint which travels along inside that which it has to apprehend. This mode of grasping an object is unique to literature.'³⁰ Not unique enough, once we approach Ann as a reader of the planet's stone surfaces. Nor once the protensions of what lie ahead in the future take on the definition of Derrida's non-exergue which

²⁸ Iser, 'The Wandering Viewpoint', *The Act of Reading: A Theory of Aesthetic Response* (London: Routledge & Kegan Paul, 1978): 108-34.

²⁹ Iser quotes Husserl: 'Every originally constituent process is inspired by protensions, which construct and collect the seed of what is to come, as such, and bring it to fruition.' 110-1.

³⁰ *Ibid*, 109.

‘proclaims itself at present, beyond the closure of knowledge’ (*Grammatology*, 4). As a method, Derrida’s science of writing (grammatology) attends to the protensions of what is to come. Grammatology is the ‘wandering of a way of thinking that is faithful and attentive to the ineluctable world of the future.’³¹ This is a statement in agreeance with the reader’s experience of the sentence, as Iser puts it: ‘Each sentence can achieve its end only by aiming at something beyond itself.’³² The horizon of the sentence, aside from proclaiming what lies beyond it, which is yet to have an exergue (or date of publication), also implies a more specific departure from Iser’s dialectic of protension and retention, and the straight line through them.³³ To move around the surface of the planetext always with the protensive landscape in the dark, means that this dark space, while mute and without signification, foregoing representability, is exerting a pull toward meaning, even while it is always in excess of reaching a fully meaningful visibility.

A question therefore suggests itself over the issue of experiencing the darkness over the horizon, the muteness beyond the sentence, without appealing so narrowly to the linear path. The most relevant quotation to show where an alternative non-linear interpretive experience might possibly be described is when Iser points to the fact of the reader ‘caught up in and transcended by the object’³⁴ of interpretation. The term by which to describe this fact is that he or she is in orbit. To be caught up is to be pulled by a gravitational pressure, and to transcend it is not to escape its influence entirely but move in orbit around it, making it a necessarily compromising or compromised distance. Derrida announces both this promise in the project of grammatology, as well as its incapacity. In commenting on his own method of deconstruction, he describes:

Starting from this point of exteriority, a certain deconstruction of that totality which is also a traced path, of that orb (*orbis*) which is also orbital (*orbita*), might be broached... It proceeds like a wandering thought on the possibility of itinerary

³¹ Derrida’s exact wording is: ‘Patient meditation and painstaking investigation on and around what is provisionally called writing... are wanderings of a way of thinking that is faithful and attentive to the ineluctable world of the future which proclaims itself at present, beyond the closure of knowledge.’ *Grammatology*, 4.

³² Iser, *Act of Reading*, 110.

³³ Iser writes: ‘Thus every moment of reading is a dialectic of protension and retention, conveying a future horizon yet to be occupied, along with a past (and continually fading) horizon already filled; the wandering viewpoint carves its passage through both at the same time and leaves them to merge together in its wake’; ‘The incompleteness of each manifestation necessitates syntheses, which in turn bring about the transfer of the text to the reader’s consciousness. The synthezizing process, however, is not sporadic – it continues throughout every phase of the journey of the wandering viewpoint.’ 112, 109.

³⁴ *Ibid*, 109.

and of method. It is affected by nonknowledge as by its future and it ventures out deliberately. (*Grammatology*, 161-2)

Yet, he adds, there is an ‘incapacity to [‘exceed the metaphysical orb’] to sustain on one’s own and to the limit the coherence of one’s own discourse’ (*Ibid*). The line of incoherency, beyond which one cannot sustain one’s own, is of course the horizon. By bringing Derrida into the influence of Iser on our own method, it is possible to gain a description of an experience of the horizon as the point at which the planet rolls away into infinity, beyond the line of sight, into the protensive non-exergue darkness of the *other* side of the planet. To laminate this onto a readerly experience, incoherency as a kind of muteness (or speech that fails to mean anything) always floats in orbit around the focal sentence. As terms on which to read the narrative of Ann Clayborne, the significance of the orbital path, or the view from and of objects in orbit will lead into the final section of this chapter, on the rocks of the sky, and Ann’s final experience which closes the Trilogy on the beach of Phoenix Lake, where the pull of the moon, and a memory of a comet enact another sense to wandering. The relevance of placing the mute objects at a distance not only moves Ann to the margins, but also implies that the rocky planet she so hopes to retain is likewise pushed to the side, and marginalised. Only a proper deconstruction of the Mars novels gestures to the dark zones of alterity in orbit around the core narrative of terraforming.

In the closing pages of this chapter, we shall consider the last moments of the Trilogy in which Ann finds herself on a beach in what has become a blue utopian Mars. Here the stones of the previous places that composed the wild of Mars are broken and turned in the surf of the shoreline, and that the reader leaves Robinson’s Mars with Ann’s ambivalence at finding herself with a degree of enjoyment in a terraformed planet, of which the beach is one of its quintessential topologies. We find the beach elsewhere in Robinson’s fiction, in the close of *Pacific Edge*, the utopian *Blue Mars*-equivalent in many ways of the California Trilogy, and *A Short, Sharp Shock*, in which the beach is a meta-textual entry point, or *shoreline*, into understanding Robinson’s fiction. As an entry point at the close of these stories (except in *A Short, Sharp Shock* where it also begins the novella), the beach is also paradoxically an end point, inviting the sense that beaches are, in both literal and historical terms, the beginning and the end of history. The shoreline is therefore a horizon of sorts, a barrier or limit of the land which gestures to the oceanic expanse beyond it. As will be shown, the beach scene in *Blue Mars* suggests a complicated overlap of methods (Michel’s and Ann’s), at the same time that it overlaps feelings of grief and depression for a lost rocky Mars and of a new vitality for living, the meeting also of two topologies, stone and water. By thinking of the beach as an equivocal horizon of history, its end or its beginning (it gives no certain sense of which) this new feeling for life speaks to the significance of history as a force or tidal inertia on which to be carried along. Flooding and sea level

rise throughout the series symbolise this significance and force. As a place of departure from the novels and from a previous phase of history (making it one of Robinson's chief utopian locations), the temptation is to dive in. Yet the invitation to dive is also the diving of a depth analysis. From here, this final discussion will lead us into the topics of the next chapter: diving as interpretation (after Freud and Schlegel); Michel and Ann's melancholy as in need of the diving hermeneutic of depth analysis; the golden key of the novels (Jameson himself), issued through the command of Michel; an archaeology of the Trilogy. With the shadow of the next chapter already cast over this one, reading the beach arrives at (or departs with) the idea that Ann, as a wandering exorbitant, is a deconstructive motivator of the narrative, that her Galilean silence, indicated with 'but still it moves' (*Blue*, 760), serves to deconstruct a classically Jamesonian way of reading, by locating itself in orbit around it. Yet it is also a compromise.

Et in arcadia, eppur si muove (even if Arcadia, yet it moves) – Ann's recalling of Galileo's famous 'and yet it moves' emphasizes the role of wandering to her position of resistance.³⁵ Only here, despite having come to rest on this shore in a moment of leisure, it is no more an explicit wandering but a position of mind, that in silence her resistance can go on: 'better to say what one had to, and go on from there.' (*Blue*, 761) This has been the purpose of tracing Ann's narrative through her wandering, her practice of silence, and her preference for the stone world. It has been to make the point that even in arcadia there remains a need for an exorbitant method. As will be explored in more detail in chapter 2, the critical trend has been to follow the guardrail³⁶ of Jameson; and yet even before his writing on the Trilogy in *Archaeologies of the Future*, utopian critic Tom Moylan found a sense in which *Pacific Edge* deploys a 'self-reflexive meditation on its own conditions of production,'³⁷ what Jameson would later call 'auto-referential inscription' (*Archaeologies*, 397). The terms on

³⁵ See Žižek in *Less Than Nothing*: 'There is no contemporary evidence that he did in fact mutter this phrase, but today the phrase is used to indicate that, although someone who possesses true knowledge is forced to renounce it, this does not stop it from being true.' He also alerts us to the way in which *eppur si muove* can serve to place facts in resistance to theory – the issue of theoretical applicability will be taken up in chapter 2: 'Freud's own *eppur si muove* was the saying of his teacher Charcot which Freud often repeated: '*La théorie, c'est bon, mais ça n'empêche pas d'exister*' ('Theory is good, but it doesn't prevent [facts which do not fit it] from existing'), – imbricated parentheses in original passage; fn.3, *Less Than Nothing: Hegel and the Shadow of Dialectical Materialism* (New York: Verso, 2012), 3-4.

³⁶ On following classical exigencies, Derrida claims in *Of Grammatology*: 'But this indispensable guardrail has always only *protected*, it has never *opened*, a reading,' 158.

³⁷ 'Witness to Hard Times: Robinson's Other Californias', in *Kim Stanley Robinson Maps the Unimaginable: Critical Essays*, ed. William Burling (Jefferson: McFarland & Company, Inc., 2009), 11-2; also see Moylan's 'Utopia Is When Our Lives Matter: Reading Kim Stanley Robinson's *Pacific Edge*,' *Utopian Studies*, 6.2. (1995), 1-25.

which the Mars books issue this meditation is, the scope of this thesis, and for now the whole command of the interpretive key which is found in Michel (chapter 2), and its deconstruction in Ann. The mode of hammering a how-to-read-me chart somewhere in Robinson's stories finds its most explicit form in his novella *A Short, Sharp Shock*, written in 1990, just prior beginning the Mars Trilogy.

As a fable, fantastical in its lack of science or scientists, this novella serves much the same purpose in relation to Robinson's other work as *Leaf, by Niggle* did for Tolkien's body of work, or *The Golden Key* for MacDonald's; two cases of relevance below. The brevity of the story, suggested in its title, and the estranging mechanic of sparing the reader any cognitive explanations or threads of plausibility, means that the reader, like its nameless protagonist, is simply thrown into the water and left to drown in estrangement; the novella opens: 'when he came to he was drowning' (*Short*, 3). E. B. White said 'the reader was in serious trouble most of the time, floundering in a swamp, and that it was the duty of anyone attempting to write English to drain the swamp... or at least throw a rope.'³⁸ To think of *A Short, Sharp Shock* and the sight of water for Ann as about the plight of the reader, makes it just as much about the means by which to drain the swamp, or throw a rope; however not one by which a strange experience might be made plausible, so much as coherent and meaningful. The ways in which a text suggests its own means to be understood extends sometimes to other Robinson texts, as with *Leaf* and *The Golden Key*. On these grounds we can approach the shorelines that open and close this novella as exemplary as a deployment of the critical rope found again in *Blue Mars*.

This is a tricky point, for what is the relevance of speaking about these other narratives in the context of Ann on the shore of Phoenix Lake? It is not merely the focus on the shoreline of the string of islands that make up the spine of the strange place into which the protagonist of *A Short Sharp Shock* known only as 'the swimmer' has fallen. It too, like *Pacific Edge* and *Blue Mars*, ends on a beach, and deploys three critical images: a bird in the likeness of a 'meteor streaking over the sea'; the sea itself as a 'mirror'; and the swimmer's act of 'leaping' off the edge into the sea-mirror, the 'surface' of which 'was flush with green light.' The setting sun brings out, much as it did for Nadia, the light-play of the surface. Yet the surface for the swimmer is only a 'kind of lens gathering sunlight.' Looking down into the water, the sun now disappearing, what gathers below the surface is a green light 'glowing' (*Short*, 130) as if from within. The active leap of the swimmer reads backwards into the opening, where he awakes to find himself drowning. The moment is instructive, firstly that drowning is not the same as swimming, but secondly,

³⁸ 'Introduction', William Strunk Jr. & E. B. White, *The Elements of Style, with Revisions, an Introduction, and a Chapter on Writing*, Fourth Edition (New York: Longman, 1959, 2000), xviii.

that diving is a textual access into the depths of the story. The recognition of the water as a mirror at one level performs this reflection back to the opening of the narrative, but more importantly to the self-reflexive nature of the body of water which opens the reader to its instructions about narrative.

As we shall soon see, the mirror-theme is dispersed throughout both Robinson's Mars, and in Martian literature more generally, making out the planet as a mirror for human history. The opening of the novella bears this out in the image of the moon that directs the swimmer's attention. The reflection of the light off orbital bodies might be the widespread reason for supposing a mirrored quality, but what the swimmer sees is not just the face of the moon, but something more recognisable in Ann's experience as a geologist: on the night beach, drowning

he glanced up, suddenly aware of the idea of the surface... the world began to roar, the shattered image of a crescent moon. At the thought a whole cosmology bloomed in him –

And broke apart like the moon's image, as he crashed up and into the air... (*Short*, 3)

Turning around, viewing the surface from below, and seeing the mirror-lens fragment the image, enacts another reversal of time, further back into pre-history when the moon was nothing but a floating belt of fragmented bits and pieces before they accreted together. The water, it seems, is a lens of time, a means of turning it backwards, allowing for the wholeness of the moon to be experienced through its breakage. Ann's similar experience is pre-historical. Instead of a moon it is the meteor that created the Hellas Basin, in which the water of Phoenix Lake now sits. The meteor is only glimpsed in the fragments that comprise the sand of the shore. The blooming cosmology is, as Jameson would say, a 'Stapledonian excess' (*Archaeologies*, 394):

The sand squeaked underfoot as she toed it. She looked more closely: dark grains of basalt, mixed with minute seashell fragments, and a variety of colorful pebbles, some of them no doubt brecciated fragments of the Hellas impact itself. (*Blue*, 761)

The breccia may point to a prior composition of bits into a coherent plain of Hellas pre-impact, and the accreted rock of the meteor, but what is more stark here is the very breakage itself. She has found herself on the shoreline of history, visibly displayed in its transformation of meteor and impact crater as sand and basin for a lake, repeating the image early in *Red Mars* of Underhill: 'It is an *entire town*, disassembled and lying in pieces' (*Red*, 106). The appropriation is also textual, for what the beach gives most of all is the opportunity to swim, a reminder of the diving that was necessary to escape the storm at the end of previous chapter (*Blue*, 730-40). The fragments themselves, Jameson claims (in reference to this quote from *Red Mars*), are

observable from a 'synthesizing perspective', and so it is only right the Trilogy 'should inscribe this its structural condition of possibility' (*Archaeologies*, 403). The beach is therefore also a shore of assembly on which the pieces are made visible as sand and pebbles. The 'autoreferentiality' of disassembly allows terraforming to be the Trilogy's 'internal marker and as it were interpretant and its organ of resonance' (*ibid*). It is an issuing of the order to reconcile. The rocks and stones of the early history of Mars are here, on the beach, continually crushed and turned in the surf. By using these rocks in a new way, they are thrown into the production of the terraformed planet, claimed by the terraformers for their purposes. As a self-reflexive moment, these fragments urge the reader to interpret this moment through its own condition of being possible. By taking this a step further, it also conditions the reader in turn to view it only on these terms, forcing a perspective of synthesis. The textuality of the beach is an invitation to observe the disassembly of its sand as History, just as much as it invites one to swim in its waters.

In his introduction to *A Short, Sharp Shock*, Robert Crossley points to another confluence the novella has with *Blue Mars*, and with Ann in particular: the walkabout trope. Ann's 'educative travelogue' ['Ann in the Outback'] 'serves both to reveal some of the wonders of terraformation and to mark a turning point in Ann's attitude toward planetary change' (*Short*, xv). This is quite true, and together with the beach, what is seen is the invention of the sea-mirror, the creation of a lake. The 'turning point' suggests the mirror. And on its terms Crossley claims the method by which to read the novella: 'Through mirrors we see things right way round at last' (*Short*, xiii). Carol Franko too gives an early and exemplary reading of the role of mirror in *A Short, Sharp Shock*, into which the swimmer-reader gains a meta-reflection of the status of storytelling and narrative. The lens of the mirror can therefore behave as the Marxist technique of inverting the text, turning it right way up, and by so doing revealing its socially entangled mode of production. For Franko, the topography in the novella sits in 'historical limbo', and yet the textual mirroring, which she performs, is to re-situate the historical moment right way up. She writes:

History and ideology are not really absent, of course, but rather displaced onto adventures, topography, and the fragmentary ethnologies of the inhabitants of the peninsular planet. The exists in a historical limbo and lives through an open-ended and intensely physical 'allegory'.³⁹

The consciously meta-textual deployment of the mirror means that the command for flipping the allegory, placing it back into its right orientation, is a command for the reader. We should also recognise the term Michel used with Ann, the displacement of history through her depression.

³⁹ Franko, 'Dialogical Twins: Post-Patriarchal Topography in Two Stories by Kim Stanley Robinson, *Science Fiction Studies*, vol. 22 (1995), 315.

Crossley suggests this is a quality by which the allegory of the narrative fits it into a fantasy mode – and not merely on the basis of Galadriel’s mirror that tells the future in *The Lord of the Rings* (*Short*, xiii). The text of instruction he chooses instead works to illustrate the methodological command of the close of the novella, to dive into the pool, George MacDonald’s fable *The Golden Key*, from which Crossley deploys the famous issuing in the quest-fantasy of the command to Tangle: ‘you must throw yourself in. There is no other way’ (*SSS*, ix). As we shall see here, but especially in the next chapter, this is also the Freudian command to dive into the unconscious. However, as MacDonald critic Cynthia Marshall argues in discussing the narrative strategies of *The Golden Key*, this command may mean more than a simple access to meaning. The form of the story as parable, as she claims, does compare in this present analysis with *A Short, Sharp Shock*, that *The Golden Key* ‘is a story that provides its own gloss, the key to its ‘latent meaning,’ through a kind of self-referentiality.’⁴⁰ However, the ‘rhetoric of excess’⁴¹ it employs operates on this meaning to delay or expand it beyond what the eye can take in. If read with wandering in mind, the parable of *The Golden Key* ‘privileges process and vision over goal and achievement.’⁴² Marshall suggests the importance of vision (though never claims it explicitly) when the ‘amplifying’ of the journey is expressed as a ‘dilation’.⁴³ An example from *Blue Mars* is the final lines, in which the repeating of the name of the planet does not vacate meaning but amplifies it beyond the visual range of the narrate, into the future: ‘she walked over the sand toward her friends, in the wind, on Mars, on Mars, on Mars, on Mars, on Mars’ (*Blue*, 761). A dilation which is necessary to take in the sheer wonder of being on the planet and carry it into exorbitance. The planetext opens just as the book closes, allowing the dilation to swell out of textual space into the post-reading of the reader in which interpretation begins to take on its most exorbitant conduct.

To get another sense of how the methodological key of the Mars novels serves to provide a wider lens by which to capture the light of meaning, consider Franko’s reading of the Robinson short story ‘A History of the Twentieth Century, with Illustrations’ (read alongside *A Short, Sharp Shock*). She interprets the order once issued from the death-bed of Goethe ‘more light!’⁴⁴ repeated in the story, as a critique on the heliocentric project of the

⁴⁰ Marshall, ‘Reading ‘The Golden Key’: Narrative Strategies of Parable’, *Children’s Literature Association Quarterly* 14, no.1 (Spring, 1989), 24.

⁴¹ *Ibid*, 24, 22.

⁴² *Ibid*, 25.

⁴³ *Ibid*, 24.

⁴⁴ For science, in this instance, to be providing the gloss, or glow, of textuality, we should also bear in mind Marshall’s understanding of dilation and this capturing of more light alongside Robert Heinlein’s famous disruption of expository writing with the brief and wholly unexplained ‘the door dilated.’ Robert A. Heinlein, *Beyond This Horizon* (New York: Signet Books, 1952), 5. Also see: Gary Westfahl, *The Mechanics*

Enlightenment, providing a recognisably Adornian reading of the order as reaching its violent zenith in the atomic holocaust of Hiroshima and Nagasaki (309).⁴⁵ Aside from helping construct a method based on the interplay of light and shadow, the means by which a narrative dilates is not in response to there being too much light – as with the flash of the atomic bomb, but only in the dark, ‘the country from whence shadows fall’,⁴⁶ to speak of Tangle’s journey. The problem with this approach is that it speaks from a very clear point of view, and the dialectic of light and dark is too finely demarcated. The light of a nuclear explosion is the same by which this reading is brought to attention, that is, by sunlight, and so a heliocentrism is not so swiftly disposed of.

Dilation is, as we will come to call it, a recovery of sunlight, much in the form of Ann’s recovery of the meteor that impacted and made Hellas Basin. The contradiction to be worked out here is how Ann’s wandering into the shadow of *logos* can constitute such a recovery. And how the shoreline is an edge of visibility, the overlap of light and dark, the line of moving dilation. As a methodological encounter, I have put forward an alternative handling of the dialectic, one that asks we do not so easily insist on the series of antimonies by which to invert and expose, but to deconstruct this logic. One relevant example is the belief that Ann is escaping history by wandering, an act which is impoverished only if caught in the antimonies of escape and in-escape, history and a-history. Martian literature has long been discussing this question of Mars as an escape hatch from terrestrial problems, carried through and cast more widely in such critiques as Jameson’s problem with world reduction in Le Guin, imposed here to mean a narrowing of vision (blindness) to social modes of production. Robinson himself wrote in a critical essay on Martian fiction: ‘Mars won’t serve as a bolt or an escape hatch. It’s crazy and immoral to say it could.’⁴⁷ Tolkien’s famous discussion of ‘escape’ and ‘recovery’ in ‘On Fairy-Stories’⁴⁸ offers another method of interpretive strategy which is useful for speaking to wandering outside the logical and dialectical methods, not entirely disposing of them, but allowing a less automatic doubling of text and commentary.

The benefit of using Tolkien’s explications on the experiential value of reading fantasy literature to speak about a work of science fiction is that it helps move to the side of the common understanding by which science fiction is read as cognitive estrangement. Darko Suvin’s concept has had such long

of Wonder: The Creation of the Idea of Science Fiction (Liverpool: Liverpool University Press, 2004), 223; Harlan Ellison, ‘A Voice from the Styx’, in *The Book of Ellison* ed. Andrew Porter (New York: ALGOL Press, 1978), 133-34.

⁴⁵ Franko, ‘Dialogical Twins’, 309.

⁴⁶ Marshall, ‘Reading ‘The Golden Key’’, 24.

⁴⁷ Robinson, ‘Martian Musings and the Miraculous Conjunction’, in *Vision of Mars: Essays on the Red Planet in Fiction and Science*, eds. Howard V. Hendrix, G. Slusser, E. S. Rabkin (Jefferson: McFarland & Company, Inc., 2011), 151.

⁴⁸ Tolkien, ‘On Fairy-Stories’, in *Tree and Leaf* (London: Harper Collins, 2001), 1-82.

life mainly because it works so well with a classically dialectical reading, that the reader is first thrown into an estranging environment and is cognitively or plausibly pulled back into understanding.⁴⁹ The passage is one of alternation, the same which Jameson suggests we take through the Mars Trilogy. But to escape the swing of the dialectic, Tolkien's notion of escape and recovery is simply that the recovery of an affect of wonder (to which is attached a greater and deeper immersion in the world) does not occur after escape, but in the escape itself.

What Nadia finds in the northern expedition is not merely seeing Underhill⁵⁰ differently upon returning, but the rediscovery of a new way of seeing: 'it was a matter of paying attention in a new way, of *looking*' (RM, 142). Tolkien writes in 'On Fairy-Stories' 'recovery... is a re-gaining of a clear view.' 'We should look at green again, and be startled anew (but not blinded) by blue and yellow and red... This recovery fairy-stories help us to make', a recovery of 'the wonder of things, such as stone, and wood, and iron; tree and grass; house and fire; bread and wine.'⁵¹ The ecological tone of these passages should not be lost on us when compared with the environments of *Lord of the Rings*, and the significance of the leaf and the tree in *Leaf by Niggle*. Chris Brawley argues the fairy story is a recovery of a particular realm, one of wonder and danger both, which has become the 'drab blur of triteness and familiarity' – quoting 'On Fairy-Stories' – 'from possessiveness.'⁵² 'It is a way of respecting the environment and seeing things as apart from ourselves, to see difference but to realise that difference is also a manifestation of that which is holy.'⁵³ This is confluent with our understanding of the desert and stone world as a zone of *différance*. Alison Milbank also follows the 'numinous' theology of Brawley's focus⁵⁴ in her study *Chesterton and Tolkien as Theologians: The Fantasy of the Real*, in which what is holy is nothing less than a recovery of the direct experience of wonder. To quote another Tolkien scholar Patrick Curry, 'only re-enchantment can make it possible to realise that this world, its places and its inhabitants are existentially already wondrous states.'⁵⁵

⁴⁹ Suvin, 'Estrangement and Cognition,' in *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979), 3-15.

⁵⁰ The relevance of naming the town Underhill only accentuates the journey as connected to Tolkien's *Lord of the Rings*.

⁵¹ Tolkien, 'On Fairy-Stories,' 57-60.

⁵² *Ibid*, 57.

⁵³ Brawley, 'The Fading of the World: Tolkien's Ecology and Loss in *The Lord of the Rings*,' *Journal of the Fantastic in the Arts* 18, no.3 (71) (2007), 295.

⁵⁴ Brawley, 'The Fading of the World', *passim*.

⁵⁵ Curry, *Defending Middle Earth: Tolkien: Myth and Modernity* (New York: Houghton, 2004), 147. Also see Brawley, 'The Fading of the World,' 293.

Milbank claims ‘this is indeed a story of recovery of the real, of seeing familiar anew.’^{56,57}

It is on these terms Tolkien distanced himself from allegory as a method for reading his books, and thought instead of ‘applicability’.⁵⁸ To make a similar move away from Jameson’s reading of the allegory, by comports toward the Trilogy in errant terms from fantasy literature, a view of the Jamesonian organising principle in the Trilogy is more clearly seen. The value of stepping aside from depth-analysis and the dialectical method which employs allegory and a complicity of mirroring text and commentary, is that these functions appear more clearly in the form of such apparatuses of terraforming as the soletta lens, the meteor in *Red Mars*, and, to be detailed much more, the beach itself. What is continuous between these is the meta-reflection, opportunities for catching the image or face of the reader on their surfaces.

Ann’s chief criticism of her terraforming colleagues is that ‘when we look at the land we can never see anything but our own faces’ (*Red*, 158). Robert Crossley contributed to understanding Mars as a mirror in his essay ‘Mars as Culture Mirror: Martian Fictions in the Early Space Age.’⁵⁹ Howard Hendrix also reminds us, in his introduction to *Visions of Mars* ‘The Martian in the

⁵⁶ Milbank, *Chesterton and Tolkien as Theologians: The Fantasy of the Real* (London: T&T Clark, 2009), xiv.

⁵⁷ In order to bring the theological focus of Tolkien more into the wandering of the science fiction of Ann’s narrative, consider Heidegger’s defining of Erring in *On the Essence of Truth*; valuable for us to add a finer detail to recovery and escape: not simply that the escape is the recovery itself (as Tolkien claims), but also that as a form of errancy, or error by flight, an unconcealing might take place at the same time that the untruth of the flight is a concealment of the mystery of Dasein. This means that errancy is both a fugitive move (‘to wander from the right way’), but one that also changes what we think the right way is. It is not simply that to not err is to therefore comport toward Being without confusion, but that erring is itself a basic quality of Being, and might therefore help recover this understanding. Feelings of confusion can therefore change into wonder and bewilderment; the ‘beauty’ Nadia comes to see in the black dunes in *Red Mars* is to her ‘strange’, ‘alien’, and ‘new’ (*Red*, 141-2). In Heidegger’s own words: ‘as leading astray, errancy at the same time contributes a possibility that man is capable of drawing up from his existence – the possibility that, by experiencing errancy itself and by not mistaking the mystery of Da-sein, he *not* let himself be led astray.’ We should be wary of the insult to wandering here, if only because of his reversal into its value. When read in Tolkien’s language, going astray helps us recover the mystery of Dasein and Dasein’s being-in-the-world at the same time that it appears as a sideways flight from it. It is an escape into the real. *Basic Writings: From Being and Time (1927) to The Task of Thinking (1964)*, ed. David Farrell Krell (London: Harper Perennial, 1993), 132-4.

⁵⁸ Tolkien, *Lord of the Rings* (London: Harper Collins, 1995 [1966]): ‘I think that many confuse ‘applicability’ with ‘allegory’; but the one resides in the freedom of the reader, and the other in the purposed authority of the author,’ xvii.

⁵⁹ Crossley, ‘Mars as a Cultural Mirror: Martian Fictions in the Early Space Age,’ *Visions of Mars*, 165-74.

Mirror' that 'the face in the mirror is always both what we see of ourselves and what we dream of ourselves,'⁶⁰ a point relevant to the immense soletta lens Sax Russell puts in the Martian sky, but also to other methods he uses. Hendrix quotes: 'art is not a mirror held up to reality, but a hammer with which to shape it.'⁶¹ The hammer in this case being the comet which is thrown at the planet in the middle of *Red Mars* (377). Take also the vital image with which Bradbury chose to end *The Martian Chronicles*:

'There they are,' said Dad, and he shifted Michael on his shoulder and pointed straight down.

The Martians were there. Timothy began to shiver.

The Martians were there – in the canal – reflected in the water. Timothy and Michael and Robert and Mom and Dad.

The Martians stared back up at them for a long, long silent time from the rippling water...⁶²

The suggestion that we follow these critical and narrative instances into forming meaning is, as Derrida claims, a doubling of text and commentary, a doubling which takes place in the reflection on the rippling water of *The Martian Chronicles* and *A Short, Sharp Shock*, to say nothing of the surf in *Pacific Edge* and *Blue Mars*. And depression, as experienced by both Ann and Michel, is an affect of displacement, issuing the command to dive in and turn it right way up.

Before addressing these issues more directly, some significant features of the beach scene of *Blue Mars* can point us there. As it closes the Trilogy, there is a sense that Ann's wandering has come to a place of rest. Her admission of the 'prettiness' of the utopian qualities of the shore, implies there is no longer a need to escape. She has arrived at some sort of happiness, represented in her wish to keep on living after a 'brush' with death. It 'reminded one what was important.' She, however, possesses an ambivalence about the lake (or what it stands for), and so likens herself to Galileo who held his silence not as an admission of his error, but a pragmatic 'better to say what one had to, and go on from there.' 'To recant,' Ann thinks, 'would have been silly' (*Blue*, 760-1). Her mind is clearly divided, an indication of Jameson's claim that the novels do not commit to synthesis by themselves, but present the pieces to be assembled by praxis and collective action. Perhaps this is a leap too far, as it overlooks that the first assembler of synthesis is the reader. The final page of the Trilogy is therefore lacking in a proper conclusion which would seal it off. Instead the shore opens onto the reader's world, and the horizon of the text

⁶⁰ Hendrix, 'Introduction: The Martian in the Mirror, *Visions of Mars*, 13.

⁶¹ While providing no referential anchor, Hendrix claims this quote has been 'variously attributed to Bertolt Brecht and Vladimir Mayakovsky', 14.

⁶² Ray Bradbury, *The Martian Chronicles* (United States: Bantam, 1979), 182.

is a line splitting the narrative and narrative commentary, implying a lapping of each over the other.

To gain the sense this is a meeting point between two spaces, textual and topographical, consider the following passage:

But still it moves, Ann thought. She followed the child, smiling at her little joke. Galileo could have refused to recant, gone to the stake for the sake of the truth, but that would have been silly. Better to say what one had to, and go on from there. (*Blue*, 760-1)

In drawing a likeness between herself and Galileo, Ann is, unwittingly, establishing a few significant referent points about her moment on the beach. The first concerns, as mentioned, her own silence, and the analogy it creates between the Inquisition and the Greens. The second, more implicational, concerns the turning of historical epochs, the chief subject of which was, in Galileo's work, the Moon. And it was through his telescope that the features that made up the face of the Moon took on geographical specifics; remembering also that telescopes invert their image. The significance of Galileo's uprooting of Ptolemaic cosmology on this moment of reference on the beach allows for a new and different approach to method as historically embedded.⁶³

The meaning attached to *eppur si muove* therefore, rightly, moves about the place and equivocates the puzzling pieces of the scene, earth/baby, shore and tides, lunar-pull, and yet they all move. In the first, Ann is joking about the young child's 'trundling over the sand', her 'diaper waddling like a duck's behind.' The inertia of movement refers to the persistent legs of the child, and the inertia of new life, which she herself has recently come to appreciate

⁶³ This is, among many others, the thrust behind Paul Feyerabend's *Against Method*, to unfold Galileo's discoveries along his lack of adherence to 'methodological monism'. If we have taken Ann for some kind of Derridean, then we can supplement her image with Galileo's on similar terms with which Feyerabend described the sense of history that impinged on the old ways of doing science:

The procedure [of methodological monism] overlooks that science is a complex and heterogeneous *historical process* which contains vague and incoherent anticipations of future ideologies side by side with highly sophisticated theoretical systems and ancient and petrified forms of thought.

With Galileo, history has entered the scientific method, with all its complexity and heterogeneity. With this regard, Ann can be stood beside the Confusionists of which Feyerabend speaks who indulge far more the incoherent protensions of experience than the classical structures of thought. Chapter 3 addresses these issues much more directly. *Against Method. Fourth Edition* (London: Verso, 2010), 105; for note on Confusionists, see fn. 27, 48 of *Against Method*. Also note that the 'excellent medicine' (1) of anarchy to the scientific method is found also in 'counterinduction' which 'is thus both a fact – science could not exist without it – and a legitimate and much needed *move* in the game of science' (original emphasis, 48).

more deeply. In the second case, the movement is social and points to her mode of resistance of silence, which is held not by saying nothing but saying ‘what one had to, and go[ing] on from there’ (*Blue*, 760-1). No amount of terraforming can remove the certainty of her ethical position. In terms of the birth of a new observational methodology, the term means something far less certain, and more of the incoherent protension of the experience of history, that no amount of utopian stasis can freeze the momentum of history; at least so far as the experience of history goes, a degree of protrusive space enframes Ann, which is far more than at any point, the advent of the reader’s space set to engulf her once the book is closed. And as it is this space into which she wanders and makes her stand, the exorbitant method continues to be needed, even on the shores of utopia. Yet, this last point is what leaves Ann so ambiguously stuck in the sand. The turn of history with Galileo is one candidate for the birth of a modern method, and if the topological overlap of the beach signals both beginnings and endings, it seems another turning is upon the historical juncture.

As displayed so dramatically in her chapter of *Red Mars* (‘Shikata Ga Nai’), history often announces itself in the Trilogy with melting; to follow Michel’s imperative to Ann, to fire away (*Blue*, 253) the previous self. The substance of ice turning to the flood water of the end of *Red Mars* is echoed again, not simply in the liquid of the lake (which as argued also introduces the potential for diving), but in the substance of her very body, which she feels too to be thawing, or crumbling to sand.

Body insubstantial, as if something had leached her of substance and left her porous; she would collapse into dust at the tap of a finger. (*Blue*, 759)

Her fear that she will become a part of the fragmented impact breccia and seashells that comprise the sand with the tap of a finger, is followed with the feeling of a loss of solidity. In contrast to Nadia’s gaining of an inner density in *Red Mars*, Ann feels the wind ‘blowing right through her, her body ghostly.’ Unlike the dense black dunes, she is now a lens through which light can pass: ‘Sun so bright, the harsh rays slanting right through her rib cage – the transparency of the world’ (*Blue*, 759). The porosity and lens-like transparency of her body configures the experience of the beach itself, the loose sand and the movement of the water through and over it. The world is now working upon her and through her to render her body, with the tap of a reader’s finger, textual sandiness and transparency.

With the boundaries no longer clear, but permeable, an opportunity opens just as the book closes. It is the opportunity toward which the entire novels have conducted themselves, to turning from one phase of history into another. The grounds of this chapter have positioned rock and stone, and the science of geology as object and method by which to understand the experience of the non-human world. And Ann’s ethical attitude has driven

against the human – as Jameson reminds us, to a degree all ontology is anti-human. But so far as the stone world is a book of nature, the intrusion of the human into its very writing and reading is the creation of the beach, the import of meteors and comets into the planet, which suggest a new identity to *Anthropos*, what has had its widespread announcement of the Anthropocene.

In an excellent discussion of this very point on geology and the stone book of nature, Bronislaw Szerszynski points us in the direction of Derrida:

When Derrida foretells the end of the book in *Of Grammatology* he does not mean empirical books, or writing per se. By ‘the book’, Derrida means ‘the idea of a totality... of the signifier’, ‘a natural totality’.⁶⁴

‘In the Anthropocene,’ Szerszynski writes, ‘man’ has become a destratifying force, the *différance* that explodes the book of geology.’ He claims this book will be replaced with a ‘much more unstable volume opened up by this multiple dispersal of the human.’⁶⁵ It is clear, in the first case, that the unstable shoreline of Phoenix Lake, and the process by which it churns up the stone book of nature and grinds it to sand, is the very tap of the human finger itself, the interpellation of the human influence on the natural world, from the footprints Ann, or the women of Sur, leave behind, to terraforming itself. Her very body takes on the equivocal instability of the geological human.

It is no accident the beach retains a political and historical importance. Jacques Rancière wrote in *On the Shores of Politics*: ‘there must be something of the essence in this landscape for politics to be so stubbornly represented within it.’ On the one hand, he claims, ‘to shield politics from the perils that are now immanent to it, it has to be hauled on to dry land, set down on terra firma.’ What is on the other hand the movement of immanency is the thawing of solid ground (ice) to form a beach. Liquid water, to think in Michel’s terms, marks both a firing away of old forms, and the horizon of the new. How exactly we label the old and the new is not clear. Rancière reminds us of the confusion over the periodising of the ‘end of history’, as proclaimed by Fukuyama, when it was in fact also proclaimed two-centuries earlier by Hegel. The opportunity taken by Marx was to see ‘in the Hegelian promise not the end of history at all, but merely the end of pre-history.’⁶⁶ It is unclear by the end of *Blue Mars* whether modernity has come to a close, or whether it is only now beginning. Nirgal, for instances, seems to suppose the latter. Seeing Jackie Boone depart on a starship for another star system, he muses:

⁶⁴ Szerszynski, ‘The End of the End of Nature: The Anthropocene and the Fate of the Human,’ *Oxford Literary Review* 34, no.2 (2012), 179.

⁶⁵ *Ibid*, 179, 181.

⁶⁶ Rancière, *On the Shores of Politics*, tr. Liz Heron (London: Verso, 2007), 1-3. Also of note in the context of exorbitance is his claim ‘excess is the essence of the promise’ (5), as well that the beach is ‘a matter of *mise-en-scène*, of shifting images around’ (2).

‘taking off again, the new diaspora, of humanity across the stars, settling the nearby planets and then on from there. A step out of the cradle. The end of prehistory’ (*Blue*, 635). What is clear, for Ann at least, is that the movement of history has announced itself in the form of a beach, one of Robinson’s primary and oft-used utopian topoi.

Robinson has so frequently closed narratives on beaches not merely to mimic the vast expanse off the edge of the narrative, on which his characters frequently sit, stand, or swim, gesturing to the opening in which the reader herself sits. Not merely to suggest the shapes of utopia lie unfinished and overlapping with the future. But also, this permeable place of arrival and departure proclaims a protensive non-linear field of reading with apparently traversable ridges and horizons. The future, once glimpsed in this way, is never safely detained in futurity. Instead, other beaches begin to appear as if from the deep primordial past, which overlap and extend into the present moment of reading. A reader who attends to this grammatological field of the beach (for in truth it is neither conclusively protensive or retensive) will find two interesting cases to wash up on this one of *Blue Mars*, both of which also come at the close of texts: H. G. Wells’s *Time Machine*, and Foucault’s *The Order of Things*. If the time machine has any significant footprint on history it is to announce, much like the geological interpellations of ‘man’ in the Anthropocene, the end of linear history. The beach on which the time traveller comes to rest in the far distant future seems ancient and primordial by comparison to the places of his earlier adventures. The traveller recounts:

As I stood sick and confused I saw again the moving thing upon the shoal... against the red water of the sea... Then I felt I was fainting. But a terrible dread of lying helpless in that remote and awful twilight sustained me while I clambered upon the saddle.⁶⁷

After discussing all the utopian benefits of the time machine with his colleagues (all of which exploit some cheat of time, or anachronism),⁶⁸ the beach of the future, along with the swollen sun, is an encounter with an immense and cosmic death. The traveller’s nausea on the shore as an end point to his travels – its furthest extension into time – reveals most clearly his anti-humanism. He was a man, the narrator Filby explains, who ‘thought but cheerlessly of the Advancement of Mankind, and saw in the growing pile of civilization only a foolish heaping that must inevitably fall back upon and destroy its makers in the end.’⁶⁹ It is unclear, of course, by the time traveller’s final disappearance if what comes next is the start of a new time and a new

⁶⁷ Wells, *The Time Machine*, ed. Patrick Parrinder (London: Penguin Classics, 2005), 81-5.

⁶⁸ *Ibid*, 7.

⁶⁹ *Ibid*, 91.

Anthropos. Yet the dissatisfaction with the Enlightenment project sets it beside Ann's own disapproval of terraforming.

In this way does remembering Galileo and the coming to the end of the book of 'man' on this beach, serve as bookends to a historical period; whether of modernity as initiated by Galileo as the scientific era, or of pre-modernity. On this question we turn to the closing passage of Foucault's account of the classical era in *The Order of Things*, which deploys the epochal beach as the zone of transition:

... As the archaeology of our thought easily shows, man is an invention of recent date. And one perhaps nearing its end.

If those arrangements were to disappear as they appeared, if some event of which we can at the moment do no more than sense the possibility – without knowing either what its form will be or what its promises – were to cause them to crumble, as the ground of Classical thought did, at the end of the eighteenth century, then one can certainly wager that man would be erased, like a face drawn in sand at the edge of the sea.⁷⁰

The point beyond which 'man' can no longer see himself must occur on the loose foothold of the beach for it to carry out its own deconstruction, and for this reason Robinson closes his own book with its historical opening. From the protensions of the post- period, to the erasure of the face in the sand, and critique of science through archaeology, the beach is an ambivalent point of futurity. With the appropriate name, Kevin Claiborne, at the end of *Pacific Edge*, stands on a jetty 'feeling he had come to the right place, and was now wide awake, at the center of things. End of the world. Sun low on the water' (*Pacific*, 280).

More than anywhere else in Ann's narrative does the beach serve as the image of her loss – the fact that in the end her ethical position is marginalised and buried leaving only its 'bones' to 'st[i]ck out everywhere'. These bones appear only as the appellations and ridges of her previous ethical position, and do not account for her relative will to go on living rather than become a part of the boneyard. It also remains with her that we can attach an exorbitant status to the resistance she retains, and so come to value her narrative for its deconstructive potential. As she 'toed' the sand 'she looked more closely; dark grains of basalt, mixed with minute seashell fragments, and a variety of colorful pebbles, some of them no doubt brecciated fragments of the Hellas impact itself' (*Blue*, 761). Her train of thought constitutes the geo-phenomenology through which a vision of that orbital exorbitant wanderer, the Hellas meteor, which might be recovered its stony vitality, contained now in the salt on immemorial oceans, at a point of infinity, a horizon of historical change beyond which is invisible and silent. Her ethical

⁷⁰ Foucault, *The Order of Things: An archaeology of the human sciences* (London: Routledge, 2005 [1966]), 422.

attitude ultimately stands before this mute future, just as it does for the muted past. By repeating this meteor event early in Martian pre-history in the use of the meteor for melting the permafrost in *Red Mars*, the significance of the orbital rock is not that it retains its solidity, but that it wanders without return, in space and on beaches.

As an interpretant, the sealed envelope of its surface is complicated now only by what shall be the subject of discussion in the next chapter: the “transhistorical” imperative of all dialectical thought: ‘always historicise’ (*Unconscious*, ix). It remains to be seen whether the interpretative dimension of the beach speaks to a deconstruction or an archaeology? Have the ridges and appellations of the various forms of Ann’s geosphere been traced with enough attention for us to map a trajectory of discourse? The beach of course is the point at which to begin a reading of the Trilogy, once the reading itself has been concluded and laid over with this question of conduct. At the approach of history is Ann, and are we, forming meaning through a grammatology? Or through an archaeology? To glean a satisfactory answer by the end the Trilogy, the reader must come up against the classical interpretation inscribed within it, which we shall next explore.

CHAPTER TWO

Archaeology of a method: Michel Duval and the Jameson Program

Who shall be the master? The writer or the reader?

– Denis Diderot

...we need to insist on the way in which any first scientific reading of the Mars Trilogy must eventually develop into a second allegorical one, in which the hard SF content stands revealed as socio-political – that is to say, utopian.

– Fredric Jameson

With him it is standing on its head. It must be inverted, in order to discover the rational kernel within the mystical shell.

– Karl Marx¹

WITH WHOM CAN WE say the Mars Trilogy is standing on its head? And what reading will invert it to uncover its social element? If the path Jameson dictates in the above epigraph adheres at all to the structure of this present study, what was said previously must now stand revealed as socio-political. Yet it is exactly this adherence of commentaries which shall be the subject under question. Before diving headlong into the role Jameson plays both in and around the Trilogy, and the impact his theory and criticism has had on the Mars Trilogy, we first need to set up this discussion by following after both the title of his major work on science fiction, *Archaeologies of the Future* (in which his reading of Robinson was later published), and the topic of silence that concerned us previously. Chapter 1 closed with mention of Foucault and a method by which the Trilogy might better be understood, the archaeology, and that the shore is, historically, an interruption or threshold² onto history. Now in the context of Michel's depression, as well as Ann's, this method can

¹ Diderot, as epigraph in Alberto Manguel's *A History of Reading* (London: Penguin Books, 1996); Jameson, *Archaeologies of the Future* (London: Verso, 2005), 396; Marx, 'Postface to the Second Edition', *Capital: A Critique of Political Economy Volume One*, tr. Ben Fowkes (London: Penguin Books, 1988), 103. Cf. Louis Althusser, 'Contradiction and Overdetermination', *For Marx*, tr. Ben Brewster (London: The Penguin Press, 1969), 89-90.

² Michel Foucault, *Archaeology of Knowledge*, tr. A. M. Sheridan Smith (London: Routledge, 1989 [1969]), 4.

be put more clearly through an ‘archaeology of... silence.’³ The silence of the Mars Trilogy, previously a silence of the rocky planet, now takes the form suggested by Ann’s depression (which we did not properly discuss), as that which also pervades *The History of Madness*. It is therefore upon us to draw out the authority of the Trilogy, and make clear what is its ‘monologue of reason about madness.’⁴

Historically, one such monologue is psychology. I have already dealt with one kind of silence, and so we ought to follow it up with how silence works through the affect of depression. Yet we should not simply bracket Ann’s experience as our focus. Following the diversity of scientific phenomena across this thesis, we are better suited to turn to Michel’s experience and his own science of psychology as a means of informing a phenomenology of one kind of madness. Foucault will prove useful for describing this as a discourse⁵ of the Mars books, the authority of which is none other than Jameson and his ‘transhistorical’ imperative (*Unconscious*, ix). To give to Jameson the true authorship of the Trilogy is not to displace Robinson, but to figure the achievements of Robinson as lost somewhere under the monologue of this imperative, to find him already displaced. The rules of interpretation, only inside of which the Trilogy comes to yield meaning, firmly hold the reader’s experience of the text not merely on the grounds of Jameson as a critic of Robinson, but on his theoretical discourse as being ‘transdiscursive’, as the founder of a discourse.⁶ From him the reader can easily form the ‘principle unity of [the] work’, and permit Jameson the ‘authority of the creative subject.’⁷ Only by reading Jameson, it seems, can we begin to understand Robinson. In approaching these appellations of control over meaning, the reader might turn to Foucault’s *Archaeology of Knowledge* for a set of methodological counter-rules to pose in response. To perform an archaeology of the Trilogy, the reader ought to ‘refuse to be allegorical’, ‘to not wish to rediscover the enigmatic point at which the individual and the

³ Michel Foucault, *The History of Madness*, tr. Jean Khalifa (London: Routledge, 2006 [1961]), xxviii.

⁴ *Ibid.*

⁵ An archaeology and a phenomenology are very distinct. And it is not my part to confuse them. I do not wish to apply Foucault as a means of critiquing phenomenology, but to deliver an insight over one kind of structuralism of the Trilogy, a political unconscious. To clarify, Foucault’s project is in fact to ignore subjective experience. In his defence, he writes: ‘to treat archaeology as a search for the origin, for formal *a priori*, for founding acts, in short, as a sort of historical phenomenology (when, on the contrary, its aim is to free history from the grip of phenomenology), and then to object that it fails in its task, and that it never discovers more than a series of empirical facts.’ *Archaeology of Knowledge*, 224.

⁶ Michel Foucault, ‘What Is an Author?’, tr. Josué V. Harari, *Aesthetics, Method, and Epistemology: Essential Works of Foucault 1954-1984*, ed. James D. Faubion (New York: The New Press, 1998), 217.

⁷ Foucault, *Archaeology of Knowledge*, 156.

social are inverted into one another', nor 'return to the innermost secret of the origin.' Instead, one might give a 'differential analysis of the modalities of discourse', a 'systematic description' of the rules of discursive practices, 'to follow them the whole length of their exterior ridges, in order to underline them better.'⁸

Yet, as soon as we begin such a study of Ann's silence, and more particularly, of her and Michel's depression, a significant problem with the archaeology arises, one principally displayed in Derrida's famous response to *The History of Madness*. In brief terms, he accused Foucault of wrongly assuming he had exited the confines of philosophy, deafened himself to the monologue of reason to better hear the silence of the mad.⁹ Derrida's move to re-include Foucault within the discourse of reason stands in this present study for allocating to *cogito* and madness (the chess pieces of the famous dispute) a structural logic between Michel and Jameson. But before arriving at this dispute and its place in this reading, some of the more Foucauldian elements of the Trilogy are useful for a preliminary point of access into this whole battleground of authority and interpretation between readers and writers. All the same, even after problematizing Foucault's archaeology, it will remain useful for allowing a differential of textual power as it occurs between Jameson's work, and Robinson's.

This differential we encountered on the shore of Phoenix Lake in the form of the waves, and their gradual transformation of rock into sand. One of the functions of the beach by which we can frame it as utopian is, to borrow from an insight Elizabeth Leane made about the whirlpools in *Antarctica*, the 'domestication'¹⁰ of a violent force, and the mongrelising of the wilderness. The placidity of the Hellas beach is marked out against the surge of the Marineris flood in *Red Mars*, in which the flood of history is, to Ann at least, an interpretive mystery:

Now there was a river running down Valles Marineris, a broad, steaming, ice-choked deluge... Here in the flesh, she found it almost impossible to grasp. The landscape itself was now speaking a kind of glossolalia. The inchoate roar smashed at the air, and quivered their stomachs like some bass tearing of the world's fabric. And it was visual chaos as well, a meaningless jumble that she couldn't seem to focus on, to distinguish near from far, or vertical from horizontal, or moving from still, or light from dark. She was losing the ability to read meaning from her senses. (*Red*, 546)

⁸ *Ibid*, 155-6.

⁹ See Roy Boyne, *Foucault and Derrida: The Other Side of Reason* (London: Unwin Hyman, 1990).

¹⁰ Leane, *Antarctica in Fiction*, 52.

Later, in *Green Mars*, during the long runout¹¹ of Geneva Spur, Ann is again put in jeopardy by a melting world: ‘she was being approached by a phenomenological mystery’ (*Green*, 115). Yet this mystery over the cause of the unique length of the long runout of avalanches is textually framed as another instance of glossolalia. The novels also make a significant claim on this mystery by registering two other occasions of hearing an unknown language and failing to understand it. In *Red Mars*, during the flood Sax ‘and Michel began to discuss terraforming projects. Ann let their voices drift into glossolalia’ (*Red*, 542). And the second gives affective content to the flood itself, a sort of pathetic fallacy: ‘Frank was still angry, bitterness sublimed from him like the frost steam off the flood’ (*Red*, 552), a moment Ann observed a little while before

...the same old depression, persistent as death, rising in her like a flood, like a black slurry of mud, steam, ice, shit. Doggedly she kept at the work, but her attention kept blinking out and the glossolalia kept returning, washing everything away in the white noise of despair. (*Red*, 559-60)

These moments of unmeaning are distinct from the silence of rock. The ‘black slurry of mud’, the black dunes thawing out, turns into the ‘white noise of despair.’ The force of the flood destroys silence: ‘the broken world roared’ (*Red*, 556). Yet, at the same time that it is meaningless, the flood is meaningful as a social and affective allegory. The ‘enforced togetherness’ (*Red*, 91) of the flood episode makes this social component for Ann apparent and uncomfortable. Yet the overriding impact is on the reader to transpose her resistance against the social and allegorical background. One might even claim the linking of depression, flood, and sociality is meant primarily for the reader to subordinate Ann into a larger cohesive meaning. To perform or double Ann’s experience of the flood and of the long runout into a critical reading is to answer to the phenomenological mystery with a social and affective cause, to reveal the socio-political element of the novels. What of course is occurring is an auto-critique, a ‘signature’ as Derrida would come to call such moments in Joyce,¹² the way in which a text already interacts with

¹¹ An avalanche in which the horizontal spread reaches far beyond its vertical height which would usually determine the runout at a much shorter length. ‘Runout of landslides has attracted a lot of scientific interest. The most debated puzzle has been the ‘long runout landslide’ problem: large landslides exhibit a surprisingly long runout that seems to violate common frictional behaviour. For a rigid block of rock to travel the same distance as large landslides would require friction coefficient as low as 0.1, i.e., a small value compared to common friction coefficient of rocks 0.2-0.7 observed in laboratory scale experiments if no plastic processes operate.’ Stanislav Parez and Einat Aharonov, ‘Long runout landslides: a solution from granular mechanics,’ *Frontiers in Physics*, October 06, 2015. <https://doi.org/10.3389/fphy.2015.00080>

¹² See Jacques Derrida, ‘Ulysses Gramophone: Hear Say Yes in Joyce,’ tr. François Raffoul, *Ulysse gramophone: Deux mots pour Joyce* (Paris: Galilée, 1987), 57-143, and

its reader's methodological approaches and catches them in its web, and, as in cases like this, tries to manage them.

Glossolalia also speaks to another side of Ann's depression displayed in the immense flood, suggested in Frank's bitterness: the phenomena of subliming, and of the sublime event. The event recalls Marx's well-known image of the profane rhythm of the machine, and its subliming [my description] of the 'fixed' relations under the new mode of production:

All freed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses, his real conditions of life, and his relations with his kind.¹³

Such moments of togetherness force Ann to face her conditions of life and relations with others, just when such a moment arises as the melting of the planet's ice and the advent of a Martian utopia. This chapter will discuss the logic that supposedly produces meaning in the text through this mode of unlocking its hidden reserves. It conceives of the planetext's organising principle (in the case of Michel) through this sublime element, which in another sense from its verb form directs attention to the sublation or *aufheben* of the Idea described in Hegel, the 'liquidizing' or subliming that occurs when thesis and antithesis encounter each other. And even to the psychoanalytic understanding of sublimation, as specifically Freudian in its likeness to condensation in his dream analysis, and precipitation in his study of melancholy. When we previously looked at this flood event, it was briefly to contrast it with ice as a congealing of form and content. But as this event stands now in our attention, it is marked as subliming, melting, liquidizing, and sublating, all of which put Ann out of her method, and suggest a mode by which *aufheben* is thawed from the planetext. The question is where such a reading comes from. The Hegel-Marx-Freud combination directs us to a different language for understanding Ann's depression which we have previously forgone in favour of a resistance. Now, it is clearly seeded in Jameson's own analysis:

It is no doubt this persistence of a grief that cannot be resolved that makes her into more than an allegory of melancholy in its most morbid Freudian sense. (*Archaeologies*, 405)

'Two Word for Joyce,' tr. Geoffrey Bennington, in *Ulysse Gramophone*, 15-53. Also see: *Derrida and Joyce: Texts and Contexts*, eds. Andrew J. Mitchell and Sam Slote (New York: State University of New York Press, 2013).

¹³ Marx and Fredric Engels, 'Manifesto of the Communist Party' *The Revolutions of 1848*, ed. and tr. David Fernbach (London: Pelican Marx Library, 1973), 70-71. Also see footnote 29, Marx and Engels, *Capital Volume One*, 617.

He continues: ‘we cannot yet assess this anti-humanist ontology until we take account of its great alternative, the ‘areophany’ of Hiroko’ (*Archaeologies*, 407). A fuller account of the areophany will be given in chapter 4. For now, the overriding point of contention I wish to bring to the reader’s attention is: whose assessment is he talking about?

The reader need not go far to find Michel himself as the assessor of Ann’s depression, and clearest Jamesonian analogue. William White claims Michel ‘occupies a singular place’ among the First Hundred, owing in the first place to his psychiatric employment to ‘observe, evaluate, and when necessary counsel the others’, and in the second place that this employment is meta-textual. His essay ‘follow[s] a hint that the ‘structuralist alchemy’ in which Michel engages is meant to suggest a way of reading the meanings implicated in the novel itself.’¹⁴ The fact the Greimas square is actually deployed in *Red Mars* (217-9) seems like a little more than a hint¹⁵. And while White provides an insightful analysis of John Boone as read through the square,¹⁶ a more provocative choice may have been Michel himself, a move which treads

¹⁴ White, ‘‘Structuralist Alchemy’ in Kim Stanley Robinson’s *Red Mars*’, *Extrapolation* 48, no.3 (2007), 579.

¹⁵ This was even made to be more than a hint when Robinson told Kevin McVeigh in an interview in 1996 when the Square might prove to ‘disarm’ (McVeigh’s word) the critic to some extent: ‘I like that formulation... You can’t be a fiction writer for very long without noticing a certain condescension on the part of too many critics who seem to be coming in from Olympian heights to explain to these poor, instinctive, semi-intelligent fiction writers what they were really doing. I think it’s not a bad thing to say to them, ‘think again’. Interestingly, in his 2011 essay ‘Remarks on Utopia in the Age of Climate Change’, Robinson concedes to the Olympian view of Jameson when he claimed ‘when I read the part of ... *Archaeologies*... that speaks of the impossibility of imagining utopia, I found the notion comforting. ‘Ah ha!’ I cried. ‘I was trying to do something impossible!’ It explained a lot.’ In the same paper, Robinson elevates the critic and the fiction writer to a similar height with regard to what he calls ‘Beaker’ scientists, after the Muppets, to characterise their naivety of the linguistic and political dimension of scientific practice, and that science fiction ought to critique this attitude and re-educate them. The thrust of this problem will be the subject of chapter 3: the place of the re-education of Sax Russell, and what it says about the interplay of language and the scientific method. ‘Red Prophet, Green Man, Blue Adept: Kim Stanley Robinson in Conversation with Kevin McVeigh’, *Vector* 189 (September/October 1996), 4; Kim Stanley Robinson, ‘Remarks on Utopia in the Age of Climate Change’, *Utopian Studies* 27, no. 1 (2016), 7, 13-4;

¹⁶ In ‘exploring’ the ‘actantial’ ‘dimensions of *Red Mars*’ Boone’s narrative, with its ‘counter-narrative’ of Frank Chalmers, suggests a tension between mythic and ironic structures, which White urges us ‘explodes’ across the novel, ‘expanding’ its dualism. When thought about in the same district as the concept of *actant*, Michel enters the circle of scientists to observe, evaluate, and counsel much like Bruno Latour into Roger Guillemin’s laboratory at the Salk Institute in *Laboratory Life: The Construction of Scientific Facts* (Beverly Hills: Sage Publications, 1979). White, ‘Structuralist Alchemy’, 579.

directly into the line of sight of the ‘hint’. The conversation White sets up with other critics – Jameson, Leane, Markley, Franko, Foote, Dynes, and Abbott – stages the debates that take place in the novels; as Jameson wrote, the ‘numerous, and contradictory’ positions taken up within them (and which comprise the points of the Greimas square), ‘stage an implicit debate with the objections and ideological and political prejudices of its readers’ (*Archaeologies*, 410). Yet, the position that affords this view is not debated in White, nor raised by anyone else except by Kenneth Knoespel, and so the view of the critic is unproblematically linked to Michel, who observes, evaluates, and counsels as a meta-commentator from a unique vantage. The ‘debates’ among readers tend to speak from the same position as Jameson, a view which is already contained within the novels, as White claimed, but did not fully develop. That both Jameson and White essentially read through Michel’s eyes is a point neither make absolutely obvious, nor choose to interrogate in itself. Without a proper analysis of Michel, none of this can be made clear.

Kenneth Knoespel’s tracing of the reader’s path along the topological ‘models’ of the novels sets down some provisions for interrogation, and can begin to show the ‘braids’ of the textual web:

The forward movement of narrative also engages the reader’s own projective narratives of what might happen in the future. Algirdas Greimas – whose work reinforces that of Segre – emphasizes the role of the reader by describing the ways that information is shifted in or out in the process of reading to create coherence. Robinson amplifies this process by requiring readers to sustain multiple planes of discourse braided around an evolving plot.¹⁷

He is nonetheless dissatisfied with character as a reliable entry-point: ‘from the vantage point of the reader, the phenomenological identity created for a character serves only as a point of departure; characters serve provisional sets that enable even more complex combinatorics.’¹⁸ While he promises the reader his or her movement through the narrative ‘continually opens and closes’,¹⁹ he is unclear on how exactly these departures are made, or even the very important model by which a reader can become closed into a character, or its points of opening and closing. Who is the guard who keeps the text closed, maintains its braids, and protects its meaning? The outline of an answer was already suggested, yet it was with William White, whose essay predates Knoespel’s, and goes unmentioned by him, that Greimas was driven forward most clearly as the start of the guardrail which ‘reinforces’ and, as we will see, protects and closes, the coherence of the Trilogy.

¹⁷ Knoespel, ‘Reading and Revolution on the Horizon of Myth and History: Kim Stanley Robinson’s Mars Trilogy,’ *Configurations* 20 (2012), 117.

¹⁸ *Ibid*, 118-9.

¹⁹ *Ibid*, 119.

Going to White equipped with this topology, or braiding, of discourse means the contributions of White, Jameson, and Knoespiel to scholarship, ironically, open and close interpretive conduct. The marks of the Greimas square within *Red Mars* do not serve so well as the *grammé* which the reader might follow, but instead as the signature web in which to get stuck. It inflicts a violence on the reader with the very same apparatus of his protection. The square ensnares them at the same time it tries to hold together the coherency of its images. Knoespiel cannot help but claim to liberate the reader at the very point at which their freedom is most forcibly constrained by the topology of the model:

Topoi are elements that enable a continuous practice of opening and closing, building and dismantling. Such a process reinforces the phenomenology of reading and underscores in fundamental ways that it is the reader who constructs the novel.²⁰

The topology of the Greimas discourse continues to reinforce the reader's movement through the novels, even when one of them claims authorship over its construction of meaning. The vast shadow of authorial 'projection', of Greimas and of Jameson, can only remain unseen, it seems, if we move through the text in one direction, as Knoespiel instructs is the only way: 'forward'. But the modes of reading most centrally shaken in Michel's narrative, whose direction is always pointed homeward, suggest the point of departure is also an equivocal point of access, in which the direction can be turned back on itself and the novels read according to their own model.

To use White and Knoespiel as crucial precedents, the social dynamism of readership to which Jameson refers is safely contained on the stage of characters:

Irony emerges [in contrast to myth which 'manifests itself in the structures of the individual stories'] from the layering or nesting of those stories within each other, reversing or inverting meanings seemingly fixed within the mythic narrative taken unto itself. That which is both myth and irony is allusion, or intertextuality: it is constituted in the reference of one text to another.²¹

This is a significant expression, not only for noting how the 'range of characterisation', as William Dynes put it,²² 'stage' [Jameson] the rivalries

²⁰ *Ibid.*

²¹ White, 'Structuralist Alchemy', 599.

²² Dynes, 'Multiple Perspectives in Kim Stanley Robinson's Mars Series,' *Extrapolation* 42, no. 2 (2001): 'Robinson deploys a wide range of narrative techniques in order to explicate the relationships between individual psychology and scientific, ecological, and political perspectives. These techniques include a narrative tone that permits a range of characterization while still binding the whole within a genuinely comic vision, a point of view distributed among several characters, and both explicit and implicit interrogations of the metaphors that constitute understanding' (151).

within the novels, but for how these rivalries emerge as readerly positions as nested and layered within one another. We however cannot credit White with this more complicated involution of criticism within the novels for his argument does not bear out its overriding potential as a reading. But it shall concern us presently: the *nesting* of citations, the *inverting* of meaning (as Dynes writes), and the intertext most of all of Jameson himself with whom a suspicious continuity exists with Michel's own methods to understand himself.

White's essay is nonetheless incisive as a more direct expression of the 'autoreferential inscription' (*Archaeologies*, 397) Jameson found to be operating within the novels. Yet, by only extending Jameson's point, he overlooks the guardrail of the inscription which protects the meaning of the Trilogy, 'disarms' potential critics, and more to the point the way in which this guardrail is built into Michel's protective strategies against depression. The novels, according to Dynes, 'call for community: of wholeness within the self, within interpersonal relationships.' But the calling is never for anything more than 'syncretism'.²³ 'The utopian text is not supposed to produce this synthesis all by itself', and so Jameson himself issues the command to the reader, one already issued in the call as the work's 'temptation to reconcile' (*Archaeologies*, 409). Michel's feeling that his being is split between two planets speaks to his depression as the uncanny split of character and reader, a textual dissociation, with the therapy of his psychology offered as the means by which to re-join and make them whole. In this way we suspect the 'principle unity of the work' is conducted not in praxis or history (*Archaeologies*, 409), but in reading, and by the reader. And it is from here we return to the preliminary point of access into the rules of a methodological discourse within the novels.

The subject that shall concern us from here till the close of this chapter is Michel's depression (with Ann's in orbit around it). While it has many sides from which to approach, the overriding character of all of them is an attempt to provide a discourse of his own mental condition. This alone breaks the simple use of the structural alchemy for the reader, for it presupposes a susceptibility to therapy, and, as we shall see, a defensive strategy. By this logic, following Michel's narrative through his auto-therapy is to see deployed a psychological phenomenology, or a means of understanding his own

The 'authorial perspective' (152) Dynes is claiming gives the novels their narrative tone works with Knoespel's dissatisfaction with character anchorage and instead seeks out an invisible binding agent to tie them together into a single vision or point of view. Like Knoespel and White, Dynes is apparently unaware of his own imbrication within this authorial binding. Dynes's rhetorical strategy shown in phrases such as 'research as demonstrated...', 'the researchers came to the conclusion that...' (158), and 'current studies in social psychology suggest...' (151), work against his statements on the 'messy' (151) confusion of 'facts and values' (153), while also giving the assurance of an authorial vision of the novels. The place where such meta-statements of 'studies' and 'research' is being made is never claimed.

²³ Dynes, 'Multiple Perspectives,' 151.

experience of depression in order to cure it. The role of alchemy in his structural attempts however suggests something of the issue with this predisposition. While on the one hand it is possible to measure the lag of psychology behind the other sciences of the Trilogy, the reapplication of alchemy as an ‘occult’ science, ‘irrational’, and ‘either crazy or intellectually counterfeit’,²⁴ serves to display another more pointed image of discourse as it relates to madness.

Before the principle unity of the text can properly appear through the metaphor of alchemy (and its attendant metaphors: crucible; sublimation; kernel; etc.), the bounds of this archaeology of depression must be claimed. The practice of alchemy, stretching far back into the ancient world, was ruptured by what Foucault bracketed as the Classical Age. Along with madness, it found a more meaningful significance during the Renaissance; a likeness that should not go unnoticed: ‘madness was a specific phenomenon of the human spirit which belonged to the series of prophets, possessed visionaries, saints, clowns... a phenomenon to be interpreted, its meaning searched for.’²⁵ The Classical Age then enforced the categorical separation of reason and unreason, most clearly represented, Foucault shows, in Descartes’s *Meditations*, wherein the ‘formula of doubt’ enacted ‘the great exorcism of madness.’²⁶ The meeting point of alchemy and madness is also found in Newton’s suspected ‘breakdown’ of 1692-3,²⁷ yet it was with Descartes, his contemporary, that the *cogito*, rather than the calculus, ushered

²⁴ Bruce T. Moran, ‘Introduction’, *Distilling Knowledge: Alchemy, Chemistry, and the Scientific Revolution* (Cambridge, Massachusetts: Harvard University Press, 2005), 1.

²⁵ Slavoj Žižek, *Less Than Nothing: Hegel and the Shadow of Dialectical Materialism* (London: Verso, 2012), 328.

²⁶ Foucault, *Madness and Civilization*, 108.

²⁷ On the intersections of Newton’s genius with his madness, see: Betty Jo Teeter Dobbs, ‘Appendix D’, *The Janus face of genius: The role of alchemy in Newton’s thought* (Cambridge: Cambridge University Press, 1991) 288-92; P. E. Spargo and C. A. Pounds, ‘Newton’s ‘Derangement of the Intellect’. New Light on an Old Problem’, *Notes and Records of the Royal Society of London* 34, no.1 (July 1979), 11-32; Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton* (Cambridge: Cambridge University Press, 1980). With the beach scene at the close of chapter 1 in mind, we can recall Newton’s famous quotes: ‘I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.’ Sir David Brewster, K. H., *Memoirs of the Life, Writings, and Discoveries of Sir Isaac Newton, Volume II* (Edinburgh: Thomas Constable and Co., 1855), 407. What does this ocean become once we hear in Foucault’s estimation of Descartes the ‘retreat’ of unreason to mimic the pulling back of the tide: ‘there is only one word which summarizes this experience: *Unreason*: all that, for reason, is closest and most remote, emptiest and most complete; all that presents itself to reason in familiar structures – authorizing a knowledge, and then a science, which seeks to be positive – and all that is constantly in retreat from reason, in the inaccessible domain [or ocean] of nothingness.’ *Madness and Civilization*, 107.

in a new relation to madness, according to Foucault. ‘Descartes sought this absolute awakening, which dismisses one by one all the forms of illusion, at the beginning of his *Meditations*... But in madmen, it is medicine which must effect the awakening, transforming the solitude of Cartesian courage into an authoritarian intervention.’ Foucault then articulates the main point here to be noted: ‘The physician, in relation to the madman, reproduces the moment of the Cogito in relation to the time of the dream, of illusion, and of madness. A completely exterior Cogito, alien to cogitation itself, and which can be imposed upon it only in the form of an invasion.’²⁸

With this historicism in mind, Michel’s alchemy speaks directly to his melancholy, and reinstalls our understanding of it into a pre-Cartesian methodology. Alchemy, which in truth is recalled only in name, allows him to insert melancholy back into its medieval humouric schema, the other three points being: choleric, phlegmatic, and sanguine (*Red*, 219-20), further elaborated as values on his Greimas square. But another side to the Cartesian method can begin to reshape how this exorcism is, for Derrida, misunderstood, and how the invasive and defensive strategies already guarantee a failure to penetrate and defend what are in fact very proximally close modes of being. Mathematics was one means of the command of reason over unreason, and while for Foucault it was a ‘mathesis of light’,²⁹ which contrasted and invaded the darkness of madness, yet another formulation is more fitting with Michel, one which locates these two modes within one another. It was suggested in Newton’s breakdown which might have had as much to do with his alchemy as with the chemical fumes his experiments released.³⁰ The modern distinction between Newton’s scientific and pseudo-scientific work of course did not hold for him. What holds, then, for genius is a troublesome sense of authorship over their work. Mathematical genius John Nash, for example, said ‘the ideas I had about supernatural beings came to me the same way that my mathematical ideas did. So I took them seriously.’³¹ In her memoir of Nash, Sylvia Nasar locates his genius somewhere close to the peculiar realm of madness, in which the barrier between them is both the most fortified and most permeable zone, the same place, she suggests, from

²⁸ Foucault, *Madness and Civilization*, 184-5.

²⁹ *Ibid*, 109. Contrast with unreason as ‘*reason dazzled*’: ‘Dazzlement is night in broad daylight, the darkness that rules at the very heart of what is excessive in light’s radiance. Dazzled reason opens its eyes upon the sun and sees *nothing*, that is, *does not see*; in dazzlement, the recession of object toward the depths of night has an immediate correlative the suppression of vision itself; at the moment when it sees objects disappear into the secret night of light, sight sees itself in the moment of its disappearance,’ (original emphasis) 108.

³⁰ See P. E. Spargo and C. A. Pounds, ‘Newton’s ‘Derangement of the Intellect’. New Light on an Old Problem.’

³¹ George W. Mackey, professor of mathematics, Harvard University, interview, Cambridge, Mass., 12.14.95; see note 1 of Sylvia Nasar’s *A Beautiful Mind* (New York: Simon & Schuster, 1998), 12, 189.

which their ideas are apparently delivered.³² Yet, ‘men of scientific genius, however eccentric, rarely become truly insane – the strongest evidence for the potentially protective nature of creativity.’³³ What is missing here is what is seen in Derrida, the more genius staves off madness, the more it ‘adheres... to its essence and vocation’: ‘philosophy is perhaps the reassurance given against the anguish of being mad at the point of greatest proximity to madness’ (*Writing*, 55, 59).

Archaeology therefore only works on the novels with this significant Derridean rotation added to it. The differential of the discourse is at first visible when charted through the labelling of Jameson as the Cogito of the Trilogy, and Michel its madman. But the correction which needs making is that this Cogito, while upheld as a protective strategy, cannot forget its foundation. ‘Madness is inscribed into its very (pre)history of the *cogito* itself.’³⁴ The point here is to avoid cleanly allocating figures to reason and unreason, and to complicate their presence to such a degree that both fail to provide any resolution. Madness cannot allow what it does for Derrida, nor can reason give a solid foundation as hoped for in Descartes. Jameson is just as much the madman of the novels (or even Descartes’s evil genius) as Michel is its logic. Both roles of therapist and patient are folded in Michel to the extent that he deploys the rules of his discourse at the same time he contains its most problematic aspect. A clearer way to make this point is to replace the Cogito with the term genius, giving a different but not irrelevant relationship with madness. In this sense can we think of Michel’s depression and genius as a path through which to understand the way he and his illness yield text-wide insight as the principle unity of the work. One of the issues to be unfolded across this chapter is the way in which depression is also, uniquely, an affect which threatens a genuine experience of meaning. Michel’s own methods for staving it off therefore speak to the genius of the text, but a genius who stands on a foundation of madness, emptiness, and unmeaning. The result of seeing this play out across both Jameson and Michel is to find the concept of

³² She quotes Anthony Storr: ‘Some creative people... of predominately schizoid or depressive temperaments... use their creative capacities in a defensive way. If creative work protects a man from mental illness, it is small wonder that he pursues it with avidity’, 15; Storr, *The Dynamics of Creation* (New York: Atheneum, 1972). In supplement, Nasar also offers Sartre’s insight that genius is ‘the brilliant invention of someone who is looking for a way out’, which very much describes Michel’s urge to get off Mars and back to Provence. For Sartre, see: *Nausea: The Wall and Other Stories*, xix, and Gian-Carlo Rota, ‘Misreading the History of Mathematics’, *Discrete Thoughts: Essays on Mathematics, Science, and Philosophy, Second Edition*, eds. Mark Kac, Gian-Carlo Rota, and Jacob T. Schwartz (Boston: Birkhäuser, 1992), 232-3.

³³ Nasar, *A Beautiful Mind*, 16. With this passage, she cites Havelock Ellis, *A Study of British Genius* (Boston: Houghton Mifflin, 1926).

³⁴ Zizek, *Less Than Nothing*, 330. Cf. *Writing and Difference*, 55-6.

overdetermination³⁵ as the means by which the novels generate meaning, destroy it, enforce discourse, and narrow the interpretive range of critical responses. The hermeneutical core of Michel is therefore revealed through his depression as an immense failure of insight.

From the outset depression takes on the value of standing in distinction to a rationality of madness. To understand why Michel is depressed, or why Ann is depressed (for which we have a few clues in the novels themselves) we can think in terms of the silence of madness and the structures of cogito. By approaching Michel in particular as an opportunity for such an understanding, the subject of his depression therefore becomes a subject of attaching meaning to experience, in this case how psychology structures one's experience of reading the novels, and how a critical interpretative model arises out of it. The model we see arise is none other than Jameson himself. Jameson, therefore, is the cogito hidden and silent inside Michel's madness. And this nesting of citation, and the web by which a web of citations, or a 'web of discourse'³⁶ as Daniel Dennett calls it, is firstly one way Michel employs to understand his depression, but also to stave it off; philosophy as therapy – 'a transparent sheet separates it from madness' (*Writing*, 31). The nesting of idea and material is itself a topic of Marxist thought, originating with the idea between Hegel and Marx of inversion. To read Michel through this web of citations (both in Michel and Jameson) elucidates both the presence of Jameson as correlated to Michel – Michel therefore being a meta-commentator – as the central issue over meaning and its disappearance. Michel's depression, when understood through overdetermination, is both the straightjacket of discourse, and a defence mechanism to the sublime, empty, and excessive nature of experience. Madness is, for him at least, the emptying of meaning, and were we to scramble to Jameson to find it again,

³⁵ 'OVERDETERMINATION (*surdétermination, Überdeterminierung*). Freud used this term to describe (among other things) the representation of the dream-thoughts in images privileged by their condensation of a number of thoughts in a single image (condensation/*Verdichtung*), or by the transference of psychic energy from a particularly potent thought to apparently trivial images (displacement/*Verschiebung-Verstellung*). Althusser uses the same term to describe the effects of the contradictions in each practice, q.v.) constituting the social formation (q.v.) on the social formation as a whole, and hence back on each practice and each contradiction, defining the pattern of dominance and subordination, antagonism and non-antagonism of the contradictions in the structure in dominance (q.v.) at any given historical moment. More precisely, the overdetermination of a contradiction is the reflection in it of its conditions of existence within the complex whole, that is, of the other contradictions in the complex whole, in other words its uneven development.' Louis Althusser, *Reading Capital*, tr. Ben Brewster (London: NLB, 1970), 315-16. Also see 'On the Young Marx' and 'Contradiction and Overdetermination', *For Marx*, 49-86, 87-128.

³⁶ Dennett, *Consciousness Explained* (New York: Little, Brown, 1991), 416. Cf. Žižek, *Less Than Nothing*, 334.

the issue over madness and cogito is simply a matter of applying again Foucault and Derrida, and the resultant stalemate.

This web of discourse, aside from opening a picture of Michel's madness and of Jameson's interpretation of the novels, also, given the overlap of these two things, must lead to the method by which to understand Robinson. The inverting of the kernel and the relationship between the Idea and the material of the planetext is mimicked in the relation between text (material) and theory (idea). As such, the process of Robinson writing a Jamesonian book is the inverting of theory into the materiality of a work of fiction – the text a display of theory. To approach the texts through Jameson, to follow the guardrail of discourse which 'protects' (from madness of unmeaning?), is to invert it again, to turn text back into theory and expose its Jamesonian core. The underlying question that rises to the surface out of this is: what is the use of theory in the assurance of meaning? Or even its insurance, once meaning begins to vanish under the threat of depression?

What can be said about Michel's genius? A moment arrives in *Red Mars* when Michel finds himself in the Alchemists' Quarter, and sees the 'great white salt pyramids', with a 'layer of diamond to protect it from corrosive dust'. Somehow, while standing before such 'shapes of ancient knowledge', his mind moves toward an exposition or thinking through of the four temperaments, and how he might map them 'onto the semantic rectangle' (*Red*, 220). This is not an accidental swerve of mind, as the pyramids, the protective layer, the 'ancient' 'arcane knowledge' by which the Martian 'alchemists' make these 'diamonds out of carbon', each speak to his own structural alchemy. If this coincidence is not reassuring enough, soon after a brief exchange with Sax Russell, Michel climbs one of these pyramids, and views Underhill from its summit, and it is the vantage given which aligns with the top-down map of the schema. Michel later dreams he is a 'lizard on top of Pont du Gard' while the sun burns of his 'diamondback skin' (*Red*, 225), a re-piecing of both the diamondback pyramid and standing on top of its high vantage point. On the approach to the Alchemists' Quarter the presence of such arcane 'ancestry' elicits an overlap of the semantic square with the humours. At first, we are told, Michel spent a 'fair amount of time... using the two different systems as the x and y axes of several different grids' (*Red*, 217), until it dawns on him to throw together the Greimas square with the 'alchemical ancestry': 'it was necessary to acknowledge the real difference between something's opposite and its contrary; the concept of 'not-X' being not quite the same thing as 'anti-X'. It is first seeing, and later climbing, the pyramids around the Alchemists' Quarter that this particular psychology first suggests itself to Michel.

To describe this as a program which the reader can run the books through is not lost on the rhetoric Michel uses to describe the behaviour of his patients, including himself. Maya runs the 'Maya-program', and as a performative

measure to keep up appearances Michel must keep ‘playing the Michel persona, running the Michel program’ (*Red*, 223). Keeping this habit is a notable characteristic³⁷. The use of a program as protection also yields a demonstrative meaning. For now, these two notable features of the program speak to the performance, or ‘running’, of an interpretive structure. It is the systematising term of a ‘program’ which can be ‘run’ which draws him into the ambit of a geometrical method, that is a principle organised around algebraic notations into which he can insert a set of terms and see them gridded on a metrics of contrary and opposite. While the meta-textual component of *A Short, Sharp Shock* in chapter 1 did not employ a geometry to suggest its interpretive key, another of Robinson’s stories does employ a far closer analogue to Michel’s schemata, and one which when put in this context casts the program of the schema into an interesting, and revealing, dimension. And we should mean dimension literally, for it is the pyramid at rest on top of the square that we see the projective geometry of the schema begin to take on a different value as a vantage for a strategy of reading.

Robinson’s 1986 short story ‘The Blind Geometer’ is an essential addition to the *key* texts of Robinson, most especially here, for it dramatizes the relationship between language and mathematics. Carlos, the blind narrator and geometrician, across the story becomes embroiled in a Philip K. Dickian spy narrative involving a para-governmental body exploiting his mathematical abilities to build a particle-beam weapon. The Dickian elements continue into the metaphysical nature of Carlos’s projective geometry, most specifically evident in his use of Desargues’s Theorem to understand the interrelation of pieces on a geometrical axis. The use of this axis, and ‘geometry [as] a language’ (‘Blind’, 133), gives a scheme for readerly input, and to the reader the end of the story points: ‘I leave the proof of this as an exercise for the reader’ (‘Blind’, 156). In the case of Carlos himself, like Michel, he has already done so, charting the people in his life on the axis. Desargues’s Theorem originates in projective geometry and perspective in painting:

³⁷ Zizek, *Less Than Nothing*, 347-56.

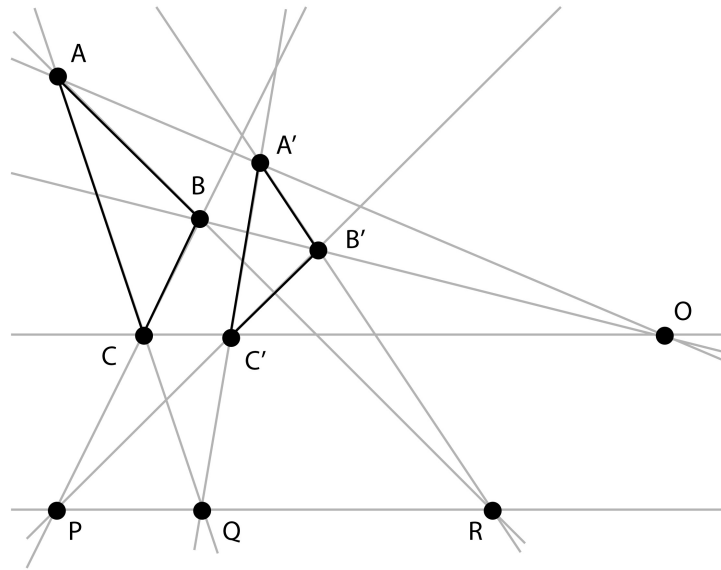


Figure 2.1 Diagram of Desargues's Theorem, which states: Two triangles are in perspective *axially* if and only if they are in perspective *centrally*. Image courtesy of Michael Cronin, mike@torresiancrow.com.au.

The perspectival nature of projective geometry positions O as the view from which ABC (which is the metaphysic) is collinear with $A'B'C'$ (the textual, or phenomenal). The way in which they line up, when viewed from the central position of O hides the metaphysical behind the phenomenal; Carlos's blindness enables him like Tiresias to see through the phenomenal into the metaphysical plane as such, a clairvoyance we should in this case read meta-textually as the projection of a reader's viewpoint into the text. The question therefore arises that if O is the view of the reader, and $A'B'C'$ denotes the textual plane, what is the metaphysic that lines up so neatly behind it? This outside figure can at least be suggested through charting Michel ($A'B'C'$) as the textual object both obstructing a view of and lining up with Jameson (ABC). The axial perspective PQR , on which the short story ends, gesture to what makes up the web of discourse by which a Jameson reading comes to take form, not as a singular set of points, but a composite, or net, of many others. The building of such a grid itself is the strategy by which this clairvoyance is captured as a method, and locates the textual geometer in a meta-relationship.

The notion of n -dimensional space which Desargues's Theorem demonstrates sits in line with the way in which a social horizon 'projects', to use Jameson's term, a particular form onto the surface. Derrida suggests we experiment by deconstructing the flatness of the structuralist schema: 'in this demand for the flat and the horizontal, what is intolerable for structuralism

is indeed the richness implied by the volume, every element of signification that cannot be spread out into the simultaneity of a form' (*Writing*, 25). To give a geometry of this projection it seems is to throw it into another dimension, to experiment in the fashion of Abbott's *Flatland*, and project the two-dimensional axis of the Greimas square into the three-dimensional pyramid:

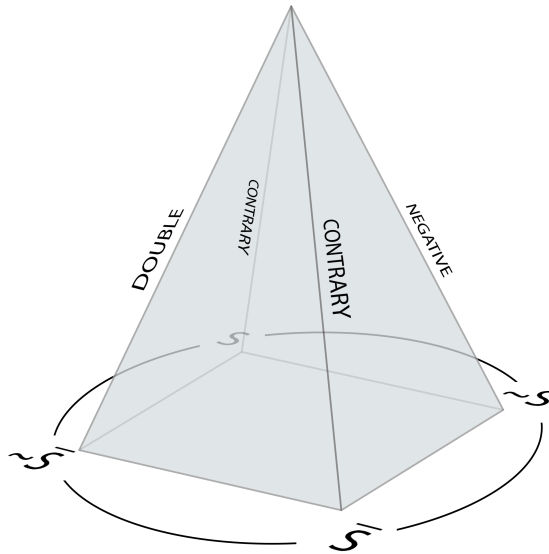


Figure 2.2 The Greimas Square and pyramids of the Alchemists' Quarter combined into a single image. Image courtesy of Michael Cronin, mike@torresiancrow.com.au.

Also in line with Carlos's stylistic habit of nesting clauses inside imbricated parentheses, Michel elaborates the complexity of the square by nesting it inside a larger one, 'bracketed in the first at right angles' (*Red*, 218). This strategy to avoid the reductive simplicity of a basic Greimas square suggests a set of shortcomings. As Jameson said, the schema Michel uses is 'perhaps not complicated enough to do justice to the multiple interactions' (*Archaeologies*, 404) of the First Hundred. Michel himself was already urged to consider the Greimas square after the fact that 'no simple dialectic was enough to indicate the true complexity of any cluster of related concepts' (*Red*, 217). Determining the geometry of individuals and concepts can be worked out chiefly through Jameson's own elaboration of complexity by nesting the square in the overdetermined field of chaos theory, in which any mathematics strains at the starting conditions of a phenomenon. Chaos theory, as Sax comes to use it, is one exemplary occasion Jameson inverts into the historical concept of overdetermination (*Archaeologies*, 395), the basic meaning of which,

as he writes, is that chaos is a problem of there being too much data, not too little, and is hence overdetermined rather than undetermined. But before coming to overdetermination, it must be noted meta-textuality can be worked out, at least partially, through an n-dimensional projection of plains. Putting together the pyramids with the Greimas square reveals a point of observation previously obscured. We are then able to understand the 'square white pavilion' (*Red*, 222) on top of the salt pyramids as reaching into the meta-textual plain, permitting and rendering invisible a unique point of view of the layering of texts, the perspective of Desargues' Theorem. The 'not-X' and 'anti-X' points are better put into the square at the point of intersection, the apex of the pyramid where the pyramid is reached.

The fact this O point is perspectival allows us to map the relation of Jameson and Michel not only on Greimas' axes also but on Desargues's. The relation is then positioned both as a metaphysical-textual dimensionality (or meta-textuality), as well as into a line of sight which renders this relationship invisible. To cast this through the Foucault-Derrida debate, the hyperbola or hyperbolic trajectory³⁸ yields a similar picture of the excess of madness that resides or passes outside and yet 'founds' the structure itself, suggesting another meaning of Jameson as the 'founder of discursivity',³⁹ its hyperbolic swerve. I must add that the hyperbola as an understanding of the founding of finite structures of thought (such as a language or schema) should be contrasted with the parabola (or parable) of McDonald's *Golden King*, both of which imply the analogy to the conical cone with its other two geometric paths; the circular and the elliptical. In context, I previously ran my analysis of Ann through the elliptical path of the exorbitant. Now it is both the hyperbole and the very understanding of the conical, or pyramidal, structure itself that is under question.

³⁸ 'By separating, within the Cogito, *on the one hand*, hyperbole (which I maintain cannot be enclosed in a factual and determined historical structure, for it is the project of exceeding every finite and determined totality), and, *on the other hand*, that in Descartes's philosophy... which belongs to a factual historical structure, I am not proposing the separation of the wheat from the tares in every philosophy in the name of some *philosophia perennis*. Indeed, it is exactly the opposite I am proposing. In question is a way of accounting for the very historicity of philosophy (*Writing*, 60).

³⁹ Michel Foucault, 'What Is an Author?', 217. To this problematic of authorship, Foucault reminds us: '... the author is not an indefinite source of significations that fill a work; the author does not precede the works; he is a certain functional principle by which, in our culture, one limits, excludes, and chooses; in short, by which one impedes the free circulation, the free manipulation, the free composition, decomposition, and recomposition of fiction. If fact, we are accustomed to presenting the author as a genius, as a perpetual surging of invention, it is because, in reality, we make him function in exactly the opposite fashion...When a historically given function is represented in a figure that inverts it, one has an ideological production. The author is therefore the ideological figure by which one marks the manner in which we fear the proliferation of meaning' 221-2.

Nesting one square within another, and seeing them projected onto a perspectival plain, helps imagine Michel's imbrication within them when he details his scheme to better cope with the input of more complex data. Building a series of nested shells, it seems, might further support and buttress their discourse. In a more specific sense, Michel's philosophical and abstract understanding takes the form of discoursing through as protective and as referential. The axial points PQR, when applied to the set of philosophies and philosophers Michel calls to his disposal, serve as the points which make up the web of citation and reference. In Zizek's account of the Foucault-Derrida encounter, he cites Daniel Dennett's use of the phrase of a 'web of discourses'⁴⁰ to describe the 'shell' by which humans defend and protect themselves much as do clothes from the cold. Zizek gestures to Dennett in order to express discourse as an extended phenotype (that discourse, in Dennett's understanding, is an expression of a genotype), how 'the dark core of madness at the heart of the *cogito* can also be determined in a more genetic way,'⁴¹ to then step beyond Dennett, and see through the web itself into the interceding 'death drive' which pressures the subject to build the shell itself. Both the gene and the calling upon Freud will be important as we proceed. To reiterate this point again about the heart of the *cogito* in order to set up an understanding of the web of discourse inside which Michel (or My-Shell) confines himself, is to import the very notions of iterability and citationality into the act of constructing the web. To also call upon the imbricated parentheses form of 'The Blind Geometer' to reiterate such a point is, itself, a citation that brackets a space in which to speak, that enables speech through the rules of its support structure.

If, as I want to argue, Jameson is the discourse of the Trilogy, what then is the field of iterability which goes into building his interpretive method? And in the second place, what is the benefit of following its 'exterior ridges',⁴² as Foucault said, even those imbricated within each iteration of the structure?

⁴⁰ Zizek, 'Interlude 2: *Cogito* in the History of Madness', *Less Than Nothing*, 327-58. The iterations of this phrase itself speak to the way in which citations work to both gesture elsewhere, to call upon in support of one's own argument, to contextualise one's work within a field or network of other work, and to alter the cited material at each re-contextualisation. Zizek, for example lifts the phrase from Dennett [buries it in square brackets to indicate a nested citation within Dennett] to assist in locating the 'vanishing mediator' that intercedes *cogito* and madness: is Freud's 'death drive', 334. Dennett himself was citing David Lodge's *Nice Work* (40 [Dennett, 410-1]), in relation to deconstruction and to contrast with it, to reiterate the Darwinian argument put forward by Steven Pinker, that language, or the web of discourse, 'is as much a biological product as any of the other constructions to be found in the animal world', 416. To make the present case very clear, each of these citations works in my own case to make a web of the web of discourse, and to intercede into the contexts of Freud (psychoanalysis), Dennett (biology), and Lodge (deconstruction). Lodge, *Nice Work* (London: Secker and Warburg, 1988).

⁴¹ Zizek, *Less Than Nothing*, 333.

⁴² Foucault, *Archaeology of Knowledge*, 155.

To clarify, importing Jameson into an analysis of the Mars Trilogy has two competing benefits, best summarised in Derrida's own clarification of his deconstruction. The overriding issue to comprehend with Jameson is the textual invitation, made only more forceful in his own reading, of the Mars Trilogy to be replicated into a commentary:

This moment of doubling commentary should no doubt have its place in a critical reading. To recognise and respect all its classical exigencies is not easy and requires all the instruments of traditional criticism... But this indispensable guardrail has always only *protected*, it has never *opened*, a reading. (*Grammatology*, 158)

It must be stated clearly that Jameson's discourse, in a classical sense, determines meaning in the Mars novels, but it also protects them from this overriding problem of interpretation, that any reading cannot ever be anything other than Jamesonian, and that every reading at some point must collapse or develop into Jameson's. If they are to try to *open* the text, they must contend with finding themselves initially engulfed in Jamesonian theory. My aim is not to destroy this discourse entirely, for drawing meaning from the books depends on its many iterations, but instead to understand the iteration or performance of a classically Jamesonian commentary, which does not determine meaning so much as (via Jameson's own citation of Althusser's concept) overdetermine it. All of Jameson's theoretical and critical work resides around these texts as their matrix, and a commentator might do little else than call upon it to counsel, advise, and speak for their own reading. This chapter seeks not merely to find Jameson in the text as already citable, to make a claim on what is already claimed by himself in his own analysis of seeing himself reflected in the Trilogy, but to follow the 'guardrail' (or ridge) that protects the interpretive range of the Trilogy.

The point of first citation was in *The Seeds of Time*, published in 1994 (the year of *Green Mars*), in which Jameson calls on a feature of the Mars novels which he later praised in his essay (and later chapter) on the completed Trilogy:

...see also Kim Stanley Robinson's Mars Trilogy, which will surely be the great political novel of the 1990s and the place in which the interrelations of the various radical and revolutionary groups have been most vividly rehearsed for our own time. (*Seeds*, 65)

A note of praise which stands in counsel for the Trilogy also advocates for their rehearsal of the 'objections and ideological and political prejudices of its readers' (*Archaeologies*, 410). The width of this claim already brackets within it all that might be said about the texts, and so effectively anticipates and disarms them. Anything that enters its field can be easily absorbed and sublated into the performance of its own rehearsals. This note also has the

tone of a prognostication, ironic when placed next to the passage which gave Jameson his title: ‘... for who can see into the seeds of time / And say which grains will grow and which will not...’⁴³ The accidental swerve between these two cited passages allows for another meaning of the vivid rehearsal of the Mars Trilogy’s own prognostications to arise: the means by which Jameson is seeding himself within them as their kernel, the acorn to ‘develop’, as he later writes. To invert the kernel, the famous step taken by Marx, is to develop the seed of Jameson into a reading of the socio-political stage on which this very reading is already placed. The step already taken by writing what are, according to this seeded element, Jamesonian novels, is itself an inversion of theoretical works into fiction, in which Jameson ‘melts’, as Banquo said, ‘as breath into the wind.’⁴⁴ It seems the program for their growth is already imbricated within them.

The benefit of citing Jameson is to therefore contour the ridges of the inversion, and characterise this reading as a re-inversion or reiteration of the original Hegelian inversion of the ‘great men’ of history:

Great men may be called Heroes, inasmuch as they have derived their purposes and their vocation, not from the calm, regular course of things, sanctioned by the existing order; but from a concealed fount – one which has not attained to phenomenal, present existence – from that inner Spirit, still hidden beneath the surface, *which impinging on the outer world as on a shell, bursts it in pieces, because it is another kernel than that which belonged to the shell in question.* (original emphasis)⁴⁵

To read according to the Jameson kernel is to send the novels once more through the inversion, and turn them back into theory; as did William White who claimed the structural alchemy ‘exploded’⁴⁶ the dualism of the novels, and, in Hegel’s language, impinged on the outer world. But this is already to reiterate the theoretical inner Spirit, which can be called Jamesonian. Great men, according to Hegel, are already prognosticating the potential of the seed, which they are tending to burst into growth.

This is the structure of reiteration from which meaning in the novels generates according to their theoretical seeds, which we shall soon see in

⁴³ The lack of citation for this passage from *Macbeth* allows room for a slight rewording of Banquo’s line: ‘If you can see into the seeds of time...’ *Macbeth* 1.3.56, William Shakespeare, *The Norton Shakespeare* (New York: W. W. Norton, 2008), 2583.

⁴⁴ *Macbeth* 1.3.80, *Ibid.*

⁴⁵ Georg Wilhelm Friedrich Hegel, *The Philosophy of History*, tr. J Sibree (New York: Dover, 1956), 30. Althusser adds: ‘The curious variant on the long history of the kernel, the pulp and the almond. Here the kernel plays the part of a shell containing the almond; the kernel is outside and the almond inside. The almond (the new principle) finally bursts the old kernel which no longer suits it (it was the kernel of the old almond); it wants a kernel *of its own*: new political and social forms, etc. This reference should be borne in mind whenever the problem of the Hegelian dialectic of history arises’, ‘Contradiction and Overdetermination’, 91n4.

⁴⁶ White, ‘Structuralist Alchemy’, 579.

detail deployed most crucially by Michel. Citations of Jameson in Robinson criticism show another effect of iterability, that is the closure of the footnote and the parentheses. For instance, Gib Prettyman's Jamesonian analysis of the allegory between Robinson's working of genres and genes in the Science in the Capital Trilogy, comes to the point, seeded in a quote from *Sixty Days and Counting*. Prettyman writes: 'thus we know that Jameson's thought is itself part of the generic-genetic heritage of Robinson's utopia. Of course, Jameson insists on the political frameworks of history and psychology, and these frameworks can account for representations of biology as easily as the obverse.'⁴⁷ Prettyman's following placement of Suvin serves to touch on the ridge of this framework: 'practice is always slyer than theory.'⁴⁸ What is touched on but missed, on top of the continual inversion or alternation between theory and practice, Jameson and Robinson, which must take place, is a genealogy, a reading of the genotype which can be 'run' as an interpretive program. This is the means by which the totality of Jameson's claims is seeded in the notation of the footnote or parentheses, and threaten to engulf the unwitting critic who quotes him. In his own words:

...the properly Utopian program or realization will involve a commitment to closure (and thereby totality): was it not Barthes who observed, of Sade's Utopianism, that 'here as elsewhere is it closure which enables the existence of system...

Totality is then precisely this combination of closure and system...
(*Archaeologies*, 4-5)

The same closure by which Jameson states separated More's programmed Utopia from history (*Archaeologies*, 5, 39, 204, 291, 412, 415),⁴⁹ the pivotal

⁴⁷ Prettyman, 'Living Thought: Genes, Genre, and Utopia in the Science in the Capital Trilogy', in *Kim Stanley Robinson Maps the Unimaginable*, 181-201. The nesting of citation, from Prettyman (201) to Marx: "To wrest Freedom from the grasp of Necessity"... Who said that? (3: 171 [*Sixty*]) Although the text does not say, this is a paraphrase from Jameson's *Political Unconscious* (3); Jameson: "These matters can recover their original urgency for us only if they are *retold within the unity of a single great collective story*; only if, in however disguised and symbolic a form, they are seen as sharing a single fundamental theme – for Marxism, the collective struggle to wrest a realm of freedom from a realm of Necessity' (my emphasis); Marx: 'The realm of freedom actually begins only where labour which is in fact determined by necessity and mundane considerations ceases... Beyond it begins that development of human energy which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity as its basis.' Marx, *Capital: A Critique of Political Economy Volume III* (New York: International Publishers, 1977), 820.

⁴⁸ Prettyman, 'Living Thought', 201. Suvin, *Learning from Other Worlds: Estrangement, Cognition, and the Politics of Science Fiction and Utopia*, ed. Patrick Parrinder (Durham: Duke University Press, 2001), 251.

⁴⁹ Also see, 'Of Islands and Trenches: Naturalization and the Production of Utopian Discourse,' *Diacritics* 7, no.2 (Summer, 1977), 2-21.

trench, is the same space in which Michel finds himself adrift with a ‘mind residing in two worlds at once, lost in the nowhere between them’ (*Blue*, 232). The gulf between the planets, which Jameson labels as Robinson’s version of the ‘trench’ (*Archaeologies*, 415), is therefore the region of closure. The ellipses in the above quotation suggest this closure, much in the way the exorbitant travels around a text, but at a distance, and fragmented. The gulf of the ellipsis, the orbit of a footnote, the barrier of a parenthesis, disclose the totality of another work, and in this significant case, the work of Jameson.⁵⁰

How then does overdetermination fit into the role of closure in the novels? And what can be said of its all-encompassing ambit? One of Michel’s critiques of scientific ideology is what he calls Sax Russell’s *monocausotaxophilia*, or love of first causes. The term originates from a neuroscientific paper on musical tones and rhyming in poetry.⁵¹ This diagnosis of Sax’s naïve scientific realism makes up as much a part of Jameson’s analysis as it does Michel’s. Only with Jameson there is the more consciously theoretical descriptor of overdetermination as an alternative to single and original causes. By contrast, overdetermination is poly-causal, it pools many causes, displacing a single phenomenon into a host of influences spread out across a range of competing forces. Only, this move does not manage the problem of comprehending systems any better than Sax’s mono-causal reductionism. In fact, overdetermination works well as a *panchreston*, a term coined by Garret Hardin as the *panacea* of knowledge; just ‘as we borrow from the Greek to call a ‘cure-all’ a *panacea*, so let us christen an ‘explain-all’ a *panchreston*.’⁵²

⁵⁰ Consider, for instance, how a footnote such as one from *The Political Unconscious* (5n5), serves as both this invoking of texts, marshalling their authority around his own, yet also filling in by way of a gesture. The citations in question (Foucault, Derrida, Baudrillard, Deleuze and Guattari, Althusser) do not hold well with *The Political Unconscious*, nor especially in the case of Derrida with its ‘transhistorical imperative.’ But the gesture sets up the space of citation as one of the contraries or opposites on the combinatory of the work of criticism, the footnote as one node on the Greimas system. But the gesture hardly opens the horizon of criticism, or unfolds the complexity of argument by way of disclosure, so much as neutralizes the apparently ‘contrary’ views of Derrida, Foucault, etc. by bridging them over the gulf between footnote and text, text and text, and make them yield to the trans-discursive thesis of *The Political Unconscious*.

⁵¹ Ernst Pöppel and Frederick Turner, ‘The Neural Lyre: Poetic Meter, the Brain, and Time’, *Poetry Foundation* 142, no.5 (August 1983), 284.

⁵² Hardin, ‘Meaninglessness of the word protoplasm’, *A Review of General Semantics* 13, no.3 (Spring 1956), 195. Hardin goes on to mention the humouric system of physiology as one such ‘carcass’ of a *panchreston* in the history of science. The elaboration of the humours into Michel’s structuralism speaks to its vague but broad meaning in terms of psychological types; the second section of this chapter will approach Michel’s melancholy as having exactly this effect of meaning nothing, or being an affect which empties experience of meaning. Hardin writes: ‘... The history of science is littered with the carcasses of discarded panchrestons: the Galenic *humours*, the Bergsonian *élan vital*, and the Drieschian *entelechy* are a few biological cases in point. A panchreston, which ‘explains’ all, *explains* nothing.’

A comprehensive explanation of this kind must also therefore be a *panacea* in its own right, a cure of Sax's knowledge problems. As E. O. Wilson warns us, *panchrestons* can arise in biology when multiple hypotheses are made 'compatible' rather than 'competitive',⁵³ an occurrence which speaks to the strange way in which a systems-discourse loses its internal competition over a principle of unity, that the 'carcasses of discarded panchrestons' can be sublated and absorbed into a new discourse, and so Michel is able to resurrect or retrieve such ancient and arcane concepts. Michel experiences the teleology of unified field discourse when he considers the physiological basis of psychology in the autonomic system as a sentencing to fate: 'thus they were driven by biology. *There should be no such thing as fate*: Ralph Waldo Emerson, a year after his six-year-old son died. But biology was fate' (*Red*, 216). As the earlier discussion of his alchemy shows, and after the consolidation of critics such as Prettyman, the genetic basis of behaviour is always historically embedded – as written in *Green Mars* in the context of Michel: 'biogenesis is in the first place psychogenesis' (*Green*, 246). The effect, as we shall see, of this particular kind of historical overdetermination, is to render the extended phenotypes of species meaningless. Standing in the pavilion of the pyramid, Michel remembers how on Earth he looked up at Mars in the sky, among the stars, and thought now: 'My God, what *were* they? *Nothing* explained that, *nothing* explained them! As well explain why they had painted in Lascaux, why they had built stone cathedrals into the sky. Why coral polyps built reefs' (*Red*, 223).

This general affect of baffling experience, instead of being 'vexed' as Sax would by reality's resistance to explanation, follows out of his disenchantment with being on Mars. His depression will be the subject of the following section, but here at least it is necessary for pointing out the dual feelings of fate and meaninglessness that arise out of his psychological systems. His building of his schema depends on many explanations of causes, a fact which point us in the direction of overdetermination as a descriptor. The large issue to raise in anticipation of Michel's depression is that this *panchreston* cures Sax's knowledge, but not Michel's homelessness. In this sense we will read his depression as the experience of overdetermination itself, a planet-wide loss of meaning as a loss of home.

The issue of the *panchreston* is worth raising in relation to Michel's experience of fatalism and meaninglessness for it points the way to the concept of overdetermination, especially as deployed by Jameson to put a stamp on all subsequent criticism of the novels. A useful way to frame this is Derrida's description of the *exergue*, of which the *Oxford English Dictionary* defines as the 'out' 'work', and in numismatic⁵⁴ terms (the 'study of coins,

⁵³ Wilson, E. O., 'Reasoning in Sociobiology', *Sociobiology: The New Synthesis* (Cambridge, Massachusetts: Belknap Press, 1975), 27-31.

⁵⁴ *Oxford English Dictionary*, s.v. 'numismatic,' <http://www.oed.com.ezproxy1.library>

medals, and banknotes as artefacts'), the inscription of a date on the reverse side of a coin or medal. In what sense can we then formulate Jameson's discourse, and particularly the ambit he puts around the ideological and political rivalries of the Mars books' readers, as the announcement of an exergue, the date of publication on the flipside of papers not yet written? For Derrida, the issue of prediction is bound up with the determination of writing, that the 'idea of writing' and the 'idea of science' is meaningful only so long as its concepts 'have *already* been assigned.' The future, on the other hand, 'proclaims itself... beyond the closure of knowledge,' for which 'there is as yet no exergue.' His grammatology, or science of writing (to reiterate chapter 1), is to conduct oneself toward the openness of the future through wandering 'attention' (*Grammatology*, 4-5). In terms of the provisions with which a reader may bring along into the Mars books, and so far as Jameson's discourse is not deconstructive, the exergue is not one of them. Hence, one fears that all future criticism written on the Mars Trilogy must subsequently bear the mark of the exergue. Whatever they may come to say, it has already been said, in theoretical terms, by Jameson, and announced as such implicitly and explicitly throughout his analysis of the Mars Trilogy.

The stamp of the future, or the face of the coin on which it is already minted, is displayed in the narrative in the form of this facing, and the eyes of that future which look back along the inversion at a particular moment when Nadia enters the underground room in Underhill in *Red Mars*. The reader will remember that Nadia experiences a historical compression, likening the room to the Roman cisterns of Aptera, the 'purpose' of which remains 'unknown', and so comes to invert the historical eye and see herself as future archaeologists will see her, as the Martian 'Cro-Magnon' with her equivalent of the cisterns (*Red*, 117). This experience sums up the readerly strategy by which the path of future history casts the role of the witnessing history in the opposite direction. This is hardly Nadia experiencing for a brief moment, like us, a vision of the future, as much as the future looking back at her. The move is therefore to figure Nadia looking back down the line of history at us, the reader. We should align this understanding with the quotes Jameson chooses to pick from the Trilogy, one of which is Ann's line: 'we'll wonder... why when we look at the land we can see anything but our own faces' (*Red*, 158; *Archaeologies*, 398). This was said to Nadia, and the mention of wonder should not be lost on Nadia's own 'wondering' of what future archaeologists and readers will think of her. It ought to come as no surprise that Jameson is reading against Ann's anti-humanism in favour of the ultimate constructedness that underlines all experience; as per his discussion of Wallace Stevens's 'Anecdote of the Jar' (*Archaeologies*, 400). In relating

Nadia's seeing of the face of the future as its exergue, what becomes apparent in Jameson's own analysis is that Ann's criticism of the crew is apt to describe his own discovery of the face of himself in his reading of the Trilogy.

The point, however, was never fully made. But were he to do so, as I currently am, then it is Michel's behaviour as a reader of philosophy which primes him as Jameson's analogue, and the bearer of the key of overdetermination – which we can see unfold through its web of contributing definitions and genealogy. Michel's historical eye is cast back to Provence and his home there as the watchful presence forever keeping him homesick. 'Headfirst into the black sun' will explore his return to Provence more fully. Until then, in *Red Mars* his practice is more theoretical. The textual equivalent of the discourse of overdetermination is implied in his grasp of the history of French philosophy:

This was his task, as he now conceived it: the hard work of reconciling the centrifugal antinomy of Provence and Mars. He felt that in this project he was part of a long tradition, for recently in his studies he had noticed that the history of French thought was dominated by attempts to resolve extreme antinomies. For Descartes it had been mind and body, for Sartre, Freudianism and Marxism, for Teilhard de Chardin, Christianity and evolution—the list could be extended, and it seemed to him that the particular quality of French philosophy, its heroic tension and its tendency to be a long march of magnificent failures, came from this repeated attempt to yoke together impossible opposites. Perhaps they were all, including his, attacks on the same problem, the struggle to knit together spirit and matter. And perhaps this was why French thought had so often welcomed complex rhetorical apparatuses such as the semantic rectangle, structures which might bind these centrifugal oppositions in nets strong enough to hold them. (*Green*, 246-7)

We ought to begin on this quote with placing these heroic tensions of French philosophy beside Hegel's heroes of history, and recognise the hard work of reconciling as suggested to the reader to do likewise. We should bear in mind Sartre in particular, as this discussion is split, more or less, according to the Marxist and Freudian seeds of overdetermination, in its sections respectively. Tasking himself with this is also toward overcoming his depression, the making of a structural net strong enough to hold all the antinomies and oppositions. We will recognise this as the way in which overdetermination is not a notation of the multitude of experience with its field of influences, but a way to gather them together into a single principle of unity. The announcement of this task also comes in *Green Mars* long after being saved in *Red Mars* by Hiroko's areophany, which he 'seized' with the 'fervour of a drowning man thrown a buoy' (*Green*, 246). And it is to the areophany that we shall see in chapter 4 is the novel's generator of meaning, at the same time that it is the generating force of terraforming.

The net and the buoy, however, are not collapsible. The areophany has a more mystical foundation and takes its influence from Buddhism and

Hildegard of Bingen; in chapter 4 we will demonstrate this contrast, which rather than saving Michel serves to trap him in the swirl of its antinomies. The significance of *déjà vu* as a mental side effect of the longevity treatments speaks to another term used in the novels to describe the recalling of the past:

So the Martian biosphere would not be a case of phylogeny recapitulating ontogeny, a discredited notion in any case, but of history recapitulating evolution. Or rather imitating it, to the extent possible given the Martian environment. Or even directing it. History directing evolution. (*Green*, 186)

It seems, in context, that the conflating of historical and personal memory which Jameson claims the longevity treatment allows, also enables history to recapitulate itself anew in the span of personal biographies. In order to work out any antinomy it becomes necessary to unfold it through the history of French philosophy, and then (as with Sartre) to unpack the antinomy of French and German philosophy. This only accentuates the feeling that whatever meaning we derive from our reading of the books has already been given by Jameson himself, and that we are simply repeating or reiterating what has already been said, written, or implied in Jameson's oeuvre. If that does not satisfy us, we shall find ourselves like X in *Antarctica*, treading down the genealogical line of philosophy all the way back to Heraclitus, where X makes a claim for an anti-philosophy, a theorization clean of the failures and opposites of history which ordinarily need to be worked out. Philosophy, for X, has the inherent problem that it cannot get away from itself. The attempt of 'travelling further backward in the history of Western philosophy' is to arrive at last 'at the world instead!' To get over or do away with the string of failures that comprise this history. X, with his depression, makes him a likely counterpart with Michel, for his own interest in philosophy is therapeutic. The backward path is the re-inverting of the kernel, looking back through the subsequent nesting of seeds: he went 'further back and read Jameson and Williams and then Sartre, and found it had all come from Sartre, and so became a Sartrean; then a Nietzschean...' until he comes upon the 'monstrosities of Kant and Hegel' (*Antarctica*, 64-5).

The 'extending of the list', or merely realising that it *could* be extended, implies not only an infinite regress, but also the 'glimpse of the closure'. It signals the *sublation* from one philosopher to the next, that within Jameson is nested the seed of Williams, Sartre, Nietzsche, Kant, Hegel... Heraclitus. The backward retrieval of the seed of each epoch's hero residing one step back is an attempt to consolidate their failures and extract from their attempts some set of noble heroism. But the backward motion is also a forward motion. Discovering the seed or spiritual kernel of an epoch is also the engine, so argues Hegel, for the heroic march into the future. Michel's future, therefore lies in his past, which he cannot retrieve. The Mars-Provence antinomy is the one which gives way to his recapitulation of French philosophy, his attempt

to work out his depression through its magnificent failures and complex rhetorical apparatuses. We can then interpret his building of the nest of discourse as a hope of flourishing out of it again as the ‘phoenix’ (*Red*, 230), the burning away of the shell, and the blossoming of the seed. This image of Michel as he is saved by Hiroko and the areophany however has little to do with his schemas, and more to do with something else, a different meaning to the spiritual core of the Trilogy. When viewed from this different place, Hiroko carries the literal seeds of terraforming. But from Michel’s perspective, the seed is with Jameson, the Trilogy’s spiritual kernel.

That Michel’s endeavour is a failure, and that all attempts previously have been failures, suggests that in any historical recovery of philosophy there is a tremendous amount of overdetermination. X’s *monocausotaxophilic* pursuit is bettered only by the multitude of paths which Michel may take back through the subsequent nestings of philosophy. Accepting the fact that any basic antinomy is too simple, might not Sartre’s wrestling with Marx and Freud proliferate onto the Greimas square, as a wrestling also with the contraries of each? To begin to grapple with the phenomenal component of overdetermination is to find that philosophy can proliferate beyond itself, and colonise the world – an ironic occurrence given X’s attempt for the opposite, the find a path back to the world through philosophy. X’s disenchantment with philosophy, already seeded in the attempt instead, is this sense of it overflowing itself and giving shape to a vacuous grasp of meaning in one’s experience. In this basic way, Michel tries to cure his depression with that which is in part also providing a structure of a depressive experience. Depression, we shall see, is an overdetermination of phenomenal experience. The phenomenology of depression when viewed through overdetermination articulates the totalising capacity in which meaning is not discovered or made, but lost and engulfed in overabundance. It is projected outward so that the world itself becomes depressing. As a textual equivalent, depression as overdetermination first renders meaning onto a total scale before evacuating it.

Jameson uses Althusser’s term to speak specifically about Sax Russell’s ‘fictive astonishment’ (*Archaeologies*, 400) at the ‘structural unpredictabilities’, based on chaos theory, of his climate forecast program. The supposed ‘indeterminacy’ of chaos which comprises the ‘anti-Marxian arsenal’⁵⁵ is misunderstood, he claims, and ought to be thought of as a case of overdetermination. The value is two-fold: in the first place it serves to describe the unpredictability of chaos, and in the second that this description is socio-political: ‘The Althusserian concept was indeed specifically designed to name what is finally not ultimately thinkable about historical conjunctures of this kind... all of the scientific problems described in the novel, without

⁵⁵ See for example Karl Popper’s *Poverty of Historicism* (Reading: ARK Paperback, 1957).

exception, offer an allegory, by way of the form of overdetermination, of social, political, and historical problems also faced by the inhabitants of Mars' (*Archaeologies*, 395-6). The 'resistance' of a reality' (*Archaeologies*, 400) which Sax responds to with vexation, Ann with pleasure, and Michel with depression, structures the particular ontology to which Jameson wishes to direct our attention: the ideology of scientific practice.

An example from Marx he uses to explicate the ideological side of scientific ontology – at the level of experience – is from Marx's *German Ideology*. It is an episode best imagined in supplement to Michel as he stands on the pyramid, looking out over Underhill:

So much of this activity, this unceasing sensuous labour and creation, this production, the foundation of the whole sensuous world as it now exists that, were it interrupted for only a year, Feuerbach would not only find an enormous change in the natural world, but would very soon find that the whole world of men and his own perceptive faculty, nay his own existence, were missing. (*Archaeologies*, 400)⁵⁶

Such a view is figured earlier in *The German Ideology* through the inversion of the retina of the eye:

If in all ideology men and their circumstances appear upside-down as in a *camera obscura*, this phenomenon arises just as much from their historical life-process as the inversion of objects on the retina does from their physical life-process.⁵⁷

Marx's invitation to Feuerbach is most certainly to look out over the Campagna through the camera obscura and re-invert the landscape's historical distortions (what is at first only 'pasture lands and swamps', then to be taken over with 'vineyards and villas of Roman capitalists'). In the lines before those Jameson chose to quote, Marx critiques is for Feuerbach the 'pure' scientific eye that penetrates the field distortion and 'mention secrets which are disclosed only to the eye of the physicist and chemist.' Marx's understanding of this through the viewfinder of critique locates the physicist (as Jameson locates the sub-atomic physicist Sax) within his historical context: 'but where would natural science be without industry and commerce?'⁵⁸ Sax's astonishment occurs when the scientific eye comes up against the 'resistance' of reality.

Poking reality, whether with eye or instrument, and feeling or seeing history come up against you is illustrated early in *Red Mars*, when Frank Chalmers pokes his fingers into the membrane walls of the new city of Nicosia: 'Frank reached out and pushed at the inner membrane... He poked

⁵⁶ Marx and Engels, *The German Ideology Part One*, ed. C. J. Arthur (New York: International Publishers, 1970), 63.

⁵⁷ *Ibid*, 47.

⁵⁸ *Ibid*, 67.

the tent wall so hard that he pushed out the outermost membrane, which meant that some of his anger would be captured and stored as electricity in the town's grid.' What is revealing is not the membrane itself but its ability to harvest from an energy source of resistance. Frank's anger and frustration with John Boone and his recent speech are reduced into a physical reaction. Once we see that the membrane converts anger into energy, we see the effects of the distortion field operating at the very moment of its mode of production visibly displayed. Recognising this historical element renders the transforming of human biological energy into the town's grid as the liquefying of labour. While Jameson does not pick up on this particular image, we can convert it into his understanding that such a site of raw passion and labour is the expression not of the finished city but the 'quarry and foundation pit', the negative space of the inverted city.⁵⁹ This void of the future features at the start of John Boone's chapter in *Red Mars*, 'Falling into History', in which the premonition of his eventual assassination in Nicosia appears in the form of an object thrown down a huge quarry shaft (RM, 212-3). That this first attempt on his life opens the chapter titled 'Falling into History' announces the turbulence of the historical moment, and the force of pressing into it.

The significance of this moment in Frank's narrative is in illustrating how the web or membrane of discourse absorbs and converts all things into it, in the fashion of Hegel's absolute; all antithetical challenges to its structural integrity only feed it and further generate the *aufheben*, or Idea at its core. All antinomies collapse into its kaleidoscopic network. Such a membrane is the very guardrail itself, the protective shell. Being imbricated within the alchemist's pyramids only permits Michel to poke its membrane with more

⁵⁹ See for example Christopher Priest's science fiction novel *The Inverted World*: 'The hypothesis by which the city and its people existed was that the world on which they lived was somehow *inverted*. Not only the world, but all the physical objects in the universe in which that world was supposed to exist.' To ask where this hypothesis is taking place is to begin to understand that any claim to its truth occurs within the city itself. To those living on the movable city of *The Inverted World*, their understanding of the planet outside is 'distorted by the transliteration generator which... continued to produce the field about' them, keeping them from noticing the real state of environmental devastation. Merely describing this cage, by token of knowing what to describe, is to invert/distort it back again. This point from within the city which allows one to apprehend its full shell-like structure is for Marx the kernel inside the shell, and for Hegel the concealed fount. Yet, *The Inverted World* also withholds the truth of the city, and so keeps its dialectic turning without resolution. The transliteration generator, which bends the horizon, is an example of the capitalist mode of production and field distortion of ideology in all its apocalyptic trajectory. On the withholding of the truth: 'Elizabeth repeated what she had said before. She pleaded with me to see reason. She said again and again that it was only my perception of the world that was distorted.' Also see Elena Gomel's 'Mystery, Apocalypse, and Utopia: The Case of the Ontological Detective Story', *Science Fiction Studies*, vol. 22, no. 3 (November 1995), 343-56, 346-8 for discussion of *The Inverted World*. Priest, *The Inverted World*, Ebook (New York: Harper & Row Publishers, 1974).

analysis, using its very structure to do so, and realise the nesting of schema within schema and the point at which comprehension is lost to the overdetermining of method itself. As with Ann on the beach, the method is unstable, this time equivocating through inversion, involution, and iteration. Whether some deeper understanding of Marx, Hegel, or Althusser would yield any beneficial points to bring to this reading would only perpetuate Michel's intellectual striving after some larger more comprehensive mapping by which to imbricate and release all his failures. More analysis would only buttress this point. But his madness lies in the pursuit itself and as equally in the method by which he attempts to do so. In this sense he is both the genius and the madman of the Trilogy.

Headfirst into the black sun: Depression as Overdetermination

Michel was a doctor in a hospice in a prison in hell; and the doctor was sick.

– Kim Stanley Robinson

...*melancholy* as the fundamental ground-tone of human existence – necessarily turns the affect into a new thing in its own right.

– Fredric Jameson

‘The strongest guard is placed at the gateway to nothing,’ he said. ‘Maybe because the condition of emptiness is too shameful to be divulged.’

– F. Scott Fitzgerald¹

PSYCHOLOGISTS IN FICTION SOMETIMES serve the useful position in a narrative as its textual diagnostician, implying to the reader a conduct of interpretation into the text. This is both the discourse I am employing, and the underlying problem of the Trilogy I am attempting to make clear. By focusing on Michel in particular as the subject of his own analysis, this issue arises partly out of the fact he is both therapist and guard, both analyst and patient. And equally so out of the critical method this implies along with it: discoursing as a defence mechanism, a guardrail at the same time that it is an unveiling. In Fitzgerald’s *Tender is the Night*, psychiatrist Dick Diver (whose name already indices a Freudian undertone) ‘winces’ at the incredibly ‘apparent’² subtext of Rosemary’s film Daddy’s Girl, yet it may not be enough to ward off its suggestion as a meta-textual moment. While psychology is attacked by the crew he is supposed to watch, and the stare of the psychologist is avoided as much as possible,³ the overriding sense that Michel holds the key to the narrative is only consolidated throughout the

¹ Robinson, *Red Mars* (New York: Bantam Spectra Books, 1993), 215; Jameson, *The Antinomies of Realism* (London: Verso, 2013), 35; Fitzgerald, *Tender is the Night* (London: Penguin Books, 2000 [1934]), 81.

² Fitzgerald, *Tender is the Night*, 80.

³ See for example the discussion among the crew on the Ares is ‘The Voyage Out’ in *Red Mars*, 62-64; specifically, the crew ‘lying’ on the ‘Revised Minnesota Multiphasic Personality Inventory’ (62); and: ‘Clearly a lot of them considered psychology a pseudoscience, and many had considerable resentment for the hoops they had been forced to jump through to set aboard’ (63).

books, as well as by critics such as William White. Michel's influence on Sax after suffering a stroke will be marked out in the next chapter. And as an interpretant he is exceeded, so I will argue in chapter 4, only by Hiroko and the viridical force of biological life. This points us to the moments when Michel's depression is least violent, and the path out of it is given to him. The significance, in contrast to the path of viriditas, is the role his melancholy plays as an overdetermination of meaning, which, on the phenomenal level, is an experience of affect which spills over the boundaries of self, spreads out into and obscures the world. Neuroscientist Robert Sapolsky recognises 'much of what constitutes a depression is centered around responding to one awful thing and overgeneralizing from it – cognitively distorting how the world works.'⁴ For the reader of the Trilogy, this multiplication reaches two modes, one suggested by Hiroko in viriditas as a continual source of meaning, a wellspring of protension in which meaning is infinitely generated, if only ever glimpsed partially. And another by Michel in his Jamesonian discourse. When depression makes up a significant section of Michel's narrative, this discourse works as its correlative entropy, when meaning drains continually into an ocean of inaccessible totality; the cost of production. In this sense, depression is an experience of overdetermination.

Such a mode of production suggests that the so-called natural forms on Mars point to the 'I behind the not-I' (*Archaeologies*, 402), which cast a shadow from an unseen source: the author/s of the terraformed planet. The fact Jameson chose to express this idea through romantic irony give these natural objects a 'heightened or sublime sense' (*ibid*). It is the sense by which Sartre's tree-root forms a part of Jameson's argument for the constructedness of the novels' 'ontological realism' (*Archaeology*, 399), that the trees of Mars stand both as the 'absolute not-I' of experience, and the 'I' which hides behind it.⁵ As Sartre wrote in *Nausea*, the tree is not only that which 'pressed itself against my eyes', but was also the 'invasion' and 'overflowing' of existence, till experience becomes the tree itself: 'I *was* the root of the chestnut tree.'⁶ We shall see this later when back on Earth Michel finds himself satisfyingly 'rooted into the ground' (*Blue*, 232) of his home in Provence among a grove of olive trees. The core interest of this section will be in addressing Michel's return to his home in Provence, and the olive trees which catch the sunlight and flash in alternating colours. The unseen source of light may very well be

⁴ Sapolsky, *Why Zebras Don't Get Ulcers*, Third Edition (New York: Henry Holt and Company, 2004 [1994]), 302.

⁵ Another set of values suggest themselves to put into Desargues' Theorem, the smaller coordinates ABC standing in front of and hiding the larger set of points A'B'C', denoting ABC as the 'not-I' and A'B'C' the 'I', respectively. Even so, the values are contingent upon the perspective of O, which here may stand as the unseen light source which causes the 'not-I' to cast a shadow over the 'I'.

⁶ Sartre, *Nausea: The Wall and Other Stories, Two Volumes in One*, tr. Lloyd Alexander (New York: MJF Books, 1998), 128.

the black sun, marking the sublime affect of depression as lost authorship in the form of an overdetermined ontology, a 'ghostly presence' in the trench of closure between 'realism and something else, which I will call ontology' (*Archaeologies*, 402).

Depression is therefore the keystone to Jameson's reading of the 'ontological realism' of the novels; though he does not offer it up directly. It can only be found piece by piece across his work, in which this run of qualities – loss, overdetermination, sublimity, and the ghost – announce a particular phenomenology of the realist novel. The 'ground-tone' out of which such trees as those in Sartre and Robinson grow is melancholy, at least as suggested in a general sense by Jameson in *The Antinomies of Realism*. Like the episode to be here explored, the only way to come to terms with the melancholy ground-tone is to commit it to a dialectical 'operation' and contrast it with the 'celebration of the body' (*Antinomies*, 35). The close of 'Homesick', Michel's chapter in *Red Mars*, is such a celebration. But as displayed in the objects mediating his experience much later, back in Provence, in *Blue Mars*, the body is entwined so deeply with his desire for homeliness that it alternates from melancholy to euphoria to make it the object of his homelessness. When he returns to the same grove later in the episode, the olive trees 'were no help', 'they gave no euphoric connection with lost time' (*Blue*, 236).

Defining depression by opposition, as Jameson urges we do in *The Antinomies of Realism*, would mean we cannot here get a full sense of it until in chapter 4 viriditas and the areophany provides its alternative, the positive euphoria. Yet this would also perform the very multiplying by which I claim meaning for Michel is lost and overdetermined. The symbolic tree of viriditas is not so simply grown beside another symbol of depression, for which there is none in the novels. As it is the very act of failing to symbolize, or signify, which forms the basic language of depression. If any contrast offers up the antinomies of depression and the euphoria of viriditas, it is that both occur out of overflowing experience, in which the latter forms itself as a continually meaningful flourishing, and the former a loss of meaning, an overdetermining of experience itself. Michel therefore uses discourse, and the schemes of signification, to fortify himself from this loss, rather than grow meaning out of the abundance of phenomena.

The basic means by which he discourses his illness, even more than philosophizes it, is with his psychological training. With the headlong of the depth analysis, overdetermination is distinctly Freudian, as revealed in his *Interpretation of Dreams*.⁷ The composite dream-content of Michel's dream, which opens 'Homesick' (*Red Mars*), is: his 'swimming in the surf off the point at Villefrance-sur-Mer', the 'black pelicans', the 'blinding salt light', and the 'breaking wave' that 'looked like diamonds smashed to cream' (*Red*, 207). We

⁷ Freud, *The Interpretation of Dreams*, tr. James Strachey, ed. Angela Richards (London: Pelican Freud Library, 1975), 415-9.

ought to remember how *A Short, Sharp Shock* opened with a similar image of diving into and emerging out of a body of water. In *Interpretation of Dreams*, precedent is found in one case of a woman who dreamed she was at a ‘summer holiday resort, by the Lake of —, she dived into the dark water just where the pale moon was mirrored in it.’⁸ Such imagery placed at the start of *A Short, Sharp Shock* and of Michel’s narrative confirms as Freud would surmise that ‘dreams like this one are birth dreams. Their interpretation is reached by reversing the event reported in the manifest dream; thus, instead of ‘diving into the water’ we have ‘coming out of the water’, i.e. being born.’⁹ The black pelicans first of all transform later into the ‘sleek black bodies’ of dolphins, a loaded sexual image of being ‘rounded like the women’s’ bodies (*Red*, 209), and by the end of the chapter as the phoenix, signalling Michel’s rebirth as a Martian into Hiroko’s areophany, the orgiastic sexuality on which this image is not lost. In alchemy, also, the pelican and the phoenix ‘inflict injury’¹⁰ upon themselves to feed their young, signalling the sacrifice needed for rebirth. But this dream which opens Michel’s narrative is ‘meagre and laconic in comparison with the range and wealth of the dream-thought’, the ‘latent content’ (or ‘dream-thoughts’)¹¹ of his dreams, which is in this case his homesickness and his attachment to his youth in Provence. The blinding light, however, is somehow to not see the pelican, or the Mediterranean. Indeed, the salt and diamond water is meant as a visual medium of refraction much in the form of the water in *A Short, Sharp Shock*. Later, when his phoenix rebirth concludes ‘Homesick’, it is vision which is reinstalled through the diamond of the rectangles (condensed earlier as the pyramidal models) which fold into the ‘kaleidoscope’ of ‘a single, beautiful rose’ (*Red*, 229). The importance of this moment’s sexual content is to return his libido.

It is a confusion of libidinal force that depression claims the Freudian melancholic: ‘the free libido’ (freed from its lost object) ‘withdraw[s] into the ego’ where it serves to ‘establish an *identification* of the ego with the abandoned object.’ Melancholy therefore takes on the form, as Freud famously claimed, of anger ‘turned around upon the subject’s own self’,¹² or, under the peculiar light of ontological realism, the inward turn of sublimity. For Freud, the ‘oceanic experience’ of such a sublime ‘oneness with the universe’ is ‘overlaid’, and ‘for the present... wrapped in obscurity’¹³; a suggestion for

⁸ *Ibid*, 525.

⁹ *Ibid*.

¹⁰ Mark Haeffner, *Dictionary of Alchemy: From Maria Prophestessa to Isaac Newton* (London: Aeon Books, 2004, 1991), 70.

¹¹ Freud, *Interpretation*, 381, 383.

¹² Freud, ‘Mourning and Melancholia’, *The Complete Psychological Works of Sigmund Freud Volume XIV, On the History of the Psycho-Analytic Movement, Papers on Metapsychology and Other Works*, tr. James Strachey (London: Hogarth Press, 1957), 251.

¹³ Freud, *Civilization and its Discontents*, tr. and ed. James Strachey (New York: W. W. Norton & Company, 1961), 19-20.

how to think about Michel's various images of layers: the tree and its bark, the lizard and its diamonds skin, and the olive and its own skin. In contrast to but linked with melancholy, the oceanic feeling is 'something like the restoration of limitless narcissism'.¹⁴ Michel's diagnosis of himself as homesick understands these images from Provence as 'overwhelm[ing]' his memory to such a degree that he 'could not remember why he had fought so passionately to be chosen' to go to Mars (*Red*, 222). It is also at this moment in 'Civilization and its Discontents' when Freud considers the reputed retrieval of the oceanic experience by mysticism that he also writes against such a method:

But I am moved to exclaim in the words of Schiller's diver:

'... *Es freue sich,*
Wer de atmet im rosigten Licht.'
(Let him rejoice who breathes up here in the roseate light!')¹⁵

Light appears into and forms the visual field of comprehension. And the ocean or body of water the void which both threatens meaning and contains its lost objects – in Schiller's poem '...no wave ever brought the lost youth to the shore'.¹⁶ As seen with Ann, the appearance of water betokens the opportunity to dive and a structuralism of surface and depth. For Michel, the significant body of water is the Mediterranean Sea which sits off the coast of Provence, and is the principle scene of his dreams and memories. It is important to bear in mind the light-filled world of comprehension as cast against this wider field or ocean of incomprehension, represented in the Sea, and for Ann the glossolalic lake and flood. Understanding this as an inward sublimity allows the approach of romantic irony in the form of psychology to adopt itself as a subject; or put more simply, it allows Michel to interpret his own depression as an affect which is in response to the overdetermining of form. His homesickness gives romantic irony its displacement, just as Anne K. Mellor visualised irony 'hovering or unresolved... between a world of merely man-made being and a world of ontological becoming'.¹⁷

By drawing together Freud's overdetermination, as linked through depression and the oceanic experience, with romantic irony, we get a clear model with which to see how Michel's self-analysis addresses the 'ambiguous space in which the Mars Trilogy is uniquely positioned, wedged in between the moments of otherness and production' (*Archaeologies*, 400), and yet also to

¹⁴ *Ibid*, 19.

¹⁵ *Ibid*, 20.

¹⁶ Johann, Christoph Friedrich von Schiller, 'The Diver', *The Poems and Ballads of Schiller*, tr. Sir Edward Bulwer Lytton (New York: Harper & Brothers, 1844), 131.

¹⁷ Mellor, *English Romantic Irony* (London, toExcel, 1980), 186. Cf. Paul de Man, 'The Concept of Irony', *Aesthetic Ideology*, ed. Andrzej Warminski (Minneapolis: University of Minnesota Press, 1996), 163-84.

step beyond Jameson toward seeing this as a paralytic space in which Michel becomes stuck. The trench is already loaded into Jameson's work on utopias, yet it also appears, sometimes in unclear ways, when claiming, for instance, that romantic irony is the 'ghostly presence' in the 'fault line between realism' and ontology (*Archaeologies*, 402). Or, in narratological terms, that realism sits in the tension between the *récit* and *roman* forms (*Antinomies*, 24-6). These simply indicate the closure in which the authorship of the Trilogy is both lost and continually resurrected into its ghostly presence, the haunting of its production. It is already clear that Jameson himself sits in the closure, and his work haunts the text and its criticism, just as Althusser felt Hegel's ghost haunted Marx. But to inscribe romantic irony into the novels in the character of Michel takes us to the role depression plays as a mourning for the loss of world, and a confusion over one's imbrication in this loss. As such, the *récit* form speaks most strongly as this auto-inscription, that is the recitation or discourse of the narrative, the way in which 'the Trilogy... inscribe[s]... its structural condition of possibility within the narrative itself' (*Archaeologies*, 403).

Depression, however, suggests the *récit* does not enable so much as disable a possible productivity. For Michel, the irrevocability of his home in Provence drives his mourning. The tension, therefore hardly resolves so much as becomes overdetermined, allowing the affect to break loose from the constructed confines of language and signification, and bleed into the world itself, which has become lost, and *becomes* this loss. Then depression is totalised. The formula for depression runs according to the discovery of the I behind the not-I, which then (especially as Jameson is one such iteration of this I) cannot help but think that this I is at fault for the loss of meaning. By turning sublimity inward, the ontological element is recognisable in the form of an aggression against the otherness of the world – an anthropocentrism. This was the reason for Ann's resistance in favour of otherness. Yet, Jameson issues the call for Freud in relation to Ann's depression rather than Michel's, with her 'persistence of a grief that cannot be resolved that makes her into more than an allegory of melancholy in its morbid Freudian sense' (*Archaeologies*, 405). Her grief, as stated, is for a lost world, which cannot again be found. When it comes to the forms Michel's affect take, the irrevocable past is among its most resistant objects, at the same time that it originates inside it. 'Melancholia', he claims, is 'a failure of memory' (*Red*, 222). With him, therefore, the story forms of the *récit* and the *roman* take the positions of the sealed-off past (in *récit* form; *Antinomies*, 24), and the psychological novel, his narrative being an encounter of each.

This dense and knotty exposition must be put in order to preface this section with a series of points: firstly, that Michel's return to Provence is a Freudian retrieval of his youth; that he tries to cure his depression by discoursing it, by fitting it into the *récit* form of a childhood narrative, which is sealed off from him, ultimately lost to time; and that this episode in *Blue*

Mars betokens a disjoining of temporalities unique to depression. While depression, or melancholia, is a failure of memory, it is also a failure of narrative form to search for and retrieve lost time. As the temporal layers of story and discourse vary in specific ways across Michel's narrative, the victim of his disjointed experience of time is also the future. In Wolfgang Iser's language, our ability to form meaning in the present of reading depends on the Janus face of retention and protension. Though depression in Michel's case is fixed on his previous life in Provence, it effectively closes his protensive faculty for gathering meaning ahead of oneself. This is marked by his return to the olive grove where he stood as a boy and saw the red dot of Mars as the exact protensive point in the sky. The loss of the past turns its violence onto the future also, and becomes a loss of desire. To wander in a 'fog of desire' (*Red*, 223) is more exactly to wander in search of desire itself, to retrieve the feeling for the future as such. In this way is Michel's narrative emblematic of the general search for utopian desire, and of the function of the utopian narrative to produce the requirement (*Archaeologies*, 409). The problem is that as a desire for desire, depression ultimately cannot move beyond its own project, its own discourse. As noted in the previous section, Derrida claimed this discourse 'was the reassurance given against the anguish of being mad at the point of greatest proximity to madness' (*Writing*, 59). Depression is this functioning of discourse at its most overdetermined point, the point at which the guardrail of figurative language assumes its most reassuring form to protect and cure, and its most poisonous impact on experience.

The second main point that needed prefacing was the ontology of this affect, that melancholy is the ground-tone, as Jameson suggested, for experience. We can now recognise this as a *hauntology*¹⁸ (ontological haunting) that founds depression as the fundamental affect of overdetermination. Any understanding of the ontological realism of the novels depends in the end upon Jameson, whether read previous to reading the Trilogy, or felt as an absent-presence. He is the next figure along after Althusser and Sartre in the Freud-Marx combination which marks him out as unique to the work of mourning in *hauntology*. Derrida argued in *Spectres of Marx* (from which *hauntology* derives) that part of Marx's persistence was the gathering into the

¹⁸ Simon Reynolds writes that Derrida's *hauntology* 'use[s] the philosophically problematic figure of the ghost... to discuss the uncanny persistence of Marx's ideas after the death of communism and 'the end of history'; in *Retromania: Pop Culture's Addiction to Its Own Past* (New York: Faber & Faber, 2011), 328-9. Also see: Neal DeRoo, 'From Deferring to Waiting (for the Messiah): Derrida's Account of Futurity', in *Futurity in Phenomenology: Promise and Method in Husserl, Levinas, and Derrida* (Iowa: Fordham University Press, 2013), 115-28; Christopher Prendergast, 'Derrida's Hamlet', *SubStance*, vol. 34, no. 1, issue 106 (2005), 44-7. For a feminist account see Nancy J. Holland, 'The Death of the Other/Father: A Feminist Reading of Derrida's Hauntology', *Hypatia*, vol. 16, no. 1 (winter, 2001), 64-71. For a general outline see Mark Fisher, 'What is Hauntology?', *Film Quarterly*, vol. 66, no. 1 (fall, 2012), 16-24.

narcissistic injury each of those which Freud claimed preceded psychoanalysis, including itself: ‘for we know that the *blow* struck enigmatically in the name of Marx also accumulates and gathers together the other three’ – *psychological* trauma (Freud); *biological* trauma (Darwin); *cosmological* trauma (Copernicus).¹⁹ This is itself an overdetermining of trauma into the gathering point of Marx. ‘Derrida’s message is very serious’, Ian Hacking tells us, ‘the claim that *hauntology* is more embracing than ontology.’²⁰ By figuring the ground-tone of melancholy as haunted by these many ghosts, we are able to see in Michel’s trip back to earth another attempt at a defensive strategy failing in the interstices of these many forms which bear the ghosts of his previous life. He is as caught between the *récit* and roman temporalities as he is between the olive tree near his house as a symbol of his previous life, and an allegory of this very figuration itself. The irony which should, according to de Man, alert him to the error of mind which is causing his depression, and so free him from it, in fact only distresses him further. The wreck of Provence from rising sea levels seals away his previous irretrievable life, subjects him to the passing of time, and drives him to imbricate himself in this loss by turning it and every other feature of Provence into a figuration of his predicament. His questioning of the success of memory retrieval is turned through his metaphorical suggestions of the olive tree, and so arrives at not merely the failure of memory but of narrative caught between competing forms.

To state these two points again: Michel’s status as a psychologist, and his attempts at self-therapy – ‘certainly it had been a mistake to have only one psychiatrist along (*Red*, 215) –, call into form the *récit* or discourse of the narrative, what Jameson named the auto-referential inscription, and psychology as the interpretive method which directs our reading toward this. It secondly allows for his depression to take the form of an ironic self-inscribed sickness over the loss of meaning, meaning which is lost to the abundance of overdetermination. It is the way in which depression multiplies into the world itself, and drains it of meaning. Images of his home in France ‘had gone away, overwhelmed perhaps by the poignant, aching, fragmented images of the life he had lived in the interstices of his desire to go to Mars’ (*Red*, 222). This thought he has just prior climbing the great salt pyramids around Underhill,

¹⁹ Derrida writes: ‘Mourning always follows trauma... There is the temptation to add here the aporetic postscript to Freud’s remark that linked in a same comparative history three of the traumas inflicted on human narcissism when it is thus de-centered... Our aporia would here stem from the fact that there is no longer any name or teleology for determining the Marxist *coup* and its subject... The Marxist blow is as much the projected unity of a thought and of a labour movement, sometimes in a messianic or eschatological form, as it is the history of the totalitarian world... For we know that the *blow* struck enigmatically in the name of Marx also accumulates and gathers together the other three.’ *Spectres*, 121-2.

²⁰ Hacking, *Why is There Philosophy of Mathematics At All?* (Cambridge, Cambridge University Press, 2014), 191.

from the summit of which that the entirely baffling explanation for why beings (from humans to coral polyps) build things occurs to him. It is still with the memory of his eight year old self among the olive groves of Provence looking up at the point of Mars that the extended phenotypes of the cathedral, the reefs, and the pyramids, invite the retrieval of this memory. This distinctly Proustian theme of ‘connection with lost time’, grafted onto the Freudian pursuit to dive, renders the experience of overdetermination through Michel’s depression and his psychologising. This second section focuses on Michel’s own attempt at the retrieval of his youth in Provence, and the network of forms which there display the disjointed sense of time unique to depression. The chromaticism of the leaves of the olive tree, and the tree itself, is best suggested, as we will see, in the missing picture by Van Gogh from the wall of Michel’s old house, which might have been *Olive Trees with Yellow Sun*, painted close by. The weight of the child inside him, and the heaviness of depression, the bitterness of the olives he tastes, the blowing mistral, his house now in ruins, and the sounds of the crows, all point us in the direction of a phenomenology of his psychological search for lost time.

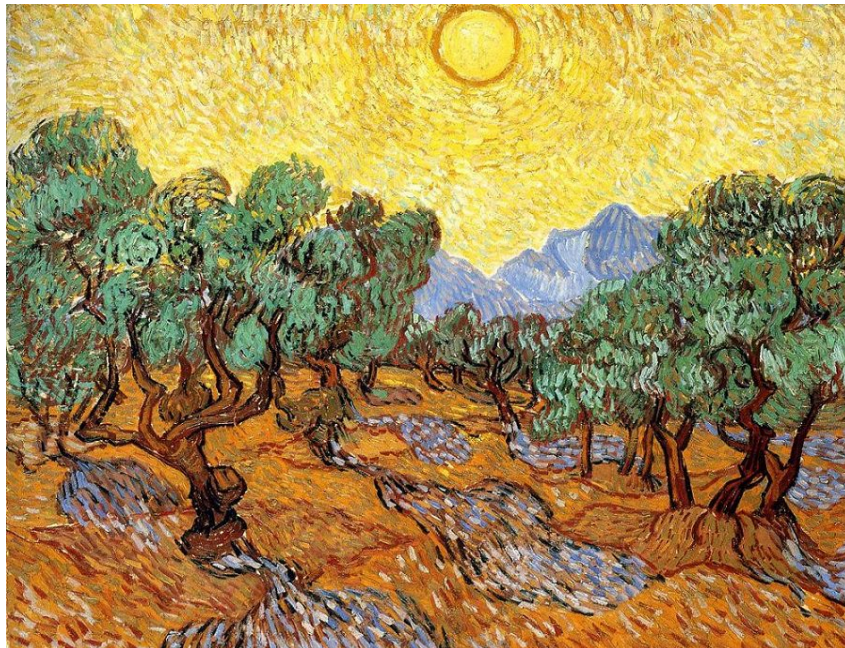


Figure 2.3 Vincent Van Gogh, *Olive Trees with Yellow Sun*, 1887. Minneapolis, Institute of Arts.

Why *Olive Trees*? Or rather, why focus at all on this missing picture from Michel's old house as the window into his despair? In the first case, we might guess which print it was firstly by the other features of Michel's visit to Provence in *Blue Mars*: the olive trees, his painter's eye for the colours of the leaves, and for the 'brass sky' (*Blue*, 232). Or by supposing he hung the print in the first place because of the significance of Provence and the Mediterranean to Van Gogh, where *Olive Trees with Yellow Sun* was painted. Of course, the selection varies across too many paintings to be sure, but in the most important sense to be discussed, *Olive Trees* is a good enough example for showing just how painterly Michel's experience of his return to Provence is, and even so generally in Van Gogh's genre of olive trees. The Van Gogh-like features of how his experience is given to us, implying it is also how he himself is seeing things, allows us to bring together two of Jameson's discussions of realist form, and its complications: the tree as an allegory for the tension between realism and ontology, and chromaticism as the description of the 'ground-tone' of depression which enables light and colour to emerge in the shift from realism to Modernism, the same shift which Van Gogh marks between the naturalism of the impressionists and the abstractions of Modern painting.

What makes these specific figures of rhetoric important for shaping Michel's interpreting of the olive groves near the ruins of his house is how they are handled with the hope of refuge or a symbolism retaining his previous life. Noting upon arrival in France how much it has changed (*Blue*, 223) means needing to find something eternal throughout the course of history to settle his homesickness informs his experience of his old property through a defensive rhetoric. By trying to capture the tree and its olives as a symbolism, he is also confronting their allegory of reading, a point of romantic irony in which his own imbrication in the meaning of the olives ceases to operate as a guaranteed recall of his previous life, and in fact becomes seen as the mark of its obliteration. When the olive tree takes on this form, it takes on the form of Van Gogh's treatment of the olive groves of Provence in which the 'gnarled olive' trunks, a symbol of his anguish, stand out and 'impart their rhythms to land and sky.'²¹ The scene, therefore, is all tree and no Provence. When this anthropic totality seeps from the tree into the land and sky, which become extensions of the trunk's anguish, they no longer allow the same entry into symbolic life as they did previously. Now, they 'waved their arms, gray green, green gray. Good-bye, good-bye. They were no help this time, they gave him no euphoric connection with lost time' (*Blue*, 236). The pathetic fallacies are many in this scene, as we will see, but this one in particular shuts him out from its remembered life while it also performs in rhetorical diction his Greimas schema through a chiasmus,

²¹ Wojtech Jirat-Wasiutyński, 'Vincent Van Gogh's Paintings of Olive Trees and Cypresses from St.-Rémy,' *The Art Bulletin* 75, no.4 (December 1993), 651.

visibly arranging the flashing leaves ('green then gray, gray then green') and the 'rectangles' (*Blue*, 229-30) of bark into an abstracted model. His theoretical way of reading 'imparts its rhythms' to the scene in the same way the tree imparts into the soil and sky of Van Gogh the brushstrokes and twisting torsos of the trunks. Michel wonders if the Mediterranean tree, 'the tree of the Greeks', is the 'proper proportion'. 'Perhaps home was the place of human scale' (*Blue*, 231).

The olive grove is clearly a place in which to get stuck. Jameson bracketed the ontological confusion of the archetypal tree-root with Sartre's chestnut tree in *Nausea* as the supposed grounding of an Absolute Not-I, the perceiving of which would guarantee a realism. But Sartre's awareness of the tangling of consciousness into the facticity of the tree makes it lose its natural realism and forces it to be replaced, so Jameson argues, with an ontological realism which is attuned to the problems the natural world presents for the novelist. In carrying this tension of phenomenal attributions within the Trilogy (whether the tree is rooted literally in a pervasive reality, or if it is tangled up in one's mental and fictional experience of it), Jameson finds it useful for positioning the realism of the novels inside the tangle of a more complicated ontology of constructedness. After taking the 'longer historical view' of Marxism, the tree root must 'wane' and 'fade' (*Archaeologies*, 399) into human constructedness, losing its status as a natural object of a Not-I world, and visible now only on the horizon of humanization. The terraforming of a planet is this process of un-naturalizing and authorizing, as referenced by Jameson in the appearance of Harry Whitebrook, one of the planet's eco-architect-I's behind the Not-I.

Michel's Mediterranean tree comes into view of Jameson's reading where it 'separates itself out', as he says, 'not as a messenger of some unknowable Being, but... as a kind of archaic symbol' (*Archaeologies*, 399). At first, this easily enough informs Michel's grove as a captured memory of his childhood, now as distant and archaic as the Greeks he claims held the world inside human proportion. But it is more troublesome when we regard the symbol from Paul de Man's perspective of nature writing, in which this archaic image or object does not denote distance and separation but identification. De Man argues that one's inner mental and emotional experience is assumed to be analogous with the natural world.²² He quotes from one early Romantic critic, Daniel Mornet, on how the two domains become so continuous or 'intermingled' 'that nothing distinguishes the images perceived by the senses from the chimera of the imagination.'²³ Preference for symbol above allegory (which by contrast 'designates primarily a distance in relation to its own origin')²⁴ is

²² Paul de Man, 'The Rhetoric of Temporality,' *Blindness and Insight: Essays in the Rhetoric of Contemporary Criticism*, Second Edition (Minneapolis: University of Minnesota Press, 1983), 187-97.

²³ De Man, 'Rhetoric,' 199; Daniel Mornet, *Le Sentiment de la Nature en France au XVIIIe siècle de Jean-Jacques Rousseau à Bernardino de Saint-Pierre* (Paris, 1932), 187.

²⁴ De Man, 'Rhetoric,' 207.

a 'defensive strategy that tries to hide from this negative self-knowledge'²⁵ of 'illusory identification'²⁶ with the non-self of the natural world. Michel's olive tree has no guarantee of bridging the temporal distance, yet the archaic symbolism of the Mediterranean olive tree is formed on the identifying self, which provides a 'gauge symmetry' (*Blue*, 231) imparting itself onto the tree and surrounding soil and sky. It is no surprise Jameson follows this quotation with Wallace Stevens's 'Anecdote of a Jar', in which is written that the jar, which 'made the wilderness / Surround that hill', 'took dominion everywhere'. The realm of the Not-I is only 'brought into being,' so Jameson claims, '...by the emergence of the fact of the human' (*Archaeologies*, 400). The issue here is how neatly it configures the symbolism of Michel's olive grove as an emblem of his childhood, a configuring which decides how successful recall may be.

Perhaps another poetic example will satisfy the romantic symbolism of Michel's configuring of the scene and the central rootedness of his being there. No example is more apt than Wordsworth's return to Tintern Abbey in 1798 to draw out Michel's consecutive visitations with greater clarity of this issue of symbolic neatness and continuity; first as a boy among the groves, later as an adult living in the house (which is now a ruin, like Tintern), and finally returning from Mars. The lines of note from Wordsworth's poem concern the 'spirit' 'that impels / All thinking things', which allows him to 'read' the 'language of my former heart' (his former visit to Tintern), and find in 'the mountain, and the deep and gloomy wood' 'an appetite... That had no need of a remoter charm', 'Their colours and their forms' make for the natural scene 'to be all in all.' Even despite the complication of the remoter charm later found in Dorothy's 'wild eyes' from which he can 'borrow' their 'shooting lights' to relive the memory, the poem nonetheless 'assert[s]... the ability of memory to overcome distinctions of time and space.'²⁷ The troublesome symbolism is the making of a Tintern space within Dorothy's eyes (the mode of transcendence) and inner domain, which allows a 'spirit' to be drawn from it and back across to the Tintern of his memory. For the eyes to act as this aperture of memory suggests Wordsworth may be privier to the perceptual issues of seeing and not-seeing undergirding the symbol, overlooked in Michel's case, for whom the agent of recall is the taste of the bitter olive. We will return to the olive. But first a note on the colours and forms of the tree itself.

The 'flashing' colours Michel uses to give figurative and chiasmic shape to the leaves of the trees imply some dialectical notion, a colour symbolism

²⁵ *Ibid*, 208.

²⁶ *Ibid*, 207.

²⁷ Wordsworth, *Selected Poems* (London: Penguin Books, 2004), 61-66. Also see: <https://www.bl.uk/romantics-and-victorians/articles/an-introduction-to-tintern-abbey>

which is hardly clear as to what gray and green denote. The 'rough broken rectangles' of the bark, and the 'fissures between the rectangles' (*Blue*, 230) suggest that this otherwise unclear notation of gray-green, green-gray is a moment of allegory rather than symbolism, and more specifically an allegory of reading, of the kind de Man put forward as the act of language rhetorically shaping its own indecision of meaning. The flashing of the leaves does not merely symbolise the aporia of subject positions and their irresolution to claim the they are all green, or all gray, but also that as a chiasmus this very way of reading is itself installed into their colouring. A careful fact must be noted that the rectangular and chiasmic shapes of the tree are not yet fully abstracted to the same transparent degree they are in *Red Mars*, where the Greimas schema is replicated for the reader's ease of access. But the deeper these abstractions are embedded within his experience means they occur with less knowing, and, we need add, with more danger. The symbol makes for a far more continuous exchange between tree and mind.

The more interesting element, therefore, of the tree seems not to be its available olives of memory, but why it stops working later in the chapter (*Blue*, 236). What has happened to the symbol of the flashing leaves to make them so distancing? They now claim the gentle refusal of entry into memory: 'the olive trees waved their arms, gray green, green gray, Good-bye, Good-bye.' And the colours are now appallingly dissociative: 'In a flickering gray green he drove back to Arles' (*Blue*, 230). Personifying the trees in this way seems like he has paid too much attention to the crows in the olive grove, which cry 'Ka, ka, ka!' Mars, Mars, Mars! They fly in a sky which 'itself was a voice from that previous incarnation.' The 'feathering leaves' which at first indicate the 'fluctuating gusts' of the mistral wind, cannot help but slide into these personified forms of sky and bird (*Blue*, 231). The simple set of gray and green can no longer safely indicate a specific memory but only remind him of Mars, where he does not want to be. If gray and green denotes anything, then, it is the way his depression overdetermines the olive grove and imparts its rhythm into the sky. The 'flickering gray green' in which he drove is not unlike a 'fog of desire' which overcame him on Mars (*Red*, 233). The 'flesh-coloured line' (*Blue*, 230) of the tree already suggest something wholly different from his luminous euphoric liberation in *Red Mars*, in which the feeling is of an interior igniting; the 'electric shiver' and the 'burning' occurring somewhere beneath the skin of his body and illuminating a viridical energy (*Red*, 229-30). But here the skin itself is the frame of the rectangle of bark, and the olive 'flesh' the only embodiment of his previous life. The sparkling of the ingested dust (*Red*, 228-9) is marked against the bitterness of the olives, which are supposed, like the dust, to be 'manna in their own little wilderness', 'but the olive flesh remained as unpalatable as ever' (*Blue*, 230).

This sense of eating the gray green bitterness as an affective digestion of memory is made only clearer once we read in Jameson that the Greek *chroma* 'first means 'skin' or 'skin colour', thereby reaffirming the constitutive

relationship [of affect] with the body itself (*Antinomies*, 41). And this affect, he also claims, has a ground-tone of melancholy. At this point the neat symbolism of the tree and its olives begins to take on the bitterness of his depression, and ceases to allow him a continuous recall without it failing to yield the same taste as it once did. We must note that for Jameson this problem is inherently only of the novel form, as opposed to the *récit*, the latter of which is closer in de Man's scheme to the eternity of the symbol than the temporality of the allegory. 'The *symboliste* doctrine of suggestion', Jameson writes

here betrays a deeper truth, that of a radical distinction between naming and representational construction, which, distantly evoking our more fundamental distinction between telling and showing, explains why affect cannot be present in the regime of the *récit*. (*Antinomies*, 35)

What the olive skin symbolizes far more than the red dirt is how the skin 'seals' in memory, and so, like the *récit*, takes it out of temporality, and, hopefully, protects it from mistrals and floods. Jameson reminds us the *récit* also 'seals' away what is most irrevocable (*Antinomies*, 24): death. Why we are given such a brief and undetailed account of Michel's drive back to Arles is not its unimportance but the time that is lost to the drive. The tree which was described with such detail seem to have vanished into the sky, the crows, and the even more dreary gray green of abstracted colouration. The narrative speed is no more than a short sentence, while the much longer drive is not reported except for its foggy gray-greenness. The bitterness sealed inside the olive has apparently imparted its rhythms into the surrounding countryside. The skin has been broken.

Suddenly there is discontinuity and abstract colour. His feeling has changed from the absorption of self into the non-self of Provence to a nostalgia with an appalling sense of time passing. The grove in its homeliness is the mark apparently of that which pervades time undiminished: 'This was his home, and no other. It had changed, and yet it would never change – not this grove, not he himself. Home at last. Home at last. He could live on Mars for ten thousand years and still this place would be his home' (*Blue*, 232). Yet despite this, as he thinks later, 'perhaps because of it', the moment in the grove is already redolent with a bitterness which begins to diminish the moment, and confuse his easy immersion in memory. The discontinuity is as spatial as it is temporal, the sky which speaks with its Ka-ing crows is to him no more discernibly Provençal than Martian. It is fitting, then, to recall Van Gogh's *Olive Trees with Yellow Sun*, which depicts more than the 'hallucinatory surface of colour' Jameson believed separated out Van Gogh's Utopian 'explosions' of apple trees into colour from his drabber socially constitutive 'A Pair of Boots' (*Postmodernism*, 7). *Olive Trees* does in fact constitute some of the 'fallow desolation of the wintry field' 'disclosed' in 'A Pair of Boots', but

only in the sense of a disjoining of sky and field (*Postmodernism*, 8)²⁸. As Warren Keith Wright makes clear in his own experience of the painting, it seems to replicate two different times of day, the yellow sun of morning fails to line up with the shadows of the olive trees.²⁹

The sky above Michel's olive grove takes on this same splitting of time, with the sky wheeling away into a Martian time with Martian birds crying the name of Mars. What is most striking about this disjoining of land and sky is not that each runs along its own timeline, but that the sky of Provence's definitive mistral is apparently eternal, while the land is ravaged and altered by the flood of sea-level rise. Upon arriving in Provence, Michel finds comfort in the blowing mistral, without which he would not have been able to recognise his home (*Blue*, 223). The crows, therefore, are almost disconcertingly Newtonian: 'They didn't care that they were on Mars, it was home to them... they were at home anywhere' (*Blue*, 231-2). But home for Michel is Einsteinian, in which the specificity of its trees and olives creates a kind of personal curvature of memory. But his allocation of crows and himself is not so safely separate as what this symbolism of Newtonian and Einsteinian homes at first seems. He remembers that Ka 'had been a weird or double of a pharaoh, pictured as descending on the pharaoh in the form of a hawk, or a dove, or a crow' (*Blue*, 231). The pathetic fallacy reconnects the sky and crows to Michel, with a sense of inner division, a ghosting or haunting of place. The divide is no longer the simple division of self and world, but an internal doubling strung between two separate values of time and place. The crows as symbols of Michel himself are overtaken by their allegory. They do not merely float above him but speak to him and remind him of Mars, and so inscribe their more distressing cry of Ka as the point of irony itself, the allegorical turn of Michel's mind back onto the written-ness of the scene. The passage of images from gray green leaves to 'feathering leaves' to the black crows performs this turning of récit-like eternity of the symbol to the more worrying Martian crows. The red protensive point of Mars is now a murder of black crows. The discontinuity is no more marked than the confusion over the crows as reminders of time who are in fact eternal, Newtonian, and pharaonic, and the Einsteinian olive grove, worn by the mistral and the

²⁸ Martin Heidegger, 'The Origin of the Work of Art,' *Philosophies of Art and Beauty*, eds. Albert Hofstadter and Richard Kuhns (New York: University of Chicago Press, 1964), 663.

²⁹ James Elkins, *Pictures & Tears: A History of People Who Have Cried in Front of Paintings*, (New York: Routledge, 2004), 111. Elkins recounts Wright's experience: 'The painting was out of synch with itself, set to an impossible hour'; and in Wright's own words: 'It portrays two distinct times at once, – predicts its own future, reverts to its past. Note that high above the cool lavender mountains, the blazing later-afternoon sun stands due west; but the actual light source casts tree-shadows that slant in from the left, the southwest, of the canvas, from autumn... – Moral light, thrown from a differing angle, a different source: where daylight would fall, later on in the year, once this tangible season was history.'

floods. Given this, the colonizing birds are, ironically, better images of time passing between Earth and Mars than the olives which he hopes can retain and capture his own past. This undercurrent of confusion and overdetermined meaning takes a little while to settle into his experience, and not until he returns to the grove and finds it failing to give the same 'euphoric connection with lost time' than it did at first.

The lagging affect does in fact show itself for a flashing moment before this, but is quickly stifled under a mass of features, perhaps a reassurance against the floating crow-like 'wheeling' of his mind into a dangerous fissure:

[The crows] were at home anywhere, wheeling in the hard gusts of the wind, coping with the mistral and calling to each other Mars, Mars, Mars! But Michel Duval, ah, Michel – a mind residing in two worlds at once, or lost in the nowhere between them. The noosphere was so huge. Where was he, who was he? How as he to live?

Olive Grove. Wind. Bright sun in the brass sky. The weight of his body, the sour taste in his mouth: he felt himself root right into the ground. This was home, this and no other. (*Blue*, 232)

The trace of images from olive tree to birds in the sky has let his mind loose, so much that an existential panic emerges in the immense gap of the noosphere, figured here as the gulf between Mars and Earth, of which the open sky is most surely a reminder. The use of 'nowhere' for noting the '[utopia] between them' is confusing and disillusioned, as is the image most evocative of the diffusion of his sadness into the place itself which is noplac. It allows us to move away from allocating cleanly marked images to Michel and Provence, self and non-self, such as that the gray green is a symbol of melancholy and euphoria, or that the crows symbolise Mars, and instead move closer to thinking of these images as themselves shaped as allegories of reading. The place in which Michel resides is therefore not Mars and not Provence, but the nowhere in between. Allegory as understood by de Man allows for this ironic awareness of form as a dictate of a method, only in Michel's case, the method is dangerously confused with overdetermination. His store of images is both symbol *and* allegory, récit form *and* psychological novel, eternal *and* temporal, with a terrible indecision over which substantiates more. If the gray green flashing leaves denote any self-consciousness inflicted on his many combinations, it is to be found strung between symbol and allegory, récit and roman, Earth and Mars. This means his rhetorical strategy of memory retrieval in the end also disables it, as symbol cannot last long for him before changing into allegory and a consciously applied mode of interpreting. This alone should not disable meaning, nor throw Michel so violently into the gulf of nowhere. The Trilogy carries many such moments of methodological reflection, but none are quiet so disabling as this of Michel's, or that in *Red Mars* discussed previously.

CHAPTER THREE

Modus Saxifraga: Saxifrage Russell and scientific method

...the structure of science was so beautiful. It was surely one of the greatest achievements of the human spirit, a kind of stupendous Parthenon of the mind...
– Kim Stanley Robinson

Scientists are sculptors of reality.
– Paul Feyerabend

If Michel is the big structuralist, then Sax is almost the anti-structuralist.
– Kevin McVeigh¹

ELIZABETH LEANE CALLED SAX Russell a symbol of ‘hard’, objective science’, and noted that across the novels his approach ‘[moves] from a reductionist, ultra-rationalist science to one which appreciates ‘the peculiar symbolic logic of the limbic system’ (*Blue*, 50).² The hard sciences are the base from which Jameson launches his discussion of realism, centring Sax at its core (*Archaeologies*, 395). In the language of Roslynn Hayne’s study on scientists in literature, Sax is ‘the scientist rehabilitated’.³ A rehabilitation entailing passing through a postmodernist bildungsroman from naïve scientism to an awareness of the scientific method when it is caught up in the

¹ Robinson, *Blue Mars* (New York, Bantam Spectra Books, 1996), 656; Feyerabend, *Against Method*, Fourth Edition (London: Verso, 2010), 284; McVeigh, ‘Red Prophet, Green Man, Blue Adept: Kim Stanley Robinson in Conversation with Kevin McVeigh’, *Vector* 189 (September/October, 1996), 4.

² Leane, ‘Chromodynamics: Science and Colonialism in the Mars Trilogy’, in *Kim Stanley Robinson Maps the Unimaginable* (Jefferson, North Carolina: McFarland & Company Inc., 2009), 147, 153.

³ Haynes, *From Faust to Strangelove: Representations of the Scientist in Western Literature* (London: John Hopkins University Press, 1994), 295-313. Haynes does not address Robinson at all. The first publication of *Faust to Strangelove* coincided with *Red Mars*, in 1994. A comparison with Sax is also possible in Haynes’s pages that deal with Shevek, Le Guin’s theoretical physicist of *The Dispossessed*. As Sandra Harding is quick to remind us, theoretical physics is sometimes held as the paradigm of all science, and so with Shevek and Sax a kind of archetype of science is being represented. Harding, *The Science Question in Feminism*, (Ithaca: Cornell University Press), 1986, 44, 46. For more on Le Guin see Teresa Tavormina’s ‘Physics as Metaphor: The General Temporal Theory in *The Dispossessed*’, *Mosaic*, Vol. 13, 3/4 (1980), 51-62.

knots and tangles of language. As Kenneth Knoespel claims: ‘his rehabilitation demonstrates the social context of language.’⁴ But charting Sax’s arc in this way alone has led critics, Leane and others, further away from a nuanced understanding of the scientific methods in the novels, and how they shape reader’s approaches, and closer to little more than a critique of ideology, as valuable as that already is. On one point Leane finds herself alongside Jameson with his own withdrawal from supposed ‘solutions’ (*Archaeologies*, 409); Leane writes:

The reader is unsure just what kind of science will be politically responsible, will abjure the patriarchal and colonialist discourse and practice which have marked it since the Renaissance. Robinson is no more able to describe in detail the nature of his ‘successor science’ than is Harding or Keller.⁵

For the problem over method to remain unsolved, or for us to not take seriously Robinson’s solutions except as placeholders for ‘collective praxis’ (*Archaeologies*, 409), solutions that Jameson states the novels are under no pressure to produce, means the reader is left with few options other than interpreting Sax’s arc as a waking up from ideological confusion.

A fresh approach is possible by taking up a more focused and direct reading of problems and solutions, a subject given at least one specific referential anchor in Sax’s mentions of Thomas Kuhn (*Green*, 147, 189; *Blue*, 656), to whom we attribute ‘puzzle-solving’ as an act of ‘normal science’.⁶ In the context of Kuhn’s work on scientific revolutions, solutions might usually be approached with caution precisely because they often fail to motivate a paradigm shift. But this is an overlooked misreading of Kuhn⁷, that has value

⁴ Knoespel, ‘Reading and Revolution on the Horizon of Myth and History: Kim Stanley Robinson’s Mars Trilogy’, *Configurations* 20, (2012), 109-36, 120.

⁵ Leane, ‘Chromodynamics: Science and Colonialism in the Mars Trilogy’, in Burling, *Kim Stanley Robinson Maps the Unimaginable*, 155.

⁶ See Kuhn, ‘Normal Science as Puzzle-solving’, in *The Structure of Scientific Revolutions*, Fourth Edition (Chicago: University of Chicago Press, 2012), 35-42.

⁷ In his ‘Introductory Essay’ to *Structures*, Ian Hacking clarified these misreadings of Kuhn’s alleged irrationality over the detailed issue of incommensurability: ‘...Kuhn was accused... of denying the very rationality of science. In other quarters he was hailed the prophet of the new relativism.’ At this point Hacking directs us to a chapter in Kuhn’s *Essential Tension* (‘Objectivity, Value Judgment, and Theory Choice’, 320-39) to deepen this point; he continues: ‘Theories should be accurate in their predictions, consistent, broad in scope, present phenomena in an orderly and coherent way, and be fruitful in suggesting new phenomena or relationships between phenomena. Kuhn subscribes to all five values, which he shares with the entire community of scientists (not to mention historians). That is part of what (scientific) rationality is all about, and Kuhn in this respect is a ‘rationalist’” (xxxii). Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago: University of Chicago, 1977).

This melds with Kuhn’s own comments on relativism in the ‘Postscript’ to *Structures*: ‘Later scientific theories are better than earlier ones for solving problems

here for pointing to a similar misreading of Sax's understanding of scientific method. This issue over the endorsement or critique of scientific method is focused in Sax's narrative more than any other. His changing grasp on scientific practice makes him the most explicit candidate for a discussion of scientific methods in the Trilogy, a task not yet undertaken with enough depth. Sax does not in fact totally abjure from his previous practices, as critics otherwise suggest, but holds on to his reductive logic throughout his so-called enlightenment.

We shall have something to say about enlightenment later, especially in Bruno Latour's sense when he separated it out from modernity.⁸ Yet a word or two must be said on the lack of ability to describe a 'successor science'. Leane derives the term from Sandra Harding's *Science Question in Feminism*, in which 'feminist standpoint epistemologies' are offered as an attempt to get out of the 'dichotomizing that is characteristic of the Enlightenment/bourgeois world view', opening space instead for a feminist science found in the 'conceptions of the knower, the process of knowing, and the world to be known which are evident in... scientific research'.⁹ The vagueness of these guiding principles makes it difficult, as Leane reminds us, to gain a more exact picture of what such a science looks like. In the end, we will see how Sax's method depends on both exactitude and vagueness. The most important citation for us here of this difficulty is Leane's use of physicist and feminist Evelyn Fox Keller's book on Barbara McClintock, *A Feeling for the Organism*. It is Sax, Leane claims, who gains this sense of feeling and marks him out as unique among the characters for undergoing a rehabilitation of scientific

in the often quite different environments to which they are applied. That is not a relativist's position, and it displays the sense in which I am a convinced believer in scientific progress', 206. Also see Paul R. Gross and Norman Levitt, *Higher Superstition: The Academic Left and Its Quarrels with Science*, (Baltimore: Johns Hopkins University Press, 1998), 56; Paul Gross, 'On the 'Gendering' of Science', *Academic Questions*, vol. 5, issue 2 (June, 1992), 12-15; Glen A. Love called Kuhn 'often-misunderstood and overgenerously applied', *Practical Ecocriticism: Literature, Biology, and the Environment* (Charlottesville: University of Virginia Press, 2003), 40; Stephen Potts, 'A Tale of Two Cultures: Science Studies and Science Fiction', in *Science Fiction and the Two Cultures: Essays on Bridging the Gap Between the Sciences and the Humanities*, eds. Gary Westfahl and George Slusser (Jefferson: McFarland & Company, Inc. 2009), 49-66; Alan Sokal and Jean Bricmont, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science* (New York: Picador, 1998), 71-8.

⁸ In *We Have Never Been Modern*, Latour dispensed one of his many slogans to have gained wider currency: 'We can keep the Enlightenment without modernity', 135. This issue with modernity will be explored more fully later in this chapter. The reader should also note that at one stage in *Blue Mars*, while thinking over what he deems to be the problems with political science, Sax is reminded of banners being hung up around the Da Vinci laboratories, one of which bears another of Latour's famous soundbites: 'Science is Politics by Other Means' (*Blue*, 434); or as Latour put it in *The Pasteurisation of France*: 'Science is not politics. It is politics by other means', 229.

⁹ Harding, *The Science Question*, 145-6.

outlook, at the same time as his literal recovery from a stroke. Other characters also change, but none pass through a methodological shift of the same magnitude. After much development across the novels, Sax wonders in *Blue Mars*, after meeting math genius Bao Shuyo for the first time, if and how female genius might differ from male genius, especially when it came to mathematics (*Blue*, 340-1).

When it came to mathematics, in fact, he was also thinking about the difference between purely mathematical work and experimental work which touched the phenomenal world. Unless math found a way into this world, he simply ‘wasn’t interested.’ The way he sees it, on one (subatomic) level are ‘Bao’s loops of timespace’, and on another colours, birds (*Blue*, 355), and sand benches (*Blue*, 515). Of the many ways of knowing, none, Sax believes, ‘was quite so satisfactory... as the direct knowledge of the senses’ (*Blue*, 355). This does not sound like the subatomic physicist of *Red* and *Green Mars*, whose interest would have then resided more in the Planck realm than in the birds which strangely brings it to mind. Instead of abstracting the birds above the sea of Chryse Gulf in *Blue Mars* into some kind of mathematised algorithm of flight, he makes an almost Heideggerian move by turning the abstract noun¹⁰ of the Planck realm into a verb: ‘moment to moment... like the successive positions of a finch’s head, the little birds *plancking* from one quantum pose to the next’ (my italics; *Blue*, 355).

In light of Leane and Harding, the option is available to allegorise these two benches or realms of knowledge – the theoretical-subatomic; the phenomenal-sensual – into a gendered meaning, the latter providing the best realm for the ‘feeling for the organism’. And it would seem from reading Harding an alternative to the masculine approach of mathematical mastery taken up by Newton and Bacon is available. It would also seem that focusing on scientific knowledge entails scientific genius. To push aside knowledge or at least exactitude, may suggest disposing with the image of the scientist as genius, or replacing *him* with a more feminist alternative. Yet, the subject of genius provides more on the issue of the paradigm and on the Trilogy’s underlying capacities for meaning. A genius may be one of the strongest supports as a shifter of paradigms. In this sense, by shifting from Michel to Sax, not only as subjects but also on the terms of their methods, the reader is also surpassing psychology as a hermeneutical key of diagnosis, and claiming scientific genius as an ability for insight. And insight, I will argue, is a major

¹⁰ Describing the Planck realm as an abstract noun, though in proper grammar it is not, gets to the heart of the issue if it exists only in concept or has the efficacy of a real object, or proper noun. My use of it here is not to claim it does not in fact exist, but only that some level of abstraction is necessary to grasping its scale, which is more or less incomprehensibly small. This hurdle is exactly what Sax is encountering in this moment, and so the different uses of ‘Planck realm’ as verb and noun ought to be held over this problem of comprehensibility, either in the abstractions of mathematics or the sensual realm of perception.

way in which the novels build their meaning on the bases of a variety of sciences. Up until now, psychology and geology have, in different ways, worked to complicate a meaningful access to the red planet of the texts. In this second half of the thesis, Sax will be the first case whose science enables meaning to the reader, having now surmounted some of the issues of this ability in Ann and Michel. Sax's archetypal 'polymorphous scientific genius'¹¹ develops across the Trilogy from the abstract structures of mathematics to a more phenomenal embeddedness to express the opposite, a meaningful textual coefficient of terraforming.

The overriding issue with Sax's naïve scientism, the point from which he begins in *Red Mars*, is best put in terms of the faults of realism. According to Jameson, the naïve scientist practices without 'reflexivity', and is 'too rapt to register the operations of [their] own mental categories in the process' (*Archaeologies*, 398). This basic point grounds Leane's study. Of value here is the blend of scientific practice and literary genre. Another kind of blend can be extrapolated from Ian Hacking's concept of 'scientific realism', which makes significant departure from naivety toward a practical embeddedness (rather than leaning on the often-assumed objective scientist). To clarify, Hacking's study on scientific realism in *Representing and Intervening* does not engage with realism as a literary genre, except for a brief note about movements and doctrines of realism. He claims that movements are a better gathering principle than doctrines because scientific realism, as he uses it, is more an 'attitude than a clearly stated doctrine', the conduct of 'creative work sharing a family of motivations.'¹² The messy outline of this term is best defined by one of Hacking's own subheadings: 'If you can spray them, then they are real.'¹³

We will later see this presented as a difference between representing as theoretical science, and intervening, its practice. When it comes to realism as a term by which to describe the novels, a subtle difference is available. Jameson begins his reading with a reminder that the Trilogy 'offers a mimesis of science... and not the thing itself' (*Archaeologies*, 393). Of course, even theoretical physics is, to some degree, removed from reality. But Hacking's

¹¹ Robert Markley, 'Falling into Theory: Simulation, Terraforming, and Eco-Economics in the Mars Trilogy', in *Kim Stanley Robinson Maps the Unimaginable*, 131; *Dying Planet: Mars in Science and the Imagination* (Durham: Duke University Press, 2005), 368.

¹² Hacking, *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science* (Cambridge: Cambridge University Press, 1983), 26.

¹³ He was referring to the experiment on 'fractional electric charges' (known as quarks) that made him a realist: 'Now it is not the quarks that made me a realist, but rather electrons.' He continues 'Now how does one alter the charge on the niobium ball?' 'Well, at that stage,' said my friend, 'we spray it with positrons to increase the charge or with electrons to decrease the charge.' From that day forth I've been a scientific realist. *So far as I'm concerned, if you can spray them then they are real.* (his emphasis), 22-23.

spray does not represent, but intervenes. As the account has been written up until now, Sax's development is a discovery of reflexive awareness, a structural awakening to the limits of representation. Yet by moving further away from Michel and his own suggested hermeneutic, Sax offers something else in the realm of a method of science, which depends as much on his awakening as on Hacking's reality principle. The problem of realism has often been bracketed by representation. To gauge this problem in the novels without failing to offer a solution, or backing away from one found inside the novels (as do both Jameson and Leane), Sax is the best focus toward describing an interpretive coefficient of scientific intervention, so far as it enables a meaningful experience rather than only representing it; or, in Jameson's language, digging the 'quarry and foundation pit' (*Archaeologies*, 400) where it will one day appear. In Sax's narrative, such fruitful experience arises because of a short-circuiting event: a stroke impacting Broca's region of his brain, violently reshuffling his language faculties. Appearing through his recovery is a utopian update to the scientific method.

In several stories Robinson has placed figures similar to Sax on the same path of an ideological bildungsroman in which they come to see past scientism to a clearer picture of their practices and stores of knowledge, embedded deeply within their social and historical contexts. Robert Markley finds Frank Vanderwal in the Science in the Capital Trilogy going 'feral'¹⁴ in the second two books of that Trilogy to great effect in lifting his ideological blindness. He also picks up on Frank's likeness to Saxifrage Russell, whose own naivety begins, in *Red Mars*, with an 'aggressive program for terraforming', and ends with a committed social and ecological grasp of the planet which is 'too complex to understand.'¹⁵ This wording we should hold in view of the argument being made across this thesis, that different sciences provide different 'grasps' of a 'complex' planet. I have focused already on the confusions, unique challenges, and losses of meaning of two sciences (geology and psychology); but the present approach (now and in chapter 4) is to turn and begin to speak about the clarity and production of meaning through different approaches to science. Yet the conversation over Sax has remained mostly within the former. One precise point of the Trilogy when Sax is most visibly confounded is noted in Jameson's essay; quoting from *Blue Mars*: 'Over and over Sax watched a thousand years of weather, altering variables in the models, and every time a completely different millennium flitted past' (414; *Archaeologies*, 395). Sax's *vexation* at what he himself calls the 'great unexplainable' (*Green*, 15), is the naivety Jameson wants to drive out to make his point about realism and ideology. We ought to note by this stage in *Blue*

¹⁴ See section 'The Scientist Gone Feral' (23-6) in Markley's essay "How to go forward": Catastrophe and Comedy in Kim Stanley Robinson's Science in the Capital Trilogy', *Configurations* 20 (2012), 7-27.

¹⁵ Markley, 'Catastrophe and Comedy', 15-6.

Mars, Sax is less anxious about the lack of reductive certainty of his weather simulations than he is ‘fascinated’ by their many ‘iterations’, which he tells us he could watch ‘all day long’ (*Blue*, 414).

Sax’s fascination is hard to place, and, it seems, it was not always his spontaneous response. He tells his student Nirgal, early in *Green Mars*, that curiosity drives him to ‘tease out the reasons’ for each phenomenon, to find out ‘why it happens the way it does’. And ‘when we can’t... well. I don’t like it. It vexes me’ (*Green*, 15). In a therapy session with Michel later in the novel, after his stroke, he credits curiosity with much the same emotional impetus when he was a child for his formation into a scientist (*Green*, 400). In the same session, the accusation we hear reverberated in Markley, Leane, and Jameson comes from Michel: ‘I consider your conception of science to be as parsimonious and reductive as your scientific activities’ (*Green*, 403). It is clear the record of this dialogue (written without exposition, action, or descriptive material) serves a similar role to what it does in *Blue Mars* (251-5) before Ann’s formative chapter ‘Ann in the Outback’. The italicised material of the novels serves many different purposes, and in these two cases end with both Ann and Sax answering Michel’s advice with ‘I’ll have to think about that’ (*Green*, 404; *Blue* 255). Using Michel as a starting place helps already to determine how we will read the chapter to come. These sessions prime the reader with an interpretive set of clues, such as that Sax’s grasp of scientific work is reductive and parsimonious, and that Ann needs to allow herself to ‘transmutate’ (*Blue*, 253) along with the planet. His advice is given as much to the reader as to either of them. Given what was said between Sax and Michel, there is little doubt the opening lines of ‘Social Engineering’ carry through the subject of scientific method: ‘Observation was never enough. Besides it wasn’t their experiment anyway’ (*Green*, 405).

In a passage of *Blue Mars* to which we will return in depth, Sax is travelling across the newly flourishing planet, surrounded by the ‘lamine terrain’, saxifrage flowers, enjoying the drive back to dinner, and the ‘delicious weariness in his feet’, when a strong ‘kind of euphoria’ comes over him. The cause is apparently mysterious and ‘indefinable’, something more than the sum of these ‘individual elements’ (*Blue*, 639). What separates this novel feeling from the anxiety of the vexatious ‘great unexplainable’ of the earlier Sax Russell, has, he surmises, something to do with the areophany, the ‘spirit of place, love of place’ to which he has learned to pay more attention. There is much to credit to Hiroko’s Martian land-religion when it comes to generating meaningful experiences, which will be the subject of chapter 4. In the lead up, recognising Sax as the chief genius and architect of terraforming in the novels positions him as the scientific generator of viriditas, its gardener and weatherman. In chapter 4 we will discuss viriditas in further detail, and I defer such comments till then. At this stage, we need only recognise it as Sax encounters it in this scene, as a strong feeling of love for the planet. The areophany was

not only as Hiroko had described it, but perhaps as she had experienced it as well. Ah, Hiroko – could she really have felt this good, all the time?... To be near that bliss, to learn to feel it oneself... love of planet. Love of a planet's life. (*Blue*, 639)

To emphasize experience as much as description is a crucial part of Sax's change from the abstract to a deeper phenomenal embeddedness. It serves here to confirm something on the scale of the planetary, though what is confirmed is less describable than it is 'sublime' (*Blue*, 640). For Ann, as we saw in chapter 3, the sublime encounter with the flooding of Marineris is destructive, and sends her descriptive capacity for language into glossolalia and incomprehensibility (*Red*, 542): 'she was losing the ability read meaning from her senses' (*Red*, 546).

At first, one way of understanding Sax's experience of the indefinable is to read it in line with Ann's, and bring to both Leane's analysis, that their acquired feeling (either euphoric or depressive) for and over the planet comes at the expense of descriptive power. What Sax loses in exactitude he makes up for in euphoria. And where Ann feels to have lost the planet itself in its original condition, depression comes to replace it. The different affect between them is important. In Sax's case, he has moved beyond the scientism of merely reducing the experience to its individual elements. Usually in the face of confusing data or events he enacts his motif gesture of 'blinking' (*Red*, 30, 240). However, the composition of pieces making up the experience is not so easily put aside. Another way into this passage is to attribute the indefinable to complexity, and follow Jameson down the path to overdetermination. But the affect is euphoria, not depression. And meaningful experience is apparently not lost, but discovered.

The reader must note a contrast with Sax, whose own ability is less impaired than overwhelmed. Michel and Ann both fell under the weight of overwhelming affect and experiences, but Sax's unique response is crucial. The thoughts that follow on from this scene take off into a deep cosmology, wondering about Deleuze's maniacal cosmic models, and viriditas as a pressure toward complex life forcing itself outward from its stellar nursery. The importance of this penultimate chapter to the Trilogy ('Experimental Procedures'; which this scene opens) lies in Sax's breakthrough solution to the memory problem afflicting many of the main characters. Indeed, the chapter is largely built around it. Recognising that such viridical experiences enable, rather than disable, his ability to read meaning, to derive insight, even if incomplete and speculative, marks an important turn in this thesis, just as it marks a turn in the novels from a confounded relationship with the planet as we find with Ann and Michel, to one which is fruitful and enlightening. The major structural feature for recognising this is that Sax's development occurs step by step with the terraforming of Mars.

Yet Jameson suggests a way into approaching this topic, even though he does not take up the connection being suggested between the weather simulations Sax runs on his computer and his growing understanding of brain science. The link between weather and mind is very much worth investigating further. Jameson focuses on the weather simulations only in describing its ‘structural unpredictabilities’ in terms of chaos theory (*Archaeologies*, 395). Given the allegorical reading common to both Leane and Jameson, indefinable euphoria might be something like ‘deterministic non-periodic flow’, Lorenz’s original title to his 1963 paper on chaos mathematics, or cascading recombinant chaos (*Blue*, 656).¹⁶ Yet, in the context of brain science, weather takes on a different set of coordinates.

The weather of the mind, along with all of Sax’s other metaphors of mind – steam engine; clock; geological change; computer; fell-field; jungle; universe; (*Blue*, 55-6) –, as well as his focus on brain science in ‘Experimental Procedures’, suggests one formative experience stands out from the rest¹⁷: his stroke in *Green Mars*. As he later accounts for the damage:

Grew a new brain. Not an accurate way of putting it. The lesion had been sustained in the posterior third of the inferior frontal convolution. Tissues dead as a result of interruption of focused ultrasound memory-speech stimulation during interrogation. A stroke. Broca’s aphasia. (*Green*, 406)

The ‘telegramese’ (*Green*, 406) here displayed are one way in which Sax’s aphasia impairs his language abilities, and recall the building-block style James Joyce used in *A Portrait of the Artist as a Young Man* to demonstrate Stephen’s learning to construct language as a child almost from the ground up. Sax’s own childishness certainly fits the naivety he possesses over the historical and social embeddedness of his scientific practices. And in this line

¹⁶ Lorenz, Edward N. ‘Deterministic Nonperiodic Flow’, *Journal of the Atmospheric Sciences* 30 (March 1963), 130-41. Also see: Lorenz, ‘The Mechanics of Vacillation’, *Journal of the Atmospheric Sciences* 20 (September 1963), 448-64; Lorenz, ‘The Problem of Deducing the Climate from the Governing Equations,’ *Tellus XVI* (1964), 1-11.

¹⁷ Leane enumerates them: being Stephen Lindholm in ‘The Scientist as Hero’ chapter of *Green Mars*, which ‘forced him to explore new dimensions of his personality’ (‘Chromodynamics’, 152); a scene ‘heavy with symbolism’ (*ibid*) in which Sax comes across the flower of his name, Saxifrage, by which he comes to know Hiroko’s viriditas; his reading of Kuhn, and coming to see him and Ann living inside incommensurable paradigms; attending a science conference, what he at first thinks is the most ‘utopian community’ (*Green*, 269), but is then ‘horror[ified]’ as science begins to ‘drift into politics’; his therapy sessions with Michel (*Green*, 400-4); getting lost in a white-out in *Blue Mars* only to be saved by who he thinks is Hiroko (68-76). See ‘Chromodynamics’ 152-3. Some of these, such as the encounter with his namesake and the white-out, carry ‘heavy’ symbolism, while others such as living incognito as Lindholm, suffering a stroke, and going to therapy are formative on a more literal level. All of these incidents and symbolism will feature throughout this chapter.

of thinking his recovery from stroke is twice framed as a rebirth (*Green*, 280, 282). The role of dying in this equation is not to be ignored, and so will come into more significance in our discussion in chapter 4. For this reason, the focal problem of ‘Experimental Procedures’ that needs solving concerns memory senescence, or biological aging. How he solves this problem can, firstly, stand in contrast to our discussion of memory in Michel’s narrative in chapter 2, and secondly, as the fruit of Sax’s developmental arc. The brain, weather, and language fit together as subjects of thought to yield Sax’s polymorphic genius. And so far as the changes made on his method and approach to the ecology of the planet, they yield also a similar insight for the reader, one which brings us closer to how the viridical force of the novels pushes toward a more comprehensive meaning of a complex planet.

The final two elements of Sax’s methodological shift that need introducing concern two famous texts in the history and philosophy of science: Kuhn’s *Structures of Scientific Revolution*, and Paul Feyerabend’s *Against Method*. In the first case, we shall see that even with McVeigh’s distinction between Michel the structuralist and Sax the anti-structuralist, Sax is still very much interested in maintaining a rationalist structural approach to science, going so far as to provide two crucial analogies to buildings: comparing the sum of scientific knowledge to a ‘stupendous Parthenon’ (*Blue*, 656); and using the memory-palace technique, known as the method of loci, as a way of taking advantage of the brain’s spatial faculties for relearning language, what he calls ‘spatializing language’ (*Green*, 406). By networking the brain, architecture, scientific knowledge, and language in this way, he is not only suggesting some equivalence between them, tied together with common features allowing him to excel at his work (such as that memory and space are closely related regions in the brain), but also that a new method can be made by throwing together a variety of different methods and approaches. Sax himself theorises this polymorphic capacity of his thinking when he finds in the etymology of ‘symbol’ the Greek root meaning to ‘throw together’ (*Blue*, 47).¹⁸ The Greco-Roman nature of his etymological digging, the spatial mnemonic, and the Parthenon are significant features to his scientific method, of which there is more to unpack. But the overriding significance of throwing together as a metonym used throughout the novels suggests a wider point gathering around a novel consilient method sharing much of its diversity and plurality with Feyerabend’s non-method method behind his own famous slogan ‘anything goes’.¹⁹

¹⁸ ‘Words of all kinds gave him trouble now, so much so that he had taken to etymology to try to understand them better. A glance at the wrist: symbol, ‘something that stands for something else,’ from the Latin symbolum, adopted from a Greek word meaning ‘throw together.’ Exactly.’ *Blue Mars*, 47.

¹⁹ Feyerabend, ‘Consolations for the Specialist’, *Criticism and The Growth of Knowledge: Proceedings of the International Colloquium in the Philosophy of Science*, London, 1965,

This composite view of scientific method serves well to clarify one of the problems of realism described in Jameson, and established as the conventional wisdom of Robinson criticism, that realism as a genre lacks a firm ontological ground. As Jameson sees it, when the gaps in the apparent firmness open on Sax, such as when he fails to explain a phenomenon, he grows anxious. On these terms Leane, Markley, and Jameson establish their critique of his ideology. Yet, the character in the most ontological danger is Michel, perhaps due to his textual permeability with the reader – a quality which shakes the stability of his own method, especially when it shows itself as inadequate in the face of depression. Sax, on the other hand, emerges from his therapy with a stronger method and approach to the planet. In speaking about realism and the novels' critique of scientific ideology, Jameson reminds us of the 'constructedness of scientific fact' (*Archaeologies*, 399), and elsewhere that somewhere outside the zone of the constructed reality lies a wilderness of 'raw material' (*Archaeologies*, 400). One of Sax's comments early in *Red Mars* refers to such material in the disassembled Ares: 'it is an *entire town*, disassembled and lying in pieces' (his emphasis; *Red*, 105-6); and again, referring to the crew: 'It's like the first second of the universe... All crammed together and no differentiation. Just a bunch of hot particles rushing about' (*Red*, 105). What Kuhn and Feyerabend allow when reading Sax's narrative is a sense of how he becomes the chief 'sculptor' of a new Martian reality, using such raw material to build his own additions to the Parthenon of science. And it is through his polymorphic ingenuity that such a feat comes about. He is not alone by any means, but his case stands for many.

Disassembly is a useful analogy for Sax's stroke as well as his reductive method. It is also helpful for seeing how he cobbles or throws words together and pulls them apart into the basic units of their etymologies. The precision of the neural event left him with 'most other cognitive functions... unimpaired' (*Green*, 406); only his linguistic faculties, it seems to him, had been dashed and destroyed. This leaves him with 'difficulty with motor apparatus of speech, little melody, difficulty in initiating utterances, reduction to telegraphese...' (*ibid*). Broca's aphasia is distinct from Wernicke's, as Sax makes clear, and in the latter 'one babbled volubly, unaware that one was making no sense at all'; sometimes 'there were people who tended towards Wernicke's without the excuse of brain damage' (*Green*, 406-7). As Ursula tells Sax, his 'cognitive functions have remained very high for someone with [his] degree of language difficulties.' She adds a significant point: 'Probably a lot of your thought in math and physics did not take place using language' (*Green*, 407). For Sax himself, taking note of his own mental processes, such thinking is geometric and works with shapes and numbers in an apparently non-

linguistic way. We will return to the unique phenomenology of mathematicians going about their work in section two. For now, the point to be drawn from this partitioning of grey matter, is the relative independence of spatial reasoning from the language centres of the brain. When it comes to rebuilding these centres, spatializing mental experience plays a pivotal role.

In beginning to exploit the parts of his brain still intact, he notices that objects freed of their signifiers apparently remain present to mind; a sphere for instance, even when shed of its term, persists in his cognitive movements, just as do the objects in his exterior experience of the Echus Overlook laboratories remain present in his perceptual field. He calls this ‘spatializing language’, and arrives at the option to borrow a method, the ‘palace-of-memory method’, by which he can generate a mental space based on these labs, and ‘place’ mental objects such as words on the ‘counter’ where they can sit alongside their corresponding shape, or ‘on top of the refrigerator’ in his house in Boulder, Colorado, where he grew up (*Green*, 406). This last model for a mental space is especially important for complementing the way in which short term memory (the relearning of language) makes its way into the sturdier centres of long term memory.

The memory palace technique, or method of loci, is traceable back to Cicero’s *De Oratore* in which Marcus Antonius credits Simonides of Ceos with the invention of the ‘science of mnemonics’.²⁰ The anecdote as he recounts it places Simonides at a dinner party at the house of a nobleman Scopas in Thessaly, where he sung a lyric poem, but much to Scopas’s displeasure with the parts of the poem referring to Castor and Pollux, and some prior confrontation. ‘A little later’, Marcus Antonius tells his group of listeners, ‘a message was brought to Simonides to go outside’, which he did. ‘But while in the interval of his absence the roof of the hall where Scopas was giving the banquet fell in, crushing Scopas himself and his relations underneath the ruins and killing them.’ When it came to burying the dead, they were ‘altogether unable to know them apart as they had been completely crushed.’²¹ Then Antonius details the method by which Simonides was able to identify each of the bodies:

...the story goes that Simonides was enabled by his recollection of the place in which each of them had been reclining at table to identify them for separate internment; and that this circumstance suggested to him the discovery of the truth that the best aid to clearness of memory consists in orderly arrangement. He inferred that persons desiring to train this faculty must select localities and form mental images of the facts they wish to remember and store those images in the localities, with the result that the arrangement of the localities will preserve the order of the facts, and the images of the fact will designate the fact themselves,

²⁰ Cicero, *de Oratore*, 2.74.299.

²¹ *Ibid*, 2.86.353.

and we shall employ the localities and images respectively as a wax tablet and the letters written on it.²²

Simonides hints the imagery mnemonic adopts a reductive logic, not only for a more orderly arrangement, but, as Antonius phrases it, for the separate internment of facts to localities. Memory recall is made easier by cutting the material (such as a speech) down into bits, whereby these bits formed as imagistic localities come to ‘represent a whole concept by the image of a single word.’²³ According to this logic, the mnemonic is close to metonymic, making a word or image stand for something much larger. To be clear, Antonius’s argument is not that a mnemonic image reduces the more complex structure, though that is certainly happening, but more that the internment of the metonym is an aid to memory.

It is tempting to bring this anecdote on the method of loci, told in a dialogue on oratory, to the topic of Sax’s language problems. Yet, Sax does not employ it for the more obvious reason of giving speeches, although the importance of speech does reside with both. More interesting is a detail of the story too easily overlooked but of great value to both Sax’s trauma and the development of his scientific practice. The detail is not simply the house in which the story takes place, but its collapsed ceiling. It connects the memory technique with his metonym of scientific knowledge and conduct: the stupendous Parthenon.

This point is not obvious, and needs some unpacking. The knot by which it is tied is made up of many elements which will unfold, when most convenient for fuller exposition, throughout both halves of this chapter. In setting up the Echus Overlook labs as a version of Scopas’s house in Thessaly, Sax came to remember ‘all the shapes he thought by their location in the mental lab’ (*Green*, 406). Later in *Blue Mars*, he recognises in the activity of brain regions and memory functioning a similarity to the room by room method of loci (*Blue*, 662, 682). This image of the lab gains density as soon as we recall Sax’s comment in *Red Mars* that ‘the planet is the lab’ (*Red*, 263); and thus a new feature of Antonius’s story begins to resonate with the internment of the laboratory, and the destruction of this internment into the world outside. Taking up the thread of Derrida and writing, the appropriate expression suggesting itself for this internment and destruction is that *there is no outside-lab*. Jameson addressed this by recalling Wallace Stevens’s jar amidst the ‘slovenly wilderness’, commenting that like the Roman Campagna (*Archaeologies*, 400), the jar stands to abolish the simplicity of the old internment, giving way to an overlap of the zones of social construction and wilderness.

²² *Ibid*, 2.86.353-4.

²³ *Ibid*, 2.87.358.

As we are now distant from Ann's point of view with respect to wilderness and structure, the view of the structure on the hill can take on a different set of values pertaining to buildings, memory, and meaning available in the collapsed ceiling. To suppose some link exists in the text between the memory palace and the Parthenon, means there is a point hinted at in the fate of both historically losing their ceilings. In anticipating Sax's methodological relationship with the Pre-Socratics, to whom belongs an early form of science, the burning of the Library of Alexandria also stands among the Parthenon and the memory palace, gesturing both to the collection of knowledge, the forming of a collective memory, and to the social unrest that eventually destroyed it. For this reason, these structures of lost memory and destruction are analogies for Sax's stroke and aphasia. But what is especially significant about the open ceiling is less the violent theme of history, than how a method of knowledge might or might not be sensitive to what is outside it. Alberto Manguel laments of the Library which was once 'the storehouse for the memory of the world', 'was not able to secure for us the memory of itself'²⁴; and Carl Sagan reminding us in this vein that inside the Library 'the permanence of the stars was questions; the justice of slavery was not.'²⁵ The significance of the crumbling of buildings is not merely a reminder of history flowing passed outside, that one day burns it down – of which the tearing down of the Clarke elevator, the flooding of Burroughs, and the torturing of Sax are textual examples –, but also of a mindset which, as Peter Sloterdijk said of the pyramids of Giza, considers the form it will take after its own destruction, and its own deconstruction.²⁶

This is not epistemic, but phenomenological. And the test of its distance as a phenomenology will be shown much later in this chapter on Sax thinking about Deleuze's cosmology. To trace that topic back to here is to follow the

²⁴ Manguel, *The Library at Night* (New Haven: Yale University Press, 2006), 27.

²⁵ Sagan, *Cosmos* (London: Abacus, 2009 [1981]), 365. Consider also Sagan's account of the Pythagoreans who not only forbade the fifth polygonal solid (dodecahedron) for the practice of knowledge, they also, by some accounts, drowned fellow mathematician Hippasus for discovering $\sqrt{2}$, on the grounds of its irrationality: 'A Pythagorean named Hippasus published the secret of the 'sphere with twelve pentagons', the dodecahedron. When he later died in a shipwreck, we are told, his fellow Pythagoreans remarked on the justice of the punishment', 209. In order to make the most sense of the suppression of $\sqrt{2}$ by the Pythagoreans, note also Sagan's above point on the maintenance of slavery together with a knowledge system which restricts the view of rationality and irrationality; 210-11; cf. Farrington, Benjamin, *Greek Science* (London: Penguin, 1953).

²⁶ Sloterdijk, Derrida, *An Egyptian: On the Problem of the Jewish Pyramid*, tr. Wieland Hoban (Malden, MA: Polity, 2010), 27: 'Egyptian' is the term for all constructs that can be subjected to deconstruction – except for the pyramid, that most Egyptian of edifices. It stands in its place, unshakeable for all time, because its form is nothing other than the undeconstructible remainder of a construction that, following the plan of its architect, is built to look as it would after its own collapse.'

passage of thought as a flight of the mind, and of the imagery mnemonic not as a gallery of still images but a space inside which to move. And the ceiling as a portal through which a very important element of the structure's destructibility is glimpsed. Such an element Heidegger found in temples: 'a building, a Greek temple, portrays nothing. It simply stands there in the middle of the rock-cleft valley. The building encloses the figure of the god, and in this concealment lets it stand out into the holy precinct through the open portico.'²⁷ The focus here is not the holiness of the precinct as on the portico which opens onto it; reminiscent of 1 Kings 8 when 'the cloud filled the temple of the Lord',²⁸ and of Horace speaking on more secular terms: '... that house is commended, which has a prospect of distant fields.'²⁹ The portico, the clouds that come from outside, the distant fields, all claim an act of moving into and out of these buildings, literally, spiritually, or imaginatively. But such an act, as with Simonides, can open the possibility of collapse: 'the underground wasn't big enough for Sax Russell' (*Green*, 141). And the last, more than any other, when it comes to Sax doing his terraforming experiments, speaks to the planet of Mars as a laboratory with permeable boundaries; a fact of experiment it takes some time for him to accept, that sometimes subjects, such as the human mind, cannot be 'isolated' and contained during experimentation (*Green*, 403). Even for his genius, the mental voyage is implied.

In the context of these phenomenological anchors should we read 'the sky is falling, the sky is falling!' (*Green*, 4) at the start of *Green Mars*, in which the ice ceiling of Zygote's underground dome has melted and begun to break apart. In the scientific tradition, there is Copernicus in the opening of his pivotal *De Revolutionibus Orbium Coelestium*: 'For what could be more beautiful than the heavens which contain all beautiful things? Their very name makes this clear: *Caelum* (heaven) by naming that which is beautifully carved...'³⁰ And later with Giordano Bruno, the sky is a carved collapsible ceiling; what he made it his prerogative to break through with his flights of mind.

At this point, the reader is free to ask why attempt to place Sax and his buildings among such a historically vast selection of buildings and scientists? The reason is to speak to a thread of criticism which began with Bud Foote

²⁷ Heidegger, 'The Origin of the Work of Art,' ed. David Farrell Krell, *Basic Writings* (London: Harper Perennial, 1993), 167.

²⁸ *The Holy Bible, Conteyning the Old Testament, and the New* (The King James Bible) (London: Robert Baker, 1611), 1 Kings, chapter 8, verse 11, see <https://www.kingjamesbibleonline.org>.

²⁹ Horace, 'Epistle X, To Aristius Fuscus', in *Horace's Complete Works* (London: J. M. Dent & Sons Ltd., 1953), 230.

³⁰ Nicolaus Copernicus, *On the Revolution of the Heavenly Spheres*, tr. Charles Glenn Wallis, in *Great Books of the Western World 16. Ptolemy Copernicus Kepler*, ed. Robert Maynard Hutchins (Chicago: University of Chicago Press, 1959), 510.

in 1993 in a short article on Robinsón's 'premodernist'³¹ elements in *Red Mars*, and finding its clearest description with Sherryl Vint's 2012 article about *Galileo's Dream*, a later novel looking more singularly into the scientist as a hero of what she refers to as 'amodernity'.³² A concept taken from Latour, amodernity is best described as keeping Enlightenment without modernity; and more extensively put as an 'amalgam' of features from the moderns, the premoderns, and the postmoderns.³³ To that end, Sax's grasp of history as it moves through its progressive world-views follows in step with his own growth out of modernity into something else, a something which is, according to Harding, Jameson, and Leane, yet to be properly defined; character recapitulating history, as with 'history recapitulating evolution' (*Green*, 186).³⁴ Yet, Bud Foote suggests that Enlightenment, as it works in the novels generally (outside the focus of Sax), is a kind of postmodernism, a 'continual sense of itself as artefact'³⁵ – a basic grasp of postmodernism, but still adhering to how the novels imagine their own sense of history as a succession of nestings; a historical babushka doll:

Just as Hawking's world-view encompasses that of Heisenberg, and Heisenberg's that of Newton, and Newton's that of Ptolemy, so Boone's new story of Mars is made to encompass all the stories told about Mars all the back to the Ice Age campfires.³⁶

According to this rubric, the recursive encompassing of a previous epoch works as an outward growth from a Palaeolithic nursery to cosmic colonisation, as Sax finds described in Deleuze. Comparing scientific progress with the stages of Martian literature³⁷ serves in one sense to point to

³¹ Foote, 'Kim Stanley Robinsón: Premodernist,' *Imaginative Futures: Proceedings of the 1993 Science Fiction Research Association Conference* (San Bernardino: Jacob's Ladder Books, 1995), 329-40.

³² Vint, 'Archaeologies of the 'Amodern': Science and Society in *Galileo's Dream*, *Configurations* 20 (2012), 29-51.

³³ For a list of features see page 135 of Latour's *We Have Never Been Modern*, keeping in mind the 'precise...amalgam [he] is looking for': 'to retain the production of a nature and of a society that allows changes in size through the creation of an external truth and a subject of law, but without neglecting the co-production of sciences and societies', 134.

³⁴ 'So the Martian biosphere would not be a case of phylogeny recapitulating ontogeny, a discredited notion in any case, but of history recapitulating evolution. Or rather imitating it, to the extent possible given the Martian environment. Or even directing it. History *directing* evolution' (original emphasis; *Green*, 186).

³⁵ Foote, 'Premodernist,' 339.

³⁶ *Ibid*, 335.

³⁷ Note that in chapter 4 the role of previous Martian narratives on Robinsón's text will be explored more fully. Also consider Foote observing the 'recursiveness' of Robinsón's Postmodernism is 'in its declaration that it is a story encompassing past stories which, in turn, encompass still older stories,' 339.

Robinson's link to Joyce (Foote handles this in no more depth than to claim 'Stan's short fiction reminds us of *Dubliners*', and *Red Mars* is as 'recursive and rich in allusion as *Ulysses*').³⁸ In the interstitial italicized material between Sax's final chapter (the penultimate of *Blue Mars*) and Ann's final chapter, there occurs a grammatically and syntactically jumbled mess of voices among a drunken group of Martians, as occurs in the final pages of 'The Oxen of the Sun' episode of *Ulysses*. Joyce's movement through the styles of history suggests recursion and periodic nesting from style to style to a terminus of glossolalia and drunken speech. Placing this italicized scene between Sax and Ann's chapters at the close of the Trilogy takes elements from both perspectives, and renders one reading of the drunken speech as containing both a sense of itself as artefact, and of a glossolalic loss of speech attribution (*Blue*, 746-51). The spoken words no longer have a corresponding mouth, an issue with a reading such as this which anchors itself in the perspectival nature of the novels.

This issue is easily enough resolved by noting the passage is very short-lived, and has no apparent stylistic rupture with the final chapter, which returns to Robinson's 'conventional surface'.³⁹ The italicised interstices, as said, serve many purposes across the Trilogy, and Robinson appears to take advantage of them when he can. Their lack of consistent narrative time, consistent narration, or character attribution, and the diverse purposes of these intervals, suggests they behave to unsettle the reader's path, but gently, before returning in each chapter to a cohesive and consistent scientific realism. They are little scars and tears in the novels' fabric. Expounding at large about the novels based on them alone is unwise simply on the grounds of the immensely larger comprehensibility of Robinson's clear style. If anything can be said about his habit of using modernist stylistic motifs, it is they ought to be respected as 'domesticated' styles, much in the form of Leane's reading of the whirlpool in *Antarctica*.⁴⁰ Domestication is another way of framing Latour's program to retain and reject specific modes from modernity and its sibling periods.

Foote's mention of the Ice Age, too, was prophetic. And it speaks more to Robinson's, and to Sax's, gather-all sense of history. In many texts, Robinson uses it to continually embody the present moment, as we will shortly see. What he calls the 'future primitive' is, he believes, a utopianism that 'cobbles together aspects of the postmodern and the paleolithic'.⁴¹ The daily life of Ice Age humans is a lifestyle to continue living. What makes this period unique

³⁸ Foote, 'Premodernist,' 340.

³⁹ Ibid, 340; also see Foote, 'Notes on Kim Stanley Robinson's *Red Mars*,' *Science Fiction Studies* 21, no.1 (March 1994), 66.

⁴⁰ Leane, *Antarctica in Fiction: Imaginative Narrative of the Far South* (New York: Cambridge University press, 2012), 52.

⁴¹ Robinson, 'Introduction, *Future Primitive: The New Ecotopias*, ed. Robinson (New York: Tom Doherty Associates Books, 1994), 11.

from the Copernican, or the Ptolemaic, is its flattening of history, or drawing full circle from postmodernity back thirty thousand years. Many aspects of Sax's changing approach to scientific practice follow both Feyerabend's 'anything goes', perhaps with Kuhn's rationality to bolster it (anything goes: provided it gives results), as well as his own slogan of throwing together, or cobbling together. His narrative therefore carries a similar nesting of historical periods (mostly scientific) and model scientists, as is sandwiched into 'The Oxen of the Sun', with the caveat that it reaches no terminus. Vint's reading of Galileo in *Galileo's Dream* coincides with Markley's of Sax and of Frank Vanderwal,⁴² and can here be positioned on the basis that all three begin with naivety and grow into historical awareness. However, a moment in Vint's reading is useful for drawing out the difference between Sax's view of history, and those of critical theorists who find themselves at a similar terminus and lack of vision of a succession; such as Theodor Adorno and Max Horkheimer in their *Dialectic of Enlightenment*.

The paleolithic element of Robinson we have already spoken about. To reiterate, in aiming to read only the surface of the planetext, Ann Clayborne forms the story of Mars largely on the random and non-human 'rocks striking rocks' (*Green*, 419), an ablation of the human element she can never quite fully manage. So far as forming a geolinguistics in the rock-on-rock type found in cave art, the paleolithic enters also in Nadia's narrative in the underground room in Underhill. Both images, I suggested, open onto the stretch of history in which novel human technologies such as rock-breaking and coloured pigments taken from rocks coincided with storytelling to take on a particular form. Ursula Le Guin's 'Carrier-bag Theory of Fiction' also helps balance, or even replace, the violent, masculine image of the hunter with the alternative gatherer figure. By conceiving a phenomenology of rock with the carrier bag analogy, we were able to follow Ann's planet as a place to gather together, or accrete, a certain kind of planetext, where wandering about the surface collecting rock samples is restored as a paleolithic act.

Unfortunately, her planetext is not the only one. In this context, the gathering bag takes on different dimensions. The first of them, obvious enough, is a sense of space in which throwing and cobbling together into a spatial field is planetary, and almost cosmic. Le Guin expounds this vision:

science fiction properly conceived... is a way of trying to describe what is in fact going on... how people relate to everything else in this vast sack, this belly of the universe, this womb of things to be and tomb of things that were... Still there are seeds to be gathered, and room in the bag of stars.⁴³

⁴² See Markley, 'Catastrophe and Comedy,' 15-16.

⁴³ Le Guin, 'The Carrier Bag Theory of Fiction,' eds. Cheryll Glotfelty & Harold Fromm, *The Ecocriticism Reader: Landmarks in Literary Ecology* (Georgia: University of Georgia Press, 1996), 154.

The membrane that holds all this together applies as readily to the site of the novel:

I would go so far as to say that the natural, proper, fitting shape of the novel might be that of the sack, a bag. A book holds words. Words hold things. They bear meanings. A novel is a medicine bundle, holding things in a particular, powerful relation to one another and to us.⁴⁴

As a demonstration of the last and final crucial dimension to her theory, Le Guin came upon the image of the carrier bag by throwing together a part of Virginia Woolf's notebooks to *Three Guineas* and an argument Elizabeth Fisher made in *Woman's Creation* that the bag for carrying nuts and berries was more likely invented before the spear, displacing the image of the hunter with the gatherer. Woolf's contribution was to reconceive 'heroism' as 'botulism', or the hero as 'bottle'; or the 'bottle as hero', as Le Guin turns it.⁴⁵ By using Le Guin's theory with these three levels – the planet, the text, and the hero – Sax's method takes on a paleolithic nature.

The first of two instances which refer to the paleolithic occurs in the italicized prelude to 'The Scientist as Hero', to describe the orbital objects Sax is largely responsible for putting in place: the soletta lenses used to warm, and even burn the planet. The prelude opens:

Hold it between thumb and middle finger. Feel the rounded edge, observe the smooth curves of glass. A magnifying lens: it has the simplicity, elegance, and heft of a paleolithic tool. Sit with it on a sunny day, hold it over a pile of dry twigs. Move it up and down, until you see a spot in the twigs turn bright. Remember that light? It was as if the twigs caged a little sun. (Green, 138)

The attribution is not at all clear. But the presence of an addressee who is told to remember, seems to imply they are being addressed by someone explaining how a soletta lenses in orbit will work. The miniature image of the bright spot caged in the twigs like a little sun is the point at which the analogy brings attention to a different kind of magnifying lens, one with a diameter of a hundred thousand kilometres. The second image also works on a similar comparison of the small and the very large. While travelling across Deimos, a moon of Mars he intends on releasing into space to stop it from being used as a 'weapon platform', he muses that 'it was so obvious the moonlet was shaped like some paleolithic hand tool, with facets knapped off by ancient strikes' (Green, 418). The 'irregular gray potato' Deimos becomes for a moment an object of technological interest.

The role of the Paleolithic in Robinson serves to build a continuum on a scale of prehistory, and to recover from this continuum basic units of humanness which, with some anachronism, we can call utopian; or at least

⁴⁴ *Ibid*, 152-3.

⁴⁵ *Ibid*, 150.

can act as a guide for a postmodernist utopianism. Prehistory is part of Michel's advice to Sax, reminding him that it '*was not just a formless round of the seasons*', but was at least '*half a million years*' which were as '*intellectual as we are now.*' '*Every age has its great scientists*' (Green, 403), he tells him, suggesting that the men and women of the Neolithic and Paleolithic were the first scientists, and responded to their environment with just as much intellectual sophistication; a view Robinson himself holds in his 2013 novel *Shaman*. Michel goes on to quote Galileo:

'The ancients had good reason to think the first scientists among the gods, seeing that common minds have so little curiosity. The small hints that began the great inventions were part of not a trivial but a superhuman spirit.' Superhuman! Or merely the best parts of ourselves, the bold minds of each generation. The scientists. (Green, 404)

Sax takes this comment of Michel on board, from thinking of macrostructures in orbit as Paleolithic hand tools, to appropriating the Parthenon as a metonym for science. Across the novels, the terraformed planet itself becomes the largest emblem of this superhuman feat of the accumulation of human knowledge, to such a degree that these orbital hand tools take on the force and scale of Archimedes levers, or Sax-levers (and none more lever-like than the space elevator).

Water on Mars, as a technological feat, is for Ernest Yanarella the picture of Robinson's technological modernism. In a very critical reading of Robinson, he argues that modernist and enlightenment tendencies hang over and 'perpetuate a driving agenda of technological modernity'⁴⁶ into the often-praised component of the Trilogy: their postmodernity and often assumed distance from modern pitfalls. His question over the 'polyphony of subject-positions'⁴⁷ leads Eric Otto to claim against him that the books do in fact ask the reader to synthesize the spectrum of positions on issues such as terraforming. Yanarella claimed that by dividing the political issues up into perspectival shards, Robinson was 'exonerating'⁴⁸ himself from making any value claims about them. Debate over the nature of perspective and how

⁴⁶ Ernest Yanarella, 'Terra/Terror-forming and Death Denial in Kim Stanley Robinson's Martian Stories and Mars Trilogy,' *Foundation* 89 (Autumn 2003), 18. Also see Yanarella's essay with Christopher Rice, 'Global Warming and the Specter of Geoengineering: Ecological Apocalypse, Modernist Hubris, and Scientific-Technological Salvation in Kim Stanley Robinson's Global Warming Trilogy,' in *Engineering Earth: The Impacts of Megaengineering Projects*, ed. Stanley D. Brunn (London: Springer, 2011), 2233-52; and Adam Trexler, *Anthropocene Fictions: The Novel in a Time of Climate Change* (Virginia: University of Virginia Press, 2015), 158-9; 154-69.

⁴⁷ Yanarella, 'Terra/Terror-forming,' 18.

⁴⁸ Eric Otto, 'The Mars Trilogy and the Leopoldian Land Ethic,' in Burling, *Kim Stanley Robinson Maps the Unimaginable*, 254; Yanarella, *The Cross, the Plow, and the Skyline: Contemporary Science Fiction and the Ecological imagination* (Parkland: Brown Walker, 2001), 280.

much they coincide, coalesce, or refuse to do so, is spread widely across the criticism. Jameson's and Leane's deferrals of 'solutions' is part of stepping back into what Yanarella calls Robinson's 'authorial ruse'.⁴⁹

In the context of modernity, and historical and personal development, the ruse takes on a form more in tune with the core of Yanarella's argument (something Eric Otto in fact fails to detail): that Robinson is 'embedded in... the dialectic of enlightenment',⁵⁰ and that his postmodernist elements serve to efface and deceive the reader of his lingering modernist belief in technological mastery, and 'transforming all entities into objects,'⁵¹ in this case of the planet.⁵² Otto focuses his reading on perspective and the demand put on readers to synthesize the multitude of viewpoints, and not on following the contours of modernity as they flow into postmodernity across the novels, and why such a path might not be entirely honest. The relevance of such a flow resides with Sax more than anyone else, but Yanarella does not organise his reading around him. Instead, like all other critics, he takes up the orbital reading distance. In failing to localise his reading to Sax's arc, he fails also to take full note of the paleolithic continuum, and the sense with which the 'best parts of ourselves' (*Green*, 404) are given greater emphasis in the service of a scientific utopian method.

Robinson's supposed *modernist lag* is composed of another lag of the paleolithic which reaches deeper in history (certainly premodern, at any rate), and suggests an alternative grasp, albeit more original, of technology and its use as a lever for intervention and a different proportion of history. In supporting his claims, Yanarella argues 'Heidegger criticises representational thought as a manifestation of Western science for transforming all entities into objects.'⁵³ With this, the claims of representation and the results of intervening can stand apart in Sax's practice. While it is true Heidegger gives

⁴⁹ Yanarella, 'Terra/Terror-forming,' 18; Otto, 'Leopoldian Land Ethic.' 254.

⁵⁰ Yanarella, 'Terra/Terror-forming,' 13.

⁵¹ *Ibid*, 21. These terms he derives from Heidegger's 'Question Concerning Technology' and 'The Age of the World Picture', *The Question Concerning Technology and Other Essays* (New York: Harper and Row, 1982).

⁵² To quote in full: 'Deconstructing Robinson's Mars series, I wish to argue the thesis that this rich, complex, and contradictory work's post-modern guises and gestures are ultimately overwhelmed and smothered by deeper post-modern impulses and objectives. That is, the two novums shaping and directing the major narrative lines of the short story, novella, and three novels at base perpetuate the driving agenda of technological modernity caught up in the dialectic of enlightenment – an agenda modestly tempered by layers of *au courant* postmodern ideas and anchor points and somewhat counterbalanced by critical theoretical analysis of a politics of the future as history – that is, as an unfolding space of political play and struggle among ideas and forces, new visions and inchoate social movements contending in the present,' 18. Yanarella's understanding of Robinson's postmodernity is mostly informed from Carol Franko's articles, whom he credits for this standard of reading Robinson.

⁵³ Yanarella, 'Terra/Terror-forming,' 21.

an appropriate analogy for the Parthenon in the house of Being⁵⁴ (keeping in mind Jameson's *Prison-House of Language*), another text of German phenomenology can stand in contrast instead as a more favourable view of technology, Peter Sloterdijk's *Rules of the Human Zoo: a response to the Letter on Humanism*, a text that helps locate the archetypal Parthenon (which encompasses knowledge as far back as the Paleolithic) as an archive, bringing it closer in function to the Library of Alexandria than to the votive Greek temple. When 'humanism... gives way to archivism',⁵⁵ Sloterdijk claims, 'reading the right books'⁵⁶ becomes an act of development. The archive is pointed to as the place to go to develop the 'right' characteristics, where, Sloterdijk reminds us, humans can go of their own accord.

If there is one virtue of human beings ... it is ... that people are not forced into political theme parks but, rather, put themselves there. Humans are self-fencing, self-shepherding creatures. Wherever they live, they create parks around themselves. In city parks, national parks, provincial or state parks, eco-parks – everywhere people must create for themselves rules according to which their comportment is to be governed.⁵⁷

The archival space gives Sax the freedom to place his self in transit from his naïve (or in Sloterdijk's terms 'beastly') to utopian existences. As Michel explains, the self in transit is 'superhuman' (*Green*, 404). And Sloterdijk's humanism takes off from Nietzsche's Zarathustra:

It will become necessary in the future to formulate a codex of anthropotechnology and to confront this fact actively.⁵⁸ Such a codex will retroactively alter the meaning of the old humanism, for it will be made explicit, and codified, that humanity is not just the friendship of man with man,⁵⁹ but that man has become the higher power of man.⁶⁰

⁵⁴ 'Language is the house of Being. In its home man dwells. Those who think and those who create words are the guardians of this home. Their guardianship accomplishes the manifestation of Being insofar as they bring the manifestation to language and maintain it in language through their speech.' Heidegger, 'Letter on Humanism', *Basic Writings*, 217.

⁵⁵ Sloterdijk, 'Rules of the Human Zoo: a response to the Letter on Humanism', tr. Mary Varney Rorty, *Environment and Planning D: Society and Space* 27 (2009), 12.

⁵⁶ *Ibid*, 15.

⁵⁷ *Ibid*, 25.

⁵⁸ The fact referred to is: 'As soon as an area of knowledge had developed, people begin to look bad if they still, as in their earlier period of innocence, allow a higher power, whether it is the gods, chance, or other people, to act in their stead, as they might have in earlier periods when they had no alternative,' 24. Fitting Sax to this description allows him to move through his awakening from innocence to no longer being able to defer the political implications of his actions to science.

⁵⁹ For Sloterdijk, friendship grounds the literary act; quoting Jean Paul: 'Books... are thick letters to friends', 12.

⁶⁰ *Ibid*, 24.

This certainly gives another dimension to the value of the organising principle of the building, or park, in speaking to the growth of Sax's methodology. In terms of answering to Yanarella's disquiet over Robinson's modernism, Sloterdijk's anthropotechnics advises an alternative path for getting to Heidegger's poetic dwelling in the house of Being; what is now the archive. Such a place as Heidegger's Clearing Sloterdijk finds to be *enlightening*:

Less and less often do archivists climb up to the ancient texts in order to reference earlier statements of modern commonplaces. Perhaps it occasionally happens that in such researches in the dead cellars of culture the long-ignored texts begin to glimmer, as if a distant light flickers over them. Can the archives also come into the Clearing?⁶¹

In this sense, Sax has become an archivist, even of the Paleolithic, a reader of ancient texts, and a plunderer of the roots of etymologies, as we will see. To measure properly Sax's growth into a naturalist, an ecological side of the archivist in the dead cellars comes from Nietzsche, who claimed 'the worst readers are those who behave like plundering troops; they take away a few things they can use, dirty and confound the remainder, and revile the whole.' Roy Sellars more than Nietzsche himself gives this passage an environmental meaning. His own plundering of Nietzsche in 'Waste and Welter: Derrida's Environment'⁶² is emblematic of the archivist in practice. An ecological ethic finds itself expressed in the zoo of Sax's Parthenon; it becomes a place to throw together, even those texts, periods of history, and etymological roots of words thought to be outdated, aged, lost, ignored, or withered and left in a scrapheap. This archival mound complicates the much-quoted words of Arkady Bogdanov and Sax Russell from *Red Mars* and *Blue Mars*, to 'make it new'; make Mars new; make this attempt at utopia new. The echo of Ezra Pound's directive makes its way into Leane's analysis without too much thought as to how a new society can move into a 'successor science' without reliving modernism.⁶³ But the trash ecology of scrapheap confounds the simplicity of newness, asking that the archive is both ancient and revitalising. So far as there is a modernist lag in the Mars Trilogy, it is thrown in with a lag of many historical periods as far back as thirty thousand to half a million years.

⁶¹ *Ibid*, 27.

⁶² Sellars, 'Waste and Welter: Derrida's Environment', *Oxford Literary Review*, vol. 32, no.1 (2010); 'Assorted Opinions and Maxims' 137, *Human All Too Human*, tr. R. J. Hollingdale (Cambridge: Cambridge University Press, 1996), 245.

⁶³ Leane, 'Chromodynamics', 154. Also see Markley, 'Falling into Theory', quoting the opening of *Green Mars*: 'The point is not to make another Earth... the point is to make something new and strange, something Martian...' (*Green*, 2); 133.

This attitude is important for approaching Sax's retrieval of his ability to speak by, in part, educating himself on the root-meaning and archives of words. A few of these stand out, such as 'symbol' and 'weather', but before detailing those in full, Sax's own name indices both this method, and the dimensions of his methodology (his understanding of method).

The obvious top layer of his horticultural namesake, *Saxifraga hirculus*, occurs in his encounter with one in *Green Mars* while walking:

...he moved very slowly from plant to plant, using his wristpad's field guide to identify... his namesake, saxifrage. Rock breaker. He had never seen one in the wild before, and he spent a long time looking at the first one he found: arctic saxifrage, *Saxifraga hirculus*, tiny branches with long leaves, ending in small pale blue flowers. (*Green*, 174)

The Latinate roots of Saxifrage reach back along two main paths of horticulture and mathematics, from the flower used as a lithotriptic solvent or breaker ('frangere') for stones in the internal organs, to stones themselves, *calculos*, or *saxum*, and hence 'rock breaker'. While the *Oxford English Dictionary* warns that *saxum* and *calculus* are not 'synonymous',⁶⁴ their similarity suggests a pollination between medicine, horticulture, and mathematics – the stone counters of the abacus, and the method of calculation later invented by Newton and Leibniz. The reduction of taxonomy in *Saxifraga hirculus*⁶⁵ also brings out Linnaeus's influence on splitting terms for speciation.

In the section pertaining to minerals in his *Natural History*, Pliny the Elder catalogues what he calls 'sponge stones', which 'the Greeks sometimes call 'stone-solvents' because they cure the affections of the bladder and break up stones in it.' Earlier he refers to the name itself: 'it is remarkably good for expelling stones from the bladder, breaking them up... This... is why it is called saxifrage (stone-breaker) rather than because it grows on stones.'⁶⁶ The medicinal lithotriptic purpose of saxifrage is not lost on Sax's narrative *calculus*, which is, in one sense, a therapeutic process in which the metaphorical flower comes to flush out scientism much as it flushes gallstones, a 'flushing of the system' (*Blue*, 665) memory drug.

To call Sax's arc a *calculus* refers, in the first place, to his mathematical bias, and in the second place to Pliny's Latin of *calculos*, stone or gallstone. *Oxford English Dictionary* lists three definitions of *calculus*, firstly as 'concretions occurring accidentally in the animal body (*vesical*, or 'in the bladder' in the case of Pliny)⁶⁷, and secondly as calculation, following the use in mathematics

⁶⁴ *Oxford English Dictionary*, s.v. 'saxifrage', accessed June 21, 2017) <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/171557?redirectedFrom=saxifrage+>

⁶⁵ 'The repulsive, goatish smell that is peculiar to its stands is said to be the basis for its scientific name *hirculus*, which means 'small goat'. <http://www.luontoportti.com/suomi/en/kukkakasvit/yellow-marsh-saxifrage>

⁶⁶ Pliny the Elder, *Natural History*, 6.22.339.

⁶⁷ *OED*, s.v. 'calculus', accessed June 21, 2017, <http://www.oed.com.ezproxy1>.

as a method of calculation first put by the Royal Society in 1672,⁶⁸ which would later split into differential and integral calculus under the hand of Newton. While Newton himself did not call his new method calculus, his original term *fluxions*, or *flux*, continues to allude to the digestive tract, which suggests this form of mathematics is a way of digesting the world by breaking it up and separating its elements. Combining calculation and stone reminds one also of the abacus and stone forms of notation.

A deeper mathematical reference is embedded in *saxifragous*, in which the second half of the compound ‘frag-’, derives from *frangere* in Old French, to break’: *fraccion*, or *fraction*.⁶⁹ To make a fraction, which is also to split the term, continues to trace a mathematical outline. Rock-splitting can then be read as both a literal counting or calculating (so far as counting entails separate integers), and a fractioning; both reductive methods. To place this in the framework of Feyerabend’s scientist as sculptor, consider that the analogy between physics and stone is not unique to Robinson’s use of *Saxifraga*. Jacob Bronowski draws out the same relation in his essay ‘The Grain in the Stone’, in which more than all the passages available to quote, one stands out:

Of course, it cannot be literally true that what the sculptor imagines and carves out is already there, hidden in the block. And yet the metaphor tells the truth about the relation of discovery that exists between man and nature; and it is characteristic that philosophers of science (Leibniz in particular) have turned to the same metaphor of the mind prompted by a vein in the marble. In one sense, everything that we discover is already there: a sculptured figure and the law of nature are both concealed in the raw material.⁷⁰

The cliché is, he claims, that science always reduces, while art always synthesizes.⁷¹ But what is clear from both his essay and our understanding of Sax’s changing method, a scientific method enriched by a linguistic tradition achieves both, and so far as it is measurable in the novels, the result is the terraformed planet itself, a sculpted reality, as Feyerabend says.

Another etymological root of *fraction* puts us in the realm of the scientist as the shaper of what he or she studies, a point given political emphasis in Leane’s reading of Robinson’s colour symbolism. In Old French, *fraccion* is in close orbit with *façon*, an early term for *fashion*, that is, in English as early as 1320 (*fasoun*), ‘to make, build, shape.’⁷² To fracture, to count the fraction, is

library.usyd.edu.au/view/Entry/26280?redirectedFrom=calculus#eid

⁶⁸ *Ibid*, see entry 3., as in: ‘*Math*. A system or method of calculation, ‘a certain way of performing mathematical investigations and resolutions’ (Hutton)...’

⁶⁹ *OED*, s.v. ‘saxifragous’, accessed June 21, 2017, <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/171559>

⁷⁰ Bronowski, *The Ascent of Man* (Boston: Little, Brown and Company, 1973), 115.

⁷¹ *Ibid*, 113.

⁷² See in *OED* both entries of ‘fashion’ as noun and verb, <http://www.oed.com.ezpr>

nicely met nearby with fiction and fact, underlining what Leane calls Robinson's 'science faction',⁷³ referring both to the factual and the fictional dimensions of his work, keeping in mind that fiction is 'seditious action',⁷⁴ to break apart from the whole.

After taking up this method of words and their roots, being able to name, or coming against something unnameable, is a serious matter. Appropriately, then, plant life provides an angle on this unnameable element, what was earlier the unexplainable, giving some sense that naming and explaining benefit from throwing together, digging up roots, and pollinating with other ideas. For Jameson, the unnameable is Utopia itself. Quoting from *Blue Mars*, when Sax inspects the plant life growing next to a pond: 'Where the green [of the leaves] shaded into red was a color he couldn't name, a dark lustrous brown stuffed somehow with both its constituent colours' (*Blue*, 66; *Archaeologies*, 409). The same scene, however, brings out a far more important element to Sax's method, and takes us closer to answering why he, more than anyone else, solves the memory problem in 'Experimental Procedures', than to the utopian blind spot in between colours. This is an important addition to this section of Jameson's analysis, for it is on the grounds of the plant life next to the pond that he claims: 'the utopian text is not supposed to produce this synthesis all by itself or to represent it' (*Archaeologies*, 409). The spot between the colours is vacated and unnamed to make room for a deferred solution. Leane builds here on the colour notation of political factions within the novel, using 'chromodynamics' as an 'enabling metaphor'⁷⁵ to 'insist that 'colours' must always be combined, must always exist in concert, but combinations can change, can interact dynamically.'⁷⁶

Later in the scene, before a very symbolic snowstorm of 'whiteness' (Leane accurately claims whiteness is a symbol for science; also as in Nirgal's colour-coding: 'in archetypal terminologies we might call green and white the Mystic and the Scientist'; *Green*, 15)⁷⁷, Sax observes two key parts to the bridge

oxyl.library.usyd.edu.au/view/Entry/68390?rskey=uIkdNh&result=2&isAdvanced=false#eid; <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/68389#eid4793704>

⁷³ Leane, 'Antarctica as a Scientific Utopia', *Foundation* 32, no.89 (2003), 27-35.

⁷⁴ *OED*, s.v. 'faction', accessed June 21, 2017, <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/67486>

⁷⁵ In more detail, quantum chromodynamics refers to the 'asymptotic freedom in the theory of strong interaction', discovered by David Gross, H. David Politzer, and Frank Wilczek. Strong interaction is the nuclear force that affects the events of quarks, anti-quarks, and the movement of the gluon between them. Leane's interest lies in the colour charge of every quark, red, green, and blue, emblematic of the red and green factions of the novels, and, in the final colour of blue, of the synthetic utopianism. http://www.nobelprize.org/nobel_prizes/physics/laureates/2004/

⁷⁶ Leane, 'Chromodynamics', 147.

⁷⁷ Leane provides a useful separation between Sax's whiteness and the whiteness of Brian Aldiss in *White Mars*, a novel partly written in response to Robinson's Trilog.

between the plant life of the planet, and the life of the mind, both of which are under concurrent development. The first is that ‘the dead plant matter would only be more fertilizer in the end’; ‘new life fed on the compost⁷⁸ of their ancestors’ (*Red*, 206); a point to be taken up at greater length in chapter 4. And the second is his observing the two processes taking place in this fertilization:

...now their presence here made the entire plain, everything he could see, into one great fellfield, spreading in a slow tapestry over the rock; breaking down the weathered minerals, melding with them to make the first soils. (*Blue*, 67)

The movement of the slow tapestry, and the breakdown of the rock which forms the fellfield speaks to these two processes. Saxifrage, being a high alpine flower, finds ‘hospitality’ in a ‘crack in the moraine’ (*Green*, 172), garnering another side to its naming as rock-breaker.

In time there was enough organic material in this matrix to support other kinds of flora, and areas at this stage were called fellfields, *fell* being Gaelic for stone. It was an accurate name, for stone fields they were, the ground surface studded with rocks, the soil between them and under them less than three centimeters thick, supporting a community of small ground-hugging plants. (*Green*, 173)

For Aldiss ‘whiteness seems to symbolize a desire to see blankness and emptiness’, while for Sax whiteness is scientific practice without politics (Leane, ‘Chromodynamics’, 147). In *Blue Mars*, while speaking on the Parthenon-like structure of science and reviewing scientific literature on a given subject, Sax lays a path from ‘gray literature’, the ‘background literature’ sometimes written by a ‘syncretist’ but who often holds the ‘status of outsider’ to established paradigmatic science, to the ‘white literature’ of peer-reviewed journals (*Blue*, 656-7). It is clear from what has been said, and from Leane’s study, that the Mars Trilogy fits somewhere on the gray spectrum, or as she claims on the colour spectrum in which dynamic combination and recombination are always occurring; in terms soon to be very relevant in this chapter, ‘cascading recombinant chaos’ (*Blue*, 656). The benefit of introducing Feyerabend into the fray of this recombinant system is not to insist alongside Leane on the deeply political nature of science, but to more carefully ensure politicians and political parties do not co-opt scientists by holding a gun to them under the table. *Against Method* is also a fortification of non-method against black swan events, outliers, and unpredictable discoveries. Gray literature is perhaps straddling between white peer-reviewed science and the zone of black swans, which, until dynamically entering into the paradigms as outliers or mysteries, is invisible and unknown. Describing Feyerabend’s anti-method, is it useful in the same vein to call gray literature antifrangible; Nassim Nicholas Taleb, *Antifrangible: Things That Gain from Disorder* (New York: Random House, 2014), and *Black Swan: The Impact of the Highly Improbable* (New York: Random House, 2010).

⁷⁸ For a reading of compost in Robinson’s Mars Trilogy, see the work of Chris Pak: *Terraforming: Ecopolitical Transformations and Environmentalism in Science Fiction* (Liverpool: Liverpool University Press, 2016), 169, 168-203; ‘All energy is borrowed’ – terraforming: a master motif for physical and cultural re(up)cycling in Kim Stanley Robinson’s Mars Trilogy,’ *Green Letters* 18, issue 1 (2014), 91-103.

Saxifraga hirculus is also a symbolic filler of the trench or moraine of closure. In the wide lens italics before ‘Homeless’ (Michel’s *Green Mars* chapter), the gulf of the closure is filled with viriditas, ‘green force’; the focus of chapter 4:

Biogenesis is in the first place psychogenesis... noosphere preceded biosphere – the layer of thought first enwrapping the silent planet from afar... until the moment when John stepped out and said Here we are – from which point of ignition the green force spread like wildfire, until the whole planet was pulsing with viriditas. It was as if the planet itself had felt something missing, and at the tap of mind against rock, noosphere against lithosphere, the absent biosphere had sprung into the gap with the startling suddenness of a magician’s paper flower. (Green, 246)

The fullest import of the fellfield and its flora is, in this sense, as a mindscape, the fellfield as mind. An image that arose earlier as one among many of Sax’s metaphors of the mind (*Blue*, 55-6), the fellfield stands out as the matrix on which viriditas slowly forces itself into fruition. The fellfield is made of composting and weathering. And composting, to reiterate the symbolism of *Saxifraga hirculus*, both decomposes and recomposes the remainders of life into something productive, in this case fertilizer. The important analogy here (the weathering and composting of plant life), to be spoken about at length in chapter 4, is between the process of viridical force and the work of generating meaning in the planetext. To bracket the unnameable or indescribable experience as indicating some epistemic limit or failure to imagine, what Jameson suggests makes it utopian, too easily forgets Feyerabend’s switch of emphasis on the problem of knowledge: ‘Reality, or Being, or God, or whatever it is that sustains us cannot be captured that easily. The problem is not why we are so often confused; the problem is why we seem to possess useful and enlightening knowledge.’⁷⁹

With this reframing, the unnameable takes on a significantly different weight, not toward closure and confusion but productivity and meaning. As he continues moving across the fellfield, Sax turns his thoughts to this exact cognitive and phenomenological focus.

To weather. This whole world was weathering. The first printed use of the word with that meaning had appeared in a book on Stonehenge, appropriately enough, in 1665. ‘The weathering of so many Centuries of Years.’ On this stone world. Weathering. Language as the first science, exact yet vague, or multivalent. Throwing things together. The mind as weather. Or being weathered. (*Blue*, 68)

The full import of the metaphor very quickly arrives in the form of a bank of cumulus clouds, ‘their bottoms resting on a thermal layer as levelly as if pressing down on glass’ (*Blue*, 68). It is an invisible glass sheet which allows a strangeness of the thermal layer phenomenon to come into view; a visual display of the ‘layer of thought’, the mind as it once moved for Inigo Jones at

⁷⁹ Feyerabend, *Against Method*, xvi.

Stonehenge,⁸⁰ and moves now for Sax around the fellfield and the cumulus clouds. Unlike Michel's 'centrifugal antimony' (*Green*, 246) of mind and rock, and his prizing of mental life preceding biological life, the trench of closure appears for Sax horizontally in between banking clouds and fellfield. This serves to set up a deepening of the metaphor as the clouds develop into a snowstorm.

'The bubble of whiteness' (*Blue*, 69) inside which Sax is lost in the snowstorm is readable, in a strictly political sense, as the power his science is exerting over the planet turned back on himself, even of some paradigmatic closure; a karmic storm of scientism. Another reading in tune with a fellfield phenomenology of mind transforms the thermal layer of thought into a radically reduced and threatening space of the bubble. Proposing a storm of justice is being imposed almost by the planet itself, or worse by an authorial presence who wishes to teach Sax a vital lesson, misses how the warm thermal of mind, a bubble of awareness, is invisible and opening to the weather of sky and field. Here the mind as fellfield is met with the mind as sky, and thought-objects as clouds. Arranging the scene through weather, both in the sense of language as weather, and weather as shaped on the multivalence of language, forms an opening in which Sax's mind is not only free to float, but to enter into and form itself on his surroundings – fellfield, thermal layer, clouds, wind. The way his mind grasps the scene through this opening is organised as a blend both of his scientific inquiry into the field, its flora, the thermal layer, and his language ability. In this sense, Heidegger's claim on the equal ratio and 'exact yet vague' shapes of clouds and language fittingly complements Sax's 'weathering': 'language is the language of being, as clouds are the clouds of the sky.' Turning to the fellfield: 'with its saying, thinking lays inconspicuous furrows in language. They are still more inconspicuous than the furrows that the farmer, slow of step, draws through the field.'⁸¹

Due to faintness, the furrowing of thinking is difficult to trace, as difficult as measuring weather. With Sax's computer simulations, then, resides a component of a thinking machine with an algorithm for chaos, the only kind able to run weather simulations. The development from a 'characterless AI' (*Green*, 13) to a thinker laying furrows in his being, so far as this is seen in his applying of language, allows for a more detailed phenomenology of the red planet to arise. For Jameson, the level of detail is in excess, and challenges the predictive power of the algorithm. The problem, as he claims, is having too much information (*Archaeologies*, 395). N. Katherine Hayles locates chaos science in the same realm, claiming it 'had been conceptualized as extremely

⁸⁰ For the origin of the passage Sax quotes, see John Webb, *The Most Notable Antiquity of Great Britain, vulgarly called Stone-Henge, on Salisbury Plain, restored, by Inigo Jones...* (London, 1725), 88.

⁸¹ Heidegger, 'Letter on Humanism,' *Basic Writings*, 265.

complex information rather than an absence of order.⁸² And Deleuze and Guattari less accurately: ‘chaos is characterized less by the absence of determinations than by the infinite speed with which they take shape and vanish.’⁸³ This would seem to ‘provide a program [or algorithm] for generating’⁸⁴ a utopian language. Markley’s suggestion we turn to Lacan to find an alternative to representative simulation, something which does not imitate but ‘precedes its object’,⁸⁵ much like Michel’s noosphere, means accepting this faintness and extreme detail as an inherent problem. And as such the capacity for a utopian simulation is merely its failure to imagine.

But the conceptual plain Hayles mentions, the psychoanalytic simulation of lack, and the overdetermining of phenomena and data, all ignore this crucial experience of mental and planetary weather, of Sax’s growing sense of his own embodiment of and anchorage in his surroundings. For example, Hayles claims that ‘for anyone who has seriously studied how language works is aware... that it shapes even as it articulates thought’, and that ‘as soon as discovery is communicated through language, it is also constituted by language.’⁸⁶ Like the overdeterminate, Hayles too easily gives the swirl of chaos over to a reductive determination. Why should it be language alone shaping, or sculpting, thought and not contrariwise? Or some uneven messy exchange between both? And why not a more expansive Being that appears to hold both like clouds in the sky? Feyerabend chooses instead to place this uneven development not with language as such but historical process:

Such a procedure makes sense only if we assume that the elements of our knowledge... are timeless entities... However, the procedure overlooks that science is a complex and heterogeneous *historical process* which contains vague and incoherent anticipations of future ideologies side by side with highly sophisticated theoretical systems and ancient and petrified forms of thought.⁸⁷

⁸² Hayles, ‘introduction: Complex Dynamics in Literature and Science’, *Chaos and Order: Complex Dynamics in Literature and Science*, ed. Hayles (Chicago: University of Chicago Press, 1991), 1.

⁸³ Deleuze and Felix Guattari, *What is Philosophy?* (New York: Columbia University Press, 1994), 42.

⁸⁴ Robert Markley, ‘Boundaries: Mathematics, Alienation, and the Metaphysics of Cyberspace.’ In *Virtual Realities and Their Discontents*, ed. Robert Markley (Baltimore: John Hopkins University Press, 1996), 55-77.

⁸⁵ ‘If representation, as Lacan suggests, is predicated on a fundamental lack, if it entails ‘the murder of the thing,’ simulation, he argues, ‘precedes its object: it doesn’t imitate or stand in for a given thing, but provides a program for generating it.’ Markley, *Dying Planet*, 356; ‘Falling into Theory’, in *Kim Stanley Robinson Maps the Unimaginable*, 123. For the passage Markley quotes, see Steven Shaviro’s *Doom Patrols* (London: Serpent’s Tail, 1996), 17.

⁸⁶ Hayles, ‘Introduction’, 5.

⁸⁷ Original emphasis. Feyerabend, *Against Method*, 107.

It is key to hold in mind Feyerabend's voicing of the problem of knowledge, quoted earlier. He continues to find in this historical messiness not only a method but a path of uneven development:

Many of the conflicts and contradictions which occur in science are due to this heterogeneity of the material, to this 'unevenness' of the historical development, as a Marxist would say, and they have no immediate theoretical significance.⁸⁸

The procedure of others, Hayles, Jameson, Leane, and Markley, is to equally overlook how this unevenness, or furrowing, persists to be useful and enlightening. In service of clarity, Hayles displays a significant lucidity on the impact of chaos theory on science, which deserves attention to avoid lumping her too quickly in with others:

The claim is sometimes heard... that the science of chaos challenges traditional ideas of how science is done. But the science of chaos is not opposed to normal science. It *is* normal science.⁸⁹

This passage alone serves not only to place the new paradigm within Kuhn's normal science, but also hold together the value of normal science's capacity to integrate new approaches. So far as chaos mathematics forms a part of Sax's experiential grasp of his mental and natural phenomena, it also suggests a way in for the reader. George B. Handley, writing about environmental phenomenology, claims: 'the fruitful tension [in Walcott and Kincaid] is between historicizing and aestheticizing the landscape, and both become possible in the phenomenological encounter with natural forms.' He continues to claim that 'ethical burden on the critic to look at literature phenomenologically... implies the need to question the perception of the environment, one place and one author at a time, seeing literature in all of its *idiosyncrasy*' (my emphasis).⁹⁰ Unevenness, heterogeneity, detail, sensitivity to initial conditions, idiosyncrasy, recall a furrowing or corrugating of language due to a weathering of mind and a language lost in its fray, but cohering into a useful and enlightening productivity.

A description in James Gleick's book of gray literature, *Chaos: Making a New Science*, also focuses on clouds and furrowing, only now to draw an analogy with the gray matter of the brain:

At Los Alamos, in the lee of a great volcanic caldera, the clouds spill across the sky, in random formation, yes, but also not-random, standing in uniform spikes or rolling in regularly furrowed patterns like brain matter. On a stormy afternoon, when the sky shimmers and trembles with the electricity to come, the

⁸⁸ *Ibid*, 106.

⁸⁹ Hayles, 'Introduction,' 4.

⁹⁰ George B. Handley, 'Toward and Environmental Phenomenology of Diaspora,' *MFS Modern Fiction Studies* 55, no.3 (Fall 2009), 656; Also see Brian Russell Roberts, 'Archipelagic Diaspora, Geographical Form, and Hurston's *Their Eyes Were Watching God*,' *American Literature* 85, no.1 (March 2013), 125.

clouds stand out from thirty miles away, filtering the light and reflecting it, until the whole sky starts to seem like a spectacle staged as a subtle reproach to physicists. Clouds represented a side of nature that the mainstream of physics had passed by, a side that was at once, fuzzy and detailed, structured and unpredictable.⁹¹

It is not merely the clouds, or the furrowed patterns, or the subtle reproach, the fuzzy and detailed ('exact yet vague') structured unpredictability that brings us into the context of Sax's methodology. The analogy to brain matter is more than apt. It signals an overlap Sax makes between these procedures and phenomena of mind, the method of loci, the fellfield and weather, with brain structure. The way he takes into the problem of memory senescence in 'Experimental Procedures' is via his living through of an embodied mind, by conceiving and reconceiving of the mind as metaphorically arranged in the form of a Parthenon, a palace, the Echus Overlook labs, a fellfield, a sky (*Blue*, 662). Gray literature and Sax's gray matter adopt very much the same throwing together of apparently random information, arranging and rearranging, in the end cohering into insight and genius. The question, then, on these metaphors of mind, is how the layering of fields of perception cohere into a meaningful structural unpredictability, fuzzy and detailed, exact yet vague.

In one passage Sax gathers up all of what he considers to be the metaphors of mind as they have occurred across modernity, beginning with 'clockwork and Descartes', continuing up through 'geological changes for the early Victorians', Freud and the steam engine,⁹² 'computers and holography for the twentieth century, and AIs for the twenty-first' (*Blue*, 55-6). This first confirms what he later discovers to be the deeply 'contextual' (*Blue*, 682) nature of memory, fitting scientific practice into the specific guiding principles of different historical periods, and secondly, except for geology, focusing theories of mind on technologies and scientific instruments. But Sax is dubious about Freud's steam engine brain, and all the previous others. While working on the memory problem, the gray and white literature on the topic from centuries past fell into the "machine fallacy", a variant of the pathetic fallacy', or into the brain as hologram due to the 'everywhere and nowhere' neural mapping of memory (*Blue*, 661). Each of these working analogies is epiphenomenal, allowing consciousness no more significance than as a side effect of mechanical processes such as steam, the hologram, or glow emanating off the brain-machine. Sax instead thinks more of two possible metaphors, pointed to the physical context of the fellfield and sky, and to the expanse of the cosmos. This last he thinks 'a bit grandiose' (*Blue*,

⁹¹ Gleick, *Chaos: Making a New Science* (Cardinal: Sphere Books, 1988), 3.

⁹² '...for the Freudian traditionalists, steam engines. Application of heat, pressure buildup, pressure displacement, venting, all shifted into repression, sublimation, the return of the repressed. Sax thought it unlikely steam engines were an adequate model for the human mind' (*Blue*, 55-6).

56), and later (in the next chapter), we will pick up this grandiosity with Sax's criticising of Deleuze's cosmic megalomania. The comfortable proportion is the realm of the senses, the visibly mappable fellfield and sky with their weather and 'storm fronts of thought, high-pressure zones, low-pressure cells, hurricanes— the jet streams of biological desires, always making their swift powerful rounds . . . life in the wind. Well. Throwing together.' (original ellipses; *Blue*, 55-6).

None of these metaphors should be dismissed or thrown away entirely. As Feyerabend argues, the uneven development of the 'inverted tower argument helped Galileo to discover the natural interpretations hostile to Copernicus.'⁹³ Outmoded theories are sometimes useful, but only according to a discerning mysticism, which Feyerabend describes with something of Sax's exact yet vague language: 'If names are that important I can easily provide one – mysticism – though it is a mysticism that uses examples, arguments, tightly reasoned passages of text, scientific theories and experiments to raise itself into consciousness.'⁹⁴ Each of these metaphors have served to solve the problems of their time,⁹⁵ problems which were guided and shaped in part by their technologies, scientific instruments, and historical and geographical surroundings. This is Donna Haraway's 'situated knowledge'.⁹⁶ The cosmic metaphor, then, is too transcendent and threatens to explode the situated anchorage for a placeless and timeless cosmology. The rocky fellfield does not. It serves to guide Sax's new sense of language into its furrows, where is found not a cosmic existentialism, or a parochial techno-metaphor for memory, but a complicated region of folds and layers; an ecosystem; a planetext. The great challenge I have argued is taken up in Robinson's applying of different sciences is to press and force as far as possible the comfortable realm of the senses to the scale of the planet; plausible extrapolation. It is inevitable some of the cosmic explosion begins to intrude, but it can be managed in pieces. In the next chapter death is one such intrusive cosmic event, but viriditas manages it into giving meaning, rather than taking it away. Sax's Parthenon does not exclude this cosmic opening, but approaches it gradually, room by room, wing by wing. It is a gradual and

⁹³ Feyerabend, *Against Method*, 105-6.

⁹⁴ *Ibid*, xvi.

⁹⁵ Given that Feyerabend's thesis in *Against Method* is: 'the events, procedures and results that constitute the science have no common structure', he gives no grounds on which to entirely abandon such paths to knowledge. He adds to this stated thesis: 'Concrete developments... have distinct features and we can often explain why and how such features led to success. But not every discovery can be accounted for in the same manner, and procedures that paid off in the past may create havoc when imposed on the future', ix.

⁹⁶ Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,' *Feminist Studies* 14, no.3 (Autumn, 1988), 575-599, passim.

deliberate gathering of knowledge, as slow as terraforming, which enables a comfortable dwelling on the terraformed planet.

It needs also be said this opening is not by any means fought off. One occurrence on the planetary scale is weather, charted and mapped as deterministic non-periodic flow. To make this bridging of weather and mathematics clearer in the form of readerly analyses, Feyerabend claimed with *Against Method*: ‘I want you to sense chaos.’⁹⁷ Anarchy, he said, is ‘excellent medicine for epistemology.’⁹⁸ The time-consuming nature of scientific work takes on board the careful management of outliers, errors, subtle details, and vague assumptions that need uprooting. Feyerabend quotes Vladimir Lenin when he himself contoured the furrows of history when addressing political parties and revolutionary vanguards. As the historical anchorage of the scientist makes clear, ‘the lesson...is the same.’⁹⁹ The writing of an address, the practicing of science, first finds itself in thinking, and thinking grounds itself in the locale (or loci). To come to a bridging method – writing, experimenting, thinking – is to acquire an updated scientific method sensitive to the exact yet vague furrows of historical experience.

The furrows at the end of Heidegger’s ‘Letter on Humanism’ illustrate these folds of careful deliberate thinking, full of moraines and cracks, inside which Sax’s saxifrage can catch on and grow. Furrowing is also a concerned wrinkling, a puzzlement at the rich, varied, and many-sided content of phenomena. Yet Sax’s curiosity and ‘fascination’ at the many ‘iterations’ of his weather simulations, different at every stage and every magnification of its geometry and fluid mechanics, means he has learnt how ‘thinking *gathers*¹⁰⁰ language into simple saying’; gathering here also to mean folding, wrinkling, and layering. The closure of meaning Michel experienced is not here an issue. Instead, the gathering principle of Sax’s updated scientific method of throwing things together into a carrier bag or Parthenon of knowledge, and using what he gathers to plant more seeds (in this case literally across Mars: ‘he bent over and planted another seed’; *Green*, 422), means the overdetermination of abundant experience does not vacate meaning, but grows it. Heidegger’s ‘inconspicuous furrows’ are in the first sense complicated, hidden, vague, and ambiguous, but also nascent. These qualities in fact generate useful and enlightening meaning, and forms the simple saying of Sax’s new language. Vagueness assists in gaining exactitude. Furrowing is what enables Sax as the farmer-naturalist-scientist, and us, his readers, ‘slow of step’, to deliberate meaning from the planetext.

⁹⁷ Feyerabend, *Against Method*, xv.

⁹⁸ *Ibid*, 1.

⁹⁹ *Ibid*: ‘History generally, and the history of revolutions in particular, is always richer in content, more varied, more many-sided, more lively and subtle than even’ the best historians and the best methodologists can imagine.’

¹⁰⁰ Heidegger, ‘Letter on Humanism’, 355.

The spur of the mind: Da Vinci Crater and scientific insight

I had lost a head and gained a world.
– D. E. Harding

The Bodhi is not a tree
The clear mirror is nowhere standing.
– Hui-neng

*...if there was a bird in sight she tracked it, watching it more closely than
birders had ever before watched a bird, imitating its every twitch and
flutter, to try to learn the genius of its flight.*
– Kim Stanley Robinson¹

THE METONYM OF THE Parthenon shows Sax's deliberate structural awareness of method, a methodology of his own practice. As a way of organising his reading of the planetext, it represents a way for deliberating its meaning, piece by piece, until it composes a planet and corresponding knowledge. However, as seen in chapter 1, most of the planetext remains in the dark, hidden, outside of structural walls. It would seem from following Michel's depression as overdetermination that such a shadowy component of the planetext drastically confounds and limits interpretive conduct. Timothy Clark claimed such a planet as ours under the force of Anthropocenic climate change is so 'hard to deal with', critically speaking, 'as a sustained and direct object of analysis because the issue is one that refuses to stay put, dispersing as you look at it into multiple questions, disciplines, and topics.'² And Tim Morton labelled it a *hyperobject*, a vast 'nonlocal' object 'massively distributed in time and space relative to humans.'³ Both close down the planet as a conceivable unit of narrative, instead pointing out the excess which lies unavailable beyond comprehension. It seems the availability of the planetext

¹ Harding, *On Having No Head: Zen and the Re-Discovery of the Obvious* (Guernsey: The Guernsey Press, 1986), 2; Thomas Merton, *Mystics and Zen Masters* (New York: Dell, 1961), 18-9; cf. Mark Epstein, *Thoughts Without a Thinker: Psychotherapy from a Buddhist Perspective* (New York: Basic Books, 1995), 89-91; Robinson, *Blue Mars* (New York: Bantam Spectra Books, 1996), 505; cf. Jon Kabat-Zinn, *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life* (London: Piatkus, 1994).

² Clark, *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015), 10.

³ Morton, *Hyperobject: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), 1.

will go a long way to conceiving of its meaningfulness, or ability to generate meaning, of which terraforming is its objective correlative. Making a critical assessment against Sax's scientific method and to suffice for a faintly outlined 'successor science', leaves too little room to discuss how Saxifrage's deliberate approach is not his only way into and over the planetext. But another way decidedly less deliberate and more on the spur of the moment finds its practice in what Sax refers to as haecceity, or thereness, which in his own words means to focus on 'the particular individuality of every moment' (*Red*, 292-3) in its own *thisness*. How these two components of Sax's narrative, chief terraformer and practitioner of haecceity, come to announce the meaningfulness of the planetext will now be our focus.

Aside from signalling the total fold of meaning, 'furlowing', as we saw at the close of the previous section, instead increases the complexity and detail of language which is gathered around the concept of planet. The writing of the planetext is partly enabled by its furlowing, as much as by the thinking that lays furrows in this language. The conduct of haecceity is to approach this dimension of the planetext through its moment to moment furlowing. Metaphorically speaking, the fine details of the planetext mean this attentional focus need be given greater emphasis, and equal importance as its more encompassing counterpart of critical summary. As seen with the Parthenon and the way Sax deliberates his methodology, the kind of encompassing or overview reading found in most criticism of the novels easily extends this deliberate way of reading which seeks to encapsulate the narrative into short explications. This has been a limit on criticism thus far, which the length of this study alone hopes to address. A more detailed focus on the *thisness* of the Trilogy's moments helps elucidate how this part of Sax's method works for himself on the planetext. By adding it to the other pieces of his methodology, we will see that viridical force begins to form itself not only as a biological force for terraforming but also one of the textual forces within the Trilogy that both elicits the planet and hides its totality, both furrows its land, and seeds it in the act of terraforming. This section, which will focus on the fine detailing of individual passages, will lead us to viriditas where it will be extended into chapter 4 as the chief planetary force of the planetext.

To address one side of viriditas before a much longer discussion later, we must note the early use of the term pertained to freshness, as in *amoris viriditatem*, 'the freshness of love'.⁴ As an imperative of momentariness, it stands against often-quoted directive in the Trilogy, echoing Ezra Pound, to 'make [Mars] new' (*Blue*, 34): 'the point is the make something new and strange, something Martian', (*Green*, 2). But the modernist imperative on

⁴ Heloise to Abelard, 'Letter 48', *The Lost Love Letters of Heloise and Abelard: Perceptions of Dialogue in Twelfth-Century France*, Second Edition. Constant J. Mews, tr. Neville Chiavaroli and Constant J. Mews (New York: Palgrave Macmillan, 1999), 251.

newness might better be replaced with the 'greening power' (*Red*, 211) of viriditas, or 'freshness'. The freshness of viridical force depends in a very significant way on its momentariness, of which newness makes no claim. In one sense, it comprises the reader's present moment of reading. If revolution is to be given any sense of forceful success in the novels, either scientific, political, or hermeneutical, it depends, as Maya says, on 'the spur of the moment' (*Red*, 19, 68; *Green*, 455, 423-550). This cliché should be taken quite seriously, at least in two sides of its meaning which colour its more pedestrian usage as urge or impulse. On top of thinking about it as the force or push of the moment, the older use of the term as the pinwheel on a horse rider's shoe suggests something of a drive.⁵ It is in this spurring nature of momentariness that we can speak of haecceity as a spontaneous acting on the spur of the moment. When Sax frames viriditas as a 'love of place' he surmises it is a love 'spontaneously generated' (*Blue*, 640).

In speaking to this as a readerly conduct of close attention, meaning produced in the momentariness of the reader's present of reading, and of the detailed way in which the planetext works on a viridical spur, akin to the rocky spur protruding from a mountainside (a partially hidden presence), it benefits to develop the spur from the angle of style. The spurring style of a text, such as we find in Derrida's layering of the term in *Spurs: Nietzsche's Styles* for addressing the folding and unfolding of style, leaves it 'indefinitely open' and closed, like Nietzsche's umbrella.⁶ For Derrida, the spur keeps folded up its own meaning: 'the English spur, the eperon, is the 'same word' as the German Spur: or, in other words, trace, wake, indication, mark', and that 'style might be compared to that rocky point, also called eperon' (*Spurs*, 41). A curious omission from this list is the spur of the bird's beak, an image which introduces this sense of the spur's edge as a haecceity or point of attentional focus, the direction of a gaze, which appears in the third episode to be discussed here as the finch's head which darts from direction to direction and symbolises the 'different ways of knowing' (*Blue*, 438), the many succession of different viewpoints. The spur of the beak is the sharp point of focused inquiry, a haecceity, a pointing to the thisness of things in its attentional field.

So far as this is useful as a readerly conduct, 'wake' and 'trace' recall the gathering of material behind oneself in the way of Wolfgang Iser's retentive

⁵ *Oxford English Dictionary*, s.v. 'spur' accessed May 8, 2017, <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/187954?rskey=mb5W5l&result=1&isAdvanced=false>.

⁶ A strange scrawl on one of Nietzsche's manuscripts becomes for Derrida a focal point of this opening and closing: 'I have forgotten my umbrella'. Because 'there is no infallible way of knowing the occasion of this sample', the furling and unfurling of the umbrella take the form in Derrida's argument on the closing and disclosing of textual meaning (*Spurs*, 123). *Spurs* also makes a claim, or avoids making claims, about the valency of truth in language, and the problem with rendering truth as 'woman' (*Spurs*, 35-7).

material after being read forms itself like foam following a ship, an image Derrida also chooses for that exact point to describe Nietzsche's style: 'like the prow... of a sailing vessel, its rostrum, the projection of the ship that surges ahead to meet the sea's attack and cleave its hostile surface' (*Spurs*, 41, 39).⁷ As Iser said, 'the wandering viewpoint carves its passage through both at the same time and leaves them to merge together in its wake.'⁸ This sense of what is left behind and what lies ahead forms in the novels a standing reserve of the planetext, its store of viridical force, functioning as a spur of meaning. To shift the basic temporal mapping of Iser's before-after rubric, the mundane planet ('belonging to the earthly world')⁹ lying diffusely about the present moment suggests the ambience of viriditas is closer to an atmospheric about-ness than the ocean and sea metaphor of Derrida and Iser. Instead of the boat as an analogy of the reader, the image of the 'owl' (*Red*, 30) and later the finch associated with Sax takes this about-ness of the planetext and figures it as the sky above Chryse Gulf, and the spur of the finch's beak as the pointing instrument of his mode of inquiry into the thisness of phenomena. It is no surprise, then, that the wind on which the birds of Chryse Gulf float flows into Sax's nostrils as a 'mild intoxicant' in this brain (*Blue*, 438). The flowing of air between the sky and his mental space imply that its birds are akin to his searching intellect, and the flight of mind points and inquires with the pointedness of a singular attention.

In the form in which haecceity is directly explained (*Red*, 292-3), it amounts to the 'intense thereness' of experience, a 'religious belief' 'in here-and-nowness, in the particular individuality of every moment.' Individuation is in keeping with Deleuze and Guattari's use of the term in *A Thousand Plateaus*¹⁰. However, a subtler element of suchness as a comparable term from the Buddhist tradition, is possibly alluded to in the religiosity of haecceity on top of its already established originator Duns Scotus.¹¹ The value in sending the term through a perennial ambit is to speak, first of all, to the stark

⁷ I owe this selection of *Spurs* from Nicole Anderson's article 'The Ethical Possibilities of the Subject as Play: In Nietzsche and Derrida', *The Journal of Nietzsche Studies*, issue 26, Autumn 2003, 79-90.

⁸ Wolfgang Iser, *The Act of Reading: A Theory of Aesthetic Response* (London: Routledge & Kegan Paul, 1978), 112.

⁹ *Oxford English Dictionary*, s.v. 'mundane', accessed June 21, 2017 <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/123748?redirectedFrom=Mundane#eid>

¹⁰ Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, tr. Brian Massumi (London: University of Minnesota Press, 1980), 260-77.

¹¹ Timothy B. Noone, 'Universals and Individuation', in *Cambridge Companion to Duns Scotus*, ed. Thomas Williams (Cambridge: Cambridge University Press, 2003), 119; c.f. with another well-known literary usage of haecceity by Gerard Manley Hopkins: John Llewelyn, 'Hopkins Double Discovery, of Scotus and of Himself' and 'Instress Scaped and Inscape Stressed' in *Gerard Manley Hopkins and the Spell of John Duns Scotus* (Edinburgh: Edinburgh University Press, 2015), 12-3, 32, 34, 36, 41-2.

similarity between thisness and suchness; the focus on moment to moment with great exactitude as Samadhi in meditative language; the development of the concentrative component needed for proper mindful attention during meditation; and second of all to point to another instance of Buddhism in Robinson (see chapter 4). At the close of the italicized passage before ‘Experimental Procedures’, Nirgal receives a message from his mother, now in deep space: ‘*wherever you go, there we are*’ (*Blue*, 636), a rendering of a famous phrase, uncreditable, but nonetheless employed as a title of Jon Kabat-Zinn’s *Wherever You Go, There You Are*, written in 1994, detailing a Buddhist-influenced meditative method. When held in the context of the spur, moment to moment ‘onepointedness’, or *samadhi*, is an attending to the spontaneity of momentary flow:

You can think of concentration as the capacity of the mind to sustain an unwavering awareness on one object of observation. It is cultivated by attending to one thing, such as the breath, and just limiting one’s focus to that. In Sanskrit, concentration is called *samadhi*, or ‘onepointedness’. Samadhi is developed and deepened by continually bringing the attention back to the breath every time it wanders.¹²

Such an attention cannot be planned or deliberated. We saw in this chapter already how Sax’s polyphonic genius created an updated utopian approach to scientific method. Yet the Parthenon, the method of loci, and even Feyerabend’s non-method method, were too organised around a clearly deliberated process. Thinking now instead about Sax’s engagement with the spontaneous nature of moments allows us to deepen his methodology and suggest a readerly conduct in line with a close intimate attention, what Iser called a ‘wandering viewpoint’, moving through the moments of the texts like the birds of Chryse Gulf move through the air, directing a sharp attention without preordination.

In three moments of Sax’s narrative is this element of mundane viridical spontaneity at its clearest. The first concerns a cautionary inattentiveness of when thinking can lead to ‘megalomania’ and a excessive cosmic solipsism developing out of a ‘strong anthropic principle’, or if this force is too quickly credited to human consciousness alone. This loss of attention occurs when Sax, following Deleuzian cosmology, tries to explain the uncomfortably ‘unexplainable’ presence of viriditas in the universe as a cosmic burgeoning of life through stages of the expansion of the universe (*Blue*, 639-42). The second two moments occur around Da Vinci Crater, or Chryse Gulf after terraformation, in which his thoughts on mathematical intuition try to knit together his haecceity or focus on the thisness of experience with the realm beyond human perception. But this is not always successful. The Planck realm itself is one such fold beyond the reach of experience which causes Sax

¹² Kabat-Zinn, *Wherever You Go, There You Are*: 72.

some cognitive problems when trying to grasp its minute scale. An intuitive maths, apart from logical and formal, exploits the phenomenal realm, latching on to the same mundanity we saw informed his deliberations of weather and building. Like the spur, it focuses on the passing of moments and what is given in the about-ness of each moment, leading Sax to act on their specific conditions and content.

Exactly how long a moment is, a topic of concern for Sax around Chryse Gulf, reveals something of the folding and unfolding of moments as they occur either as discrete units of individuation or as flow states. How small a moment can be, for example, prompts him to consider the Planck length as a viable counter of individuation. Yet the immense difficulty to imagine such a scale suggests the Planck constant always sits just off the edge of the mind's spur, a phenomenon he calls 'tip-of-the-tongue-ism' (*Blue*, 641); or in Michel's language, *presque-vu* (almost-seeing). Another strange almost-seen spur in Sax's mind appears only in a lapse of attention after which he cannot quite recall his previous train of thought. This spur, now the spur of rock, appears in the space of his mind 'like a rock in his shoe' (*Ibid*), an irritating edge which causes him to stumble. But a stumbling that, as it turns out, is serendipitous for returning him to the present. His sense of moments, then, is formed around his wandering attention to the about-ness of the planetext. What he attends to is the different ways in which the planetext forms in his mind, as a gulf, a chasm, a small rock, a cosmos, and a sky. The way in which the planetext, as he says, 'seeps' into his mind 'like colour' implies moments always sit on the spur, which is but a rocky tip of the rest of the planet. The 'seepage' (*Ibid*) of the planetext arises is as much veridical (truth-speaking) colour as viridical force. The clue only slightly realized is how much genuine insight, and Sax's genius in the novels, depends on being attuned to this viridical force always on the tip of the tongue.

In the moments which lead to Saxifrage's pondering on Deleuze and the cosmic expansion of viriditas (*Blue*, 640-1), while walking across a freshly grown terrain of saxifrage flowers, he finds he cannot define the way in which the scene composes its disparate elements – 'the laminate terrain'; 'the saxifrage in the light'; 'the little car moving to its dinner rendezvous with him'; the delicious weariness in his feet' – into a cohesive and moving experience of 'pleasure' as what he can only approximate as a 'love of place' (*Blue*, 639). But this term of love, interchangeable with 'spirit', as in 'spirit of place', is mysterious so far as it 'catches the eye' and focuses one's regard in the 'centre of the curvilinear landscape' (*Blue*, 640). He tries to explain the attraction of the 'purple saxifrage' itself, an example of viridical force pushing through the soil, in two ways with varying results: crediting it with 'spontaneous generation', and catching on to its wording, his namesake, as a point from which to consider a more egomaniacal model of viridical force expanding through the cosmos.

It is useful to contrast these two ways early, though there will be much more about them throughout this discussion, for noting their vying approaches to viriditas as a writing of the planetext. The spontaneous generation focuses in on the saxifrage as a mysterious arising on the spirit of the place as much as in the field of writing and reading of the scene. To express this in the overriding point to be made across chapters three and four, the generating of plant life (owing to Hiroko's viridical force and to Sax's scientific engineering of terraforming technologies and approaches) is also the generating of textual meaning within the Trilogy. What is uniquely bracketed at this moment is the spontaneity of this generated meaning, where, as we have just seen with the Parthenon, it was also deliberate and procedural. This confusing, though pleasurable, instant in *Chasma Borealis* is pointing Sax toward another side of his method, one he has not yet made into a conscious methodology, a plan with a firm outline of approach. 'Something' about the scene that cannot be reduced and known from its 'elements' (*Blue*, 639) alone escapes the organising principle of his usual methodology. And so he is confronted with the force of life which exceeds deliberate planning of growth and development, and begins acting on its own. As the planet stops being terraformed and starts terraforming itself, a sense of authorship (*Archaeologies*, 402) fades into the mystery of viridical force, vast as the planet itself, but also focused in the specificity of a saxifrage flower. In the first case, this incredible range of resolution between the planet and the individuality of a single instant of life growing in a rock, opens an important approach toward reading the planetext of the Trilogy, that it demands both a wider lens for encapsulating a text-wide view, and a much narrower one that brings us, like it brings Sax, up close to the succession of minute moments. In the second case, an understanding of how meaning is produced as spontaneously as the saxifrage accentuates the value of what we can call reading on the spur of the moment, a reading in which these two lenses of wide and narrow are not merely separate parallax viewpoints to be conducted apart from one another, but in fact mesh together, so that in any one moment the planetext is available and encompassing. Its mundanity and diffuse enframing of individual moments give Sax more than a sense of place, but also behaves to produce a sense of love for this place as spontaneously as mysteriously. The implication for the reader is not to prioritise one method above another, but move through the text with both in mind, to adduce meaning deliberately and spontaneously.

As I am suggesting this growth of meaning appears out of the 'shatter of the land' (*Blue*, 639) without premeditation or planning, the sensing of the availability of the planetext about Sax as he traverses the sand benches cannot help but elicit an insight. His polymorphic genius¹³ developed in the previous section as a deliberate working through of methodologies and word usage. But here it forms itself almost magically and without a plan. Yet this is no

¹³ Markley, 'Falling into Theory', in *Kim Stanley Robinson Maps the Unimaginable*, 131.

guarantee of not being led astray. The turn in his thoughts away from the ground onto a cosmic scale is a distortion of this mysterious nature of mind to produce meaningful connections and insights apparently out of nowhere, or which at least seems so without a preordination of thinking. The struggle among psychologists and neurologists to come to a reductive understanding of creative genius has, one is not surprised to find, fallen far short of explaining its spontaneous nature. The vague hold Sax has on this unexplainable spirit of place allows him to fly off into the universe with the only thing he seems to have a focused hold on, his namesake saxifrage. But rather than ponder some of the more deliberate meanings contained in that word, it is the association itself between it and his own sense of Being which explodes the frame of his placement in Chasma Borealis, and sends him on a flight of mind onto a scale which, as he discovers to his disliking, is nothing short of egomaniacal.

The mundane and routine walking across the chasm to dinner, and eating it, marks out the absurdity of this manic expansion of mind. It also suggests that the force of expansive, even if ‘megalomaniac’, moments of genuine insight also resides in mundanity. Special insight is not merely to be found on as unique flights of mind in which one departs from the local and the specific for the cosmic and immense. But the value of such wild adventures of thought occurs always in and around ordinary routine behaviours and the mundane diffusion of place.

Bruce Gardiner makes this point about radical and routine inquiry, beginning with Thomas Kuhn’s harsh divide between these two ‘kinds’ of thinking, stating that, along with other culprits of a similar dividing,¹⁴ radical

¹⁴ Kuhn: ‘No ordinary sense of the term ‘interpretation’ fits these flashes of intuition through which a new paradigm is born’, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 2012 [1962]), 123. Gardiner recognises the culprits of the division through Heidegger’s ‘peculiarly authentic and the everyday’, Coleridge’s imagination and fancy, and in classical rhetoric between the metaphor and the metonym; for citations see Gardiner, ‘Talking of Michelangelo: Routine and Radical Inquiry into Literature and Aesthetics’, *Literature and Aesthetics* 21, no.2 (December 2011), 187n30. In contrast, he cites Foucault’s *Archaeology of Knowledge*, in which his three ‘fields’ pertain to presence, concomitance, and memory, and Dean Simonton on Creativity among Scientists, who wrote of ‘a flat associative hierarchy’ with highly creative scientists, which ‘means that for any given stimulus, the creative person has many associations available, all with roughly equal probabilities of retrieval’; Foucault, *Archaeology of Knowledge*, tr. A. M. Sheridan (London: Routledge, 1989 [1969]), 64-5; Dean Keith Simonton, ‘Scientific Creativity as Constrained Stochastic Behaviour’, *Psychological Bulletin* 129, no.4 (2003), 483. Note the sense he gives for how the contextual stimulus and the spray of associative options appear to meet in a field of reserves, from which one can retrieve meaning with equal probability. He continues by contrasting to ‘persons who are very low in creativity’ with ‘steep associative hierarchies in which any given stimulus elicits only one or two responses in a highly predictable fashion’ (*Ibid*).

Another instance in Gardiner’s argument is worth drawing out for pointing to an ecocritical approach to the nature of the field of associative options available to

insight ‘is inherently alien to the mind into whose routine it forcibly irrupts.’ Seeing the saxifrage flower as irrupting from the rock supposes this same force of mind, which is in this case alien. Experiencing an insight as a surge which is out of the ordinary directs Sax’s mind not to the mundane planet but to the most alien scape imaginable, the cosmos on a timescale from the big bang to its end, either in the ‘heat death’ of infinite expansion, or the big crunch of cosmic contraction (*Blue*, 640-1). But Gardiner claims the radical and the routine ‘cannot be immiscibly distinct’, that they ‘differ in degree rather than kind.’ To connect the merely routine with the more relevant mundanity of the planetext as it lies diffusely about Sax and the reader, Gardiner places this sense of insight within a field recognisable to Iser’s retentive and protensive space behind and ahead of the present of reading. For Gardiner, another way of thinking (that taken up by Simonton and Foucault) posits ‘that all thought knits the familiar with whatever is not yet and no longer so.’¹⁵ For the reader, as much as for Sax, this way of thinking locates those parts of a text we routinely ‘stop thinking about’ once past them, and those we have ‘yet to think through’,¹⁶ two regions lying either side of the present moment of reading found in Iser’s understanding of the phenomenology of reading. As we are extending this readerly-ness to the planetext itself, it is important to attend as equally to the radical and routine as to the deliberate and spontaneous. In terms of understanding Sax’s capacity for insight and genius, close analyses of three scenes shows that Sax’s haecceity, and the focus on the thisness of experience and objects, incorporates both degrees of inquiry.

the critical reader, is the sense of play given to the play of mind on a flat hierarchy. Gardiner wrote: ‘Heidegger’s lectures ‘On the Essence of Truth’... do little more than realise the tendency... to think of the mind as the creature of what it is forced to think rather than as the player that plays more or less freely with thoughts it shares casually with its fellow players’ (188-9). Considered in context with Joseph Meeker’s *Comedy of Survival: Literary Ecology and a Play Ethic* (Tuscan: University of Arizona Press, 1997), the value it raises in infinite games in which the only goal is to keep the game alive (20), focuses the player’s immersion in thought as moving away from the steep inclines of hierarchical thinking, toward a flat field of more available associations. Meeker claims the play ethic focused in the ‘comic vision is not polarized, but complex: comedy sees many aspects simultaneously, and seeks for a strategy that will resolve problems with a minimum of pain and confrontation’ (15); cf. Evolutionist Geoffrey Miller’s account of the cerebral and artistic genius of *homo sapiens* developing out of a sense of mutual creativity or playfulness of complex skills between courting humans, *The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature* (New York: Anchor Books, 2001); cf. Wolfgang Iser’s reminder of Sterne’s framing of the literary text in *Tristram Shandy* as ‘something like an arena in which reader and author participate in a game of the imagination’, *The Act of Reading*, 280; cf. Jacob Bronowski’s distinction between the ‘flight response of the gazelle’ which is all fear, and the ‘adventure in freedom’ of the ‘runner’ and the ‘child at play’, ‘exploring the limits of [their] own strength’, *The Ascent of Man* (Boston: Little, Brown and Company, 1973), 32-5.

¹⁵ Gardiner, ‘Radical and Routine,’ 188.

¹⁶ *Ibid.*

Thus, we can continue with the first scene, concerning Deleuze and the deformation of genius into megalomania.

Chasma Borealis, the region of focus in this scene, is ‘a large re-entrant in the north polar cap’, carved by ‘katabatic winds’ and ‘sublimation’,¹⁷ and later (in Robinson’s narrative) after the polar cap melted, and the declivities are turned into the channel walls of Chasma Borealis River, leaving ‘beach terraces’ along the side where plateaus of sand benches form ‘an exquisite natural staircase’ (*Blue*, 637-9). It acts in Sax’s mind as a saddle-point, or trough, in which he becomes momentarily stuck. The significance it plays as a ‘crack in the moraine’, this one with an average width of sixty kilometres,¹⁸ is more than symbolic. Not only does Sax find saxifrage ‘stubbornly hunkering down in the protection of broken rock’ (*Blue*, 639), but it plays on his thoughts as a saddle-point in spacetime, a trough in which time slows down, giving way to an absent-minded flight into cosmology. How he drifts onto such a large and incomprehensible scale from the confines of the chasm is due to an interpretive and visual difficulty he faces when walking across the benches of sand.

At first, the composite elements of the scene – ‘the laminate terrain, the saxifrage in the light... the delicious weariness in his feet’ – form ‘something indefinable’, credited to viridical force, evoking a ‘sense of love’ for the place. The saxifrage is at the centre of his attention, a point of apparent clarity where ‘one’s regard focused in the center of the curvilinear landscape.’ His puzzlement over the unexplainable element appears to be fixed at this knotted point of the flower, which appears along with his affection for it to ‘spontaneously generate’ (*Blue*, 639-40). Without being properly attuned to the flower’s haecceity which speaks ‘*myself*’, as Gerard Manley Hopkins said of the spontaneous flinging broad of the name (here literally flung as ‘saxifrage’), the flower remains a conundrum. The Buddhist-like weight of the flower’s suchness cannot yet balance in his mind well enough for him to ‘go’ along with Hopkins’s ‘selves’; that is, he cannot yet spontaneously love and cherish the flower in all its viridical being.¹⁹

In fact, just when the scene appears in focus it also goes drastically out of focus as Sax attempts to solve the puzzling thisness of the sight with Deleuzian cosmology:

As far as Sax could tell, Deleuze was maintaining that viriditas had been a threadlike force in the Big Bang, a complex border phenomenon functioning between forces and particles, and radiating outward from the Big Bang as a mere

¹⁷ Katheryn, E. Fishbaugh, James W. Head III, ‘Chasma Boreale, Mars: Topographic characterization from Mars Orbital Laser Altimeter data and implications for mechanisms of formation’, *Journal of Geophysical Research*, 107, no.E3 (2002), 1.

¹⁸ *Ibid.*

¹⁹ Hopkins, ‘As kingfishers catch fire, dragonflies draw flame,’ *Poems and Prose* (London: Penguin Books, 1985), 51.

potentiality until second-generation planetary systems had collected the full array of heavier elements, at which point life had sprung forth, bursting in 'little bangs' at the end of each thread of viriditas... So viriditas existed in the universe like this saxifrage on the great sand curves of the polar island. (*Blue*, 640)

His thoughts drift on into Deleuze's 'flat universe' which hung 'in a delicate balance' 'between permanent expansion and the expand-contract model', the pivot of which 'appeared to be very close to the present time!' Sax is rightly suspicious of the

implication in Deleuze that they could influence the matter one way or the other: stomp the ground and send the universe flying outward to dissolution and heat death, or catch one's breath, and pull it all inward to the unimaginable omega point of the eschaton. (*Blue*, 640-1)

Deleuze displays a distinguishing 'megalomania', the 'strong anthropic principle' taking on the scale of a 'small god's existentialism', the human frame thrown onto a macroscopic scale. In Sax's mind, Deleuze seems already to have stomped his feet and flown out of balance and into a state of permanent expansion and the heat death of mania, a homeostatic imbalance or Stapledonian flight of mind outward, without a thought to backward contraction. As Sax drifts along with him, megalomania begins to 'seep' as the purpleness of *saxifraga hirculus*, and the anthropic principle shows itself as a graphomantic mark on the planet, the 'mark of the limits of their understanding.' Soon the sublime universe beyond human perception is knowable only in the abstract script of Bao's equations on timespace. At this point he stumbles on the sand benches, and loses the 'cosmological hallucination' (*Blue*, 641).

The trajectory of his thoughts is, by when it is he stumbles, a gradual abstraction out of the present into a cosmic dimensionality, a scale too large to comprehend except with numbers, which has a bizarre impact on his thinking. The focus on his namesake growing in the cracks goes a long way to apprehend his pride and take it along with Deleuze's perceived megalomania, the anthropic principle announcing itself as author of cosmic expansion, and the grower of plants. He traverses the sand benches while puzzling over viriditas with mixed success. His association with Deleuze speaks to a feature of the viridical planet Jameson saw as its humanization, an ontological (though not cosmological) argument for a constructed realism; the 'I behind the not-I' (*Archaeologies*, 402). The flower is, in the company of Deleuze and Jameson, the 'mark of humanization', referred to in Ann's 'wonder' 'why when we look at the land we can never see anything but our own faces' (*Archaeologies*, 398 – note: misquote, excision of 'never'; *Red*, 158); as the mark of a spur, it spurs only manic inflated solipsism. Now written large across the cosmos, the face of Anthropos 'looks back' (*Archaeologies*, 401) at Sax with a cosmic perceptual solipsism. In terms of the planetext of the

Trilogy, for Jameson this solipsism is akin to Sax, who looked and could only see his own authorship, the mark of the I behind the not-I. This is almost as deserving of megalomania as Deleuze. And so too should we hold it with equal suspicion. To borrow from Jameson's terms, the horizon, here found to be the 'limit of their understanding', is the mark of projection, the expanding of a principle till the whole planet, or cosmos, seeps with its colour.

This seepage of the planet (referred to in chapter 1 as Freudian precipitation) ought to be the form by which the planetext is readable. But the macrocosmic scale of the Deleuzian delusion clearly takes Sax off planet, where the credibility and plausibility of the anthropic principle begins to break down under the 'first law of thermodynamics' (*Blue*, 641), and what is called viridical force is unavailable. Graphomania, or hypergraphia (a need to write),²⁰ renders the indefinable element of the scene too incomprehensible except to otherwise adjudicate and explode a strong anthropic principle into the whole cosmos. When writing gets ahead of itself in graphomania, or when reading the planetext does likewise, the spur of 'spontaneous generation' becomes spurious, replacing it with a cosmic spoor ontology, a hyper-anthropo-mania. So far as it might or might not be a way of approaching the planetext, it is meaningless writing, a jumble of an overabundant supply of signifiers cut loose of their anchorage to the planetext itself. The boundaries of the field are thrown too far to provide any grounding on the curved benches of sand. Sax's flight of mind went too far, and he stumbled on the very bench itself.

How much time elapsed since he saw the saxifrage is not counted, though what is clear is a curious departure from an approximate equal ratio of narrative and discourse time into a timescale of the life of the universe itself. The short duration of narrative time and the long procession of cosmic eons suggests the trough of Chasma Borealis has the effect of a saddle-point in mental timespace, rendered as much for us as for Sax in the disappearance of the benches and laminate terrain up until then described with such detail (*Blue*, 637-40), until he stumbles over one of them, and the narrative duration snaps back, at least for a short paragraph. The scene carries the effect of concentrating Sax's sense of self into an immense self-projection out into the universe, an egomania. However, what then occurs is the ground as it rises from beneath to meet his feet as a reminder of what he has for the duration of his reverie forgotten. Deleuze's 'stomping on the ground' to send the planets flying turns into stumbling. His remembering of a field as pervasive and mundane as the rock of the planet takes form in his mind as a rock, compared to a 'rock in his shoe'. By stumbling, the sense is given to the planet of rising up to meet his feet before they can gauge the proper distance of

²⁰ See chapter 'Hypergraphia: The Incurable Disease of Writing,' in Alice W. Flaherty's *The Midnight Disease: The Drive to Write, Writer's Block, and the Creative Brian* (New York: Houghton Muffin Press, 2005), 17-48.

footfall. As he is climbing the planes of sand benches, he stumbles on his ascending because of the way the slope inclines faster than his feet are able, in his lack of attention, to judge. Only in the context of haecceity can we find this a moment of suchness, or *tathata* in Sanskrit, to colour thisness with a Buddhist phenomenology of the space of mind. Suchness means emptiness, but the reader need caution the translatability of *tathata*, for emptiness, as Douglas Harding found out, ‘was a vast emptiness vastly filled, a nothing that found room for everything – room for grass, trees, shadowy distant hills, and far above them snowpeaks like a row of angular clouds riding the blue sky.’²¹

Harding’s sense of mind filled in with a space when at the same time losing his sense of having a head (or in Buddhist psychology, a sense of self), finds one of its canonical expressions in the story of the Buddha’s enlightenment, in which the earth appears as witness to his claim of clear-seeing. When Mara, a demon there to tempt the Bodhisattva, demanded on what grounds he claimed his victory, the Bodhisattva

with his right hand... touched all parts of his body, and then gently touched the earth. And at that moment he uttered the verse:

‘This earth, the home of all beings,
is impartial and free of malice
toward everything which moves or does not move. Here is the guarantee what
there is no deception:
take the earth as my witness.’

And as the Bodhisattva touched the great earth, it trembled...²²

with the force of Deleuze’s stomping feet, but with a difference. Far from implying Sax stumbles on nirvana, his stumbling is a serendipitous snap back to the planet of witness. To understand how the planet surges back into view, as merely accidental but meaningful, we must see that what appears in his mind just after stumbling is the spur of the planet in the form of an irritating rock in his shoe-mind.

...Now what had he been thinking about?

He couldn’t remember. He had been thinking something interesting, he knew that. Figuring something out, it seemed like. But try as he might, he couldn’t recall what it was. It bulked at the back of his mind like a rock in his shoe, a tip-of-the-tongueism that never came through. Most uncomfortable; even maddening. (*Blue*, 641)

²¹ Harding, *On Having No Head*, 24.

²² *The Lavitavistara Sūtra: The Voice of the Buddha, The Beauty of Compassion Volume II*, tr. Gwendolyn Bays (California: Dharma Publishing, 1983), 481-2.

Not merely is the prior cosmic reverie reduced to a tiny rock under his foot, but it is cause for the phenomenon of the rocky spur, a tongue of rock poking out, but never coming through. In the language of his forgotten train of thought, the rock is also the contraction point, imitable of the tiny universe at the big bang. What surrounds it is the empty field of non-space. But, no such cosmology is currently in his mind. Instead, the moment presents a subtle witnessing of the fellfield or palace of mind as mostly empty, filled in with the planet, which is here only a spur of rock, the single remainder of his Deleuzian object of thought, now a rock in his shoe-mind, an irritation occurring *somewhere* in his head. The bulk itself is not forgotten, only its content. Its forgetting is also a remembering of a sort, that his memory is a filled-in emptiness, a loss which is not quite a loss. The bulk is in fact a minor discovery, a sense of memory as built on the planes of Chasma Borealis. The subtlety is itself soon forgotten as he walks back to his car ‘without seeing his walk there’, and eating dinner ‘without noticing’ (*Blue*, 642), seemingly too routine to notice. He might not have learnt his lesson, but the narrator is certainly privy to the thisness of the rock at the back of his mind.

There remains to be spoken some of Sax’s other more successful attempts at intuiting meaning through the suchness of his close attention to individual detail. In explicit terms he relates to Michel in *Blue Mars* this habit of attentiveness:

‘Concentrate on the moment,’ Sax suggested. ‘Each moment is its own reality. It had its particular thisness. You can’t predict, but you can explain. Or Try. If you are observant, and lucky, you can say, *this* is why *this* is happening! It’s very interesting!’ (original italics; *Blue*, 415)

A careful detail to keep in mind with Sax’s conceptual grasp of the very large and the very small is how the human scale forms a middle distance in his understanding of methodology, and by extending this scale onto the planet it forms the intermediate zone of comprehensibility; the planetext resides somewhere in between the very small and the very large, both extremes equally threatening to meaning and understanding. To speak about Sax’s deployment of mathematical intuition, recall that Heidegger saw this human scaling effect ‘mathematical projection’, a term we recognise from Jameson’s horizon of the text as an ideological projection of its unconscious. While Heidegger’s criticism of math is uncompromising, neither intuition nor quantum mechanics²³ doing anything to reduce the way in which mathematics ‘skips over the things’ from which it is trying to ascertain some

²³ David Farrell Krell wrote of Heidegger’s ‘Modern Science, Metaphysics, and Mathematics’: ‘Neither the controversy between formalistic and intuitionistic mathematics in our own time, nor the emendations of classical physics in contemporary quantum mechanics, relativity theory, and thermodynamics, alter the basic structure of the modern mathematical projection’, *Basic Writings*, 269.

‘thingness’, the issue being that the project of mathematics arranges ‘beforehand’ through its axioms ‘what and how’ these things ‘are to be evaluated.’²⁴ Sax’s conduct is very much out of keeping with this phenomenology, preferring to act instead as an intuitionist. Yet, Heidegger is worth raising for the way in which he claims axioms take shape on a horizon, one which I am claiming (as in the first section, with building) projects more diffusely from the planetext, which Sax intuits as a spur of rock in his shoe-mind, an intuition based on deep concentration applied to the ‘particular thisness’ of each rock and sand bench as it arises.

If the unique approach of intuitional mathematics applies at all to the planetext, it is surely that it locates the textual nature of the planet always on the tip of one’s tongue, in the diffuse periphery of reading, always available, but already closed off, always exorbitant to anything that one can say or think about it. The planetext sits just off the spur of the tongue. Few moments in the novels speak more to this mathematical projection than Sax’s pondering over Bao Shuyo’s contributions to theoretical physics; one such other moment being the final one we will come to, Sax wandering around the cliff-edge of Chryse Gulf in *Blue Mars*. The struggle he cannot here overcome is his comparison with the genius he perceives Bao to possess, forming for a him a model of thinking he cannot quite comprehend. Robinson employs a ‘strategic opacity’,²⁵ the way in which genius is represented by omitting genuine detail to give the sense of insight beyond the power of full explication. Bao’s genius therefore sits in the same murky offing of thought as does the infinitesimal Planck realm from the perceptual scale. Despite ‘witnessing’ her genius in the boat beside him, her work and her experience of mind is ‘trembling at the touch of the sun... He could not see it, with eyes open or closed’ (*Blue*, 423). The touch of light is here the focal medium of Sax’s perception, even in the abstract zone of mathematics. After Bao has explained ‘step-by-step’ what was ‘happening at the Planck level’, he poses the ‘amazing’ ascension of the steps of mind into insight, beginning with intuition:

A truly amazing thing, he thought, to intuit this level, and then make the speculations and deductions necessary to flesh it out and understand it, creating a very complex powerful physics. (*Blue*, 424)

He earlier observed plant-growth as ‘ideograms of order’ ‘drenched in light... almost as if it were visible molecule by molecule’ (*Blue*, 416), but after Bao’s explanations, conveniently omitted for the effect of making her genius all the more convincing, the ‘vast chasm’ that ‘separated them from the Planck realm’ (*Blue*, 418), need no longer be traversed with quite so much anxiety

²⁴ *Ibid*, 273.

²⁵ See (19:37) Robinson in conversation with Dr. Stephen Potts on the *University of California Television*, of <https://www.youtube.com/watch?v=PAu5PD4OS-w>.

over not discovering. Instead, the middle region of visible light allows them to 'lie side by side on the grass in the sun, staring as deeply into the petals of a tundra flower as ever one could, and no matter what was happening at the Planck level, in the here and now the petals glowed blue in the light with a quite mysterious power to catch the eye' (*Blue*, 424-5). The effect also of the visual focus on the tundra flowers is to provide an ideogram of the Planck realm, an up-scaling of the very small world of the subatomic (about '10⁻³³-centimetre range'; *Blue*, 417), so small he claims its details are 'finer than one's conceptual resolution' (*Blue*, 416).

The Planck realm puts just as much 'strain' on mathematical sight as the cosmic scale. However, here it is more formalized, and his model is not Deleuze but Bao, whose genius is more locally suggestive of insight than a cosmic solipsism. Only later, when he has only his own mind and the planetext to play with, does genius arise in a form not distinct from his experience of someone else's brilliance, but as a deeper respect for the opacity of phenomenal experience. In this sense, the Planck realm is far more a function of the planetext's density and diffuse field surrounding both Sax and the reader as they move through its ocean, than with the hubris of Deleuze's cosmic model for viriditas. Thought mostly in the dark and similarly hard to imagine, the Planck length can be used to more effectively manage this quality of the planetext than a manic cosmology. It suggests that visible colour might be a function of a projector unseen but made constantly visible to an observer.

The problem, to reiterate Feyerabend's comment from the previous section, is not how such realms confound imagined and mathematised understanding, but how we know such realms exist at all. The key to the furrowing, of which the Planck realm has furrows 10⁻³³ centimetres deep, is that the planetext is both enlarged, compounded, and detailed beyond comprehension, while similarly enabling comprehension and knowledge to occur. This is not formally immediate, and so Bao and Sax share in a kind of mathematical procedure of intuition and phenomenology exercised by Kurt Gödel, whose own theorem on set theory exploded these very measures of formal containment.²⁶ Gödel, in his comments on intuitive math useful here for describing the way the planet is discoverable through its thisness, speaks of what is already 'given' to the mathematician, that which is 'immediate' but not yet or is always outside of experiential data. To be clear, he is not bolstering abstract mathematics with empiricism, but suggesting some more mysterious presencing or giving of experience that resides beyond the simple quantity of experience. In his own words:

²⁶ For an excellent account and interpretation of Gödel's major work ('On Formally Undecidable Propositions of Principia Mathematica and Related Systems'), see *Gödel's Proof*, Revised Edition, Ernest Nagel and James R. Newman (New York: New York University Press, 2001), passim.

It should be noted that mathematical intuition need not be conceived of as a faculty giving immediate knowledge of the objects concerned. Rather it seems that, as in the case of physical experience, we form our ideas also of those objects on the basis of something else which is immediately given. Only this something else here is not, or not primarily, the sensations. That something besides the sensations actually is immediately given follows (independently of mathematics) from the fact that even our ideas referring to physical objects contain constituents qualitatively different from sensations...²⁷

The spur of Sax's rock of the mind and the way in which the conceptual resolution of the tundra flowers enabled by light are here recognisably formed on the basis of a given abstraction, not separate from sensory data but existing in tandem with them so that, to reiterate Gödel's phenomenology of mathematical thought, the given of the planetext is abstractly diffuse to a degree that it both filters through the atomic scale of objects and gives a faint resolution of that hard-to-see scale itself.

In both cases of the cosmic and the microscopic, the pressure on mentally perceiving and understanding is drastically heightened. The Deleuze passage serves as a warning against cosmic hubris and expansive flights of mind akin to egomania. The value of the rocky spur appears for Sax almost by accident, but has the benefit of allowing him to experience the 'almost-seen' quality of the planetext. In the case of the very small realm of the Planck unit, a visual strain is supposedly overcome, at least by Bao through her intuitionist genius. What therefore arises in this scene, present in the Deleuze passage only as genius thought of as hyper manic expansiveness, is a sense possible for Sax to pick up on mathematical intuition as a way of using such a tip-of-the-tongue technique as occurred as a rocky spur for some other form of thinking. The other shape this spur takes is not divulged until later when he sees birds floating above Chryse Gulf. The phenomenon of light also in this scene with Bao is not resolved until later, or at least not yet concentrated enough to enable him to speak to the more complicated comprehension of subatomic structures. Both this and the role of Bao's loops of timespace follow into the final scene also around Chryse Gulf, where the unit of the moment as a distinct way of measuring experience forms a nexus between these apparently disparate concerns.

The nature of the moment in this scene, as understood from a variety of angles – the flight of birds; the physics of the Planck constant and the 'quantum pose' (*Blue*, 438-9); Bao's loops of timespace; the divisions on a colour chart; the movement of wind; the shape of the gulf itself and its cliffs –

²⁷ Xiaoli Liu, 'Gödel's Philosophical Program and Husserl's Phenomenology', *Synthese* 175, no.1, *Analytic Philosophy in China* (July, 2010), 43-44. Also see: Richard Tieszen, 'Kurt Gödel and Phenomenology,' *Philosophy of Science* 29, no.2 (June, 1992), 176-94; David Fowler, 'Mathematics in Science Fiction: Mathematics as Science Fiction,' *World Literature Today* 84, no.3 (May/June, 2010), 48-52; J. R. Lucas, 'Minds, Machines and Gödel,' *Philosophy* 36, no.137 (April-July, 1961), 112-27.

is founded, much like intuitionist mathematics, on the knowing of the senses. 'There were different ways of knowing; but none of them was quite so satisfactory... as the direct knowledge of the senses.' Each of the ways composing the scene appear to lie about ready-to-hand at each new appearance of a thought. Precisely where a thought begins and ends is only vaguely captured in the form of distinct sentences. His 'wandering' sets the speed, 'every step just a step, wandering attentive to the thisness of each moment.' The 'personal sidewalk' he sees as 'appearing magically out of the shatter of the land' is not only a domestication of a rock-scape but also the imprint of path to follow. The present tensing of 'appearing magically' takes away the simplicity of a path well-trodden or worn down by others' feet, or his own, and allows the path to rise and form a path-ness with each step, one not created prior but made to appear as he walks. The track as a 'personal sidewalk' makes the path only bear the impression of a path, and so the given path-ness is also a track of thoughts. How each step then forms with each moment, 'moment to moment to moment' accents both the divide of the thisness of distinct steps, distinct moments on the sidewalk, and 'discrete' increments of mind. But how each step is shaped from a thought *about* the status of moments, to likening them to 'Bao's loops of timespace', to the 'successive positions of a finch's head', to the little birds 'plancking from one quantum pose to the next' is in fact a magical appearance of the track of mind forming itself, presumably, out of the spin networks of timespace.

An issue arises once these moments are given this image of Bao's loops, the trembling of superstrings below the visible structure of reality. As seen earlier, these networks are 'trembling at the touch of the sun' (*Blue*, 423), but remain invisible. The concern that now occurs in Sax's thought process is how the strangeness of these networks influences the larger visible world. Rather than organising this issue as one of causation, it is instead an issue of flow state versus stillness. The head of a finch darting from pose to pose refers to the quantum jump or leap of an electron from one state to another, without an intervening time of transition. The question forming itself in Sax's mind as a finch's head is if moments exist discretely, jumping from one to the next, with an a-temporal divide in between, an invisible and instantaneous hole between each moment, or if each moment flows into the next, in which case the discrete separateness of each is not fixed, but moveable, allowing for thoughts to flow from one state into another. The language is distinctly of physics: timespace (a switching of Einstein's spacetime); quantum poses; Planck. However, given his preference for an intuitionist approach, two theorems, one from Gödel and the other Cantor, help frame the discrete as incomplete, and the in-discrete as continuous.

The exorbitant quality of the planetext is expressed in Gödel's incompleteness theorem, in which one must contend with cursive and

recursive²⁸ viewpoints, or in the case of formal systems, the ‘arithmetization of meta-mathematics.’²⁹ Yet, a more relevant case of Gödel’s work is his reading of Cantor’s continuum hypothesis which bears upon Sax’s measurement of moments. So far as they are what is most given in experiencing and forming the planetext, the central issue over the grounding of moments, rather than their figuring, means Cantor’s continuum of integers cannot, as he theorized, ever be captured as whole numbers.³⁰ At first using the Planck constant as a length by which to build up from the most basic and smallest of scales, Sax is soon struck, as he was with Bao, by the limit such an abstract length proves for measuring the quanta of moments of experience. If he could say that a moment is exactly 10^{-33} cm long, and that it takes light (as the primary medium of experience in this scene) an approximate time to traverse such a length, then the phenomenon of light is abstracted into an infinitesimal notation beyond visible experience. A supposedly basic question such as how long it would take a beam of light to traverse the Planck unit

²⁸ Douglas Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid* (New York: Penguin Books, 2000 [1979]), 67-8. The frame of Sax’s mental experience, by which we might apparently form a set of all that makes up his experience, is also exchanged in this flip of resolutions by what is known as the figure-ground illusion, the change noticed in one’s perception between seeing either a face or a vase, the white and black of the famous image flipping from figure to ground with no apparent fixity. Douglas Hofstadter claimed in *Gödel, Escher, Bach* that Gödel’s set theory works on this principle or refocusing the logical lens to encapsulate in a set all that are not already in a set, leading to the set of all sets. Also, in the formalist mathematics of John von Neumann, this problem occurs again, spurring mathematics onto mental experience and the engineering of intelligent computing. To give a clear sense of these three methods, logic (as in Bertrand Russell and Alfred North Whitehead’s *Principia Mathematica*) refers to proper sequencing, as in ‘the logical control of the device, that is the proper sequencing of its operations...’ [Neumann], a method by which order is arranged. Formalism fits these sequences into a given structure or set, given because the frame is assumed or built before hand, as per Heidegger’s projection mathematics. To complete the above quote from von Neumann: ‘... its operations can be most efficiently carried out by a central control organ’, the organ that stands for the set which holds and directs the logical sequence. Intuitive process is more out of focus; John von Neumann, ‘First Draft of a Report on the EDVAC – June 30, 1945’ (Stanford, CA: Stanford University Press, 1992), 2. It not merely helps to find the ground of these forms, but also suggest where the figure of the set and its axioms might be groundless or myopic. The aperture switch of figure and ground is equivalent to the vanishing of Deleuzian cosmology and the appearance of the spur of the planetext, the sense also in Harding of the immediate given-ness of the planet as experienced as headlessness, or losing the figure (or head), but gaining the ground (world).

²⁹ Nagel and Newman, *Gödel’s Proof*, 80-91.

³⁰ Gödel summarises the problem: ‘Cantor’s continuum problem is simply the question: How many points are there on a straight line in Euclidean space? In other terms, the question is: How many different sets of integers do there exist?’ ‘What is Cantor’s continuum problem?’ *Collected Works, Volume II Publications 1938-1974*, ed. Solomon Feferman (New York: Oxford University Press, 1990), 176.

introduces a host of complex problems in the end pertaining to string theory and the peculiar space between the speed of light (which according to Einstein's special theory is a basic ontological unit) and the Planck scale.

The association between Planck and Einstein arises as an issue when Sax considers that 'on close inspection', 'moments were not regular units but varied in duration, depending on what was happening in them.' The content of the gulf in front of him, either filled with 'dogfighting' birds or with none 'in sight', creates the type of time dilation Einstein described in his special theory of relativity, the acting of light upon the personal value given to time, personal in this respect to the contents of the gulf, and the personal sidewalk. When empty, 'moments could last several seconds each. Whereas when sparrows were dogfighting a crow, the moments were nearly instantaneous.' The gulf here works in the same way as the chasm of Chasma Borealis, a model space of mind which can be crowded or emptied, with dependant temporal experiences arising as a result. In this case, the gulf takes shape as the framing of his mental moments just as the 'blue dome' of the sky serves both as its ceiling and the empty fullness in which float the birds, replacing the role of the rocky spur, on the 'mild intoxicant' of the wind 'flooding his brain' (*Blue*, 438-9).

For this effect to work between the sky, the birds, his brain, and one medium of exchange: the wind; another element of the fluidity between Einsteinian relativity and Planckian quantum poses forms the dynamics of the wind with a visual coefficient: waves (or particles) of light. The question here is not how discrete and particular photons have to be before they are useful units of measuring moments, but how the nature of light appears as both a wave and a particle, a 'still' subatomic unit, or a flowing phenomenon. With the analogy between the jump of the electron and the finch's darting head, another analogy is suggested in the movement of air and the movement of light waves. By overlapping these images, his experience of the gulf and his changing content of mind shifts according to a fluid dynamic of air and light. Light, as per its ontological basis in Einstein, does not merely form the visual field of the gulf, but also forms a sense of time dependant on what is happening inside the gulf, on its waves of air and wind. It is significant Sax does not linger on the issue of whether light and its formation of moments is a wave or a particle, or if moments are discrete and still or fluid and flowing. Instead, both appear to be true. The fact of special significance is, however, less a philosophical investigation than a growing sense of how the scene knits itself together in his experience of it. Unlike the more obviously philosophical rumination over Deleuze, or the more abstractly mathematical turning over of the Planck length, each discrete piece of the scene of the gulf forms and coalesces into something more cohesive, the availability of the planet as an intoxicant and medium of mind. This is noted as wind and light, while the more discrete and problematic measuring units of moments (problematic for its difficulty for thinking about flow-states), the finch's head, the darting birds,

are not separate from this field but deeply tied to it by riding its currents of wind and appearing to influence the density or thinness of time as a factor of light.

This double sense of the medium of the scene through analogy is far more drastic than may at first seem the case. Earlier, in *Green Mars*, Sax pushes analogy as a valid form of inquiry aside, castigating it for its ‘continuous conceptual drunkenness’, good only for ‘distorted perception.’ Analogy, he surmises, is of the province of the humanities, and when applied to scientific practice, only confuses rather than clarifies. The reason for this is the fluid conceptual basis on which analogy-making behaves. Although Douglas Hofstadter and his lab reasoned that analogies and fluid concepts are reducible to a detailed and almost invisible exchange of discrete units, be they atoms, or in his example water molecules in the flow movement of water,³¹ the power to evoke an analogy is still based on association, an apparently messy way of thinking that carries along with it all the ‘great baggage’ (*Green*, 185) of words and etymological roots to confuse and distort.

The evocation of the successive positions of the finch’s head, however, appears both to be an analogy and as conceptualising of analogy. The ‘many ways of knowing’ succeed the positions of the head, the direction of the beak, the movement of the crows and sparrows. This pointing of the beaks, or spurs, of inquiry, from a variety of angles calls to mind Zo Boone’s analogy later in *Blue Mars* (to be read much closer in chapter 4) of reality appearing only at a twenty-three-degree angle at which colour appears in a rainbow. Even here, in the example of a rainbow, buoyant water molecules are a medium of exchange and refraction between photons and the head which is turned at just the right angle to see them appear in the visual field. With wind and light as the refracting element above Chryse Gulf, the ‘loops of timespace’ turn into the ‘wheeling’ of birds. To be clear, the analogy is formed not merely on a baggy messy convenience, which gets messier when noting that the wheeling of birds is itself already an analogy, but on the path of the wind from air and sky to brain, ‘in his nostrils the wind was like a mild intoxicant, flooding his brain.’ The field of associations made possible by the mediums of wind as a means of movement, and light as a means of forming an efficacy of objects, determines the nature of moments as both still and flowing in an exchange in which the various conceptual moments of the passage flow into and distinguish the physical and worldly. The interplay of mindscape with Chryse Gulf yields a sense of genuine insight arising and floating on the mediums of the mundane planet, the diffuse and pervasive atmosphere, and the field of colour.

³¹ Hofstadter and the Fluid Analogy Research Group, *Fluid Concepts & Creative Analogies: Computer Models of the Fundamental Mechanisms of Thought* (New York: Basic Books, 1995), 2-3; c.f. Hofstadter and Emmanuel Sander, *Surfaces and Essences: Analogy as the Fuel and Fire of Thinking* (New York: Basic Books, 2013) 3-33.

The scene's opening takes this last element of colour as one more analogy of the vision of light refracted through objects with varying transparency with a 'seepage' of the planetext. Like with Zo's angling analogy of perception, and what later is termed the 'seepage' of Anthropos – the way in which 'human perception' seeped 'into everything they saw, like colour' (*Blue*, 641) – the colouring of the planetext is usually thought through allegory only, as distinct to analogy. As the naming however suggests, clematis blue, or Prussian blue, indicate a separation of colour on the colour chart, as well as an organisation of colours into a wider network of associations. The seepage of colour, therefore, can be rethought away from a mere political allegory and instead toward the seepage of the planetext itself, the spurring (that is arising from within) of nascent matter into a perceptual field. The 'continuous conceptual drunkenness' and 'distorted perception' of the world of colour and analogy is unlike the mania of Deleuzian cosmology, translated into writing the planetext as a hypergraphomania. But is instead an arising of pieces of planet, networks and ever-changing associations between molecules, into an experience of viridical force. The spray of colour in the sky is a reminder of the immense refraction of atmospheric content and the curvature of its 'dome'. The scene invites not only a sense of viridical force, a seepage of viriditas as opposed to Anthropos, but of veridical colour as a kind of truth-speaking; verum and dicere thrown together to associate the appearance of the planetext, impartially but always seeping with meaningful experience, with spur of viridical force. It remains now to address this concept of force and viriditas more explicitly as the primary urge toward an array of experience seen from successive positions of the metonymic finch's head, and the seepage of a diffuse and abundant standing reserve of textual meaning analogous to the planet.

CHAPTER FOUR

Writing the green planet: Viridical force as areographia

There's a constant pressure, pushing toward pattern. A tendency in matter to evolve into ever more complex forms. It's a kind of pattern gravity, a holy greening power we call viriditas, and it is the driving force in the cosmos.

– Kim Stanley Robinson

amans amanti: amoris viriditatem.

– Heloise to Abelard

To say that force is the origin of the phenomenon is to say nothing. By its very articulation force becomes a phenomenon... Force is the other of language without which language would not be what it is.

– Jacques Derrida¹

HOW MIGHT GRAPHOMANIA BECOME areographia, a distinctly Martian writing? And how is terraforming an act itself of areography? To reiterate from the previous chapter, the appearance of life on the red planet, as a function of viriditas, seeped into everything like colour. Now, this seepage is also a writing in that it follows, as a demonstration of viridical force, the same phenomenon of language described in two focal points: the writing of Hildegard of Bingen (from whom viriditas receives its deepest meaning), and Jacques Derrida's use of force, which relates not merely the pressure toward interpretation but also the excess lying in the about-ness of the text with every possible reading. The sensing of the planetext about oneself at any moment of reading is built into viridical force. Putting forward this force as a combining of these two senses of the way language organises the meaning of phenomenal experience, means its seepage onto the planetext is, like colour, veridical; truth-speaking. But if the graphing of viriditas relates some kind of original truth, to speak this truth is in this case, as Derrida claims, to say nothing. It betokens the reader to make some claim about what the mysterious force of viriditas has to do with arriving at and discovering meaning in the Trilogy.

¹ Robinson, *Green Mars* (New York, Bantam Spectra Books, 1996), 9; Letter 48, *The Lost Love Letters of Heloise and Abelard: Perceptions of Dialogue in Twelfth-Century France*, Second Edition. Constant J. Mews, tr. Neville Chiavaroli and Constant J. Mews (New York: Palgrave Macmillan, 1999), 251; Derrida, 'Force and Signification', *Writing and Difference*, tr. Alan Bass (Chicago: Chicago University Press, 1978), 26-7.

Approaching how viriditas moves through the texts demands a shift away from the focus on individual characters in the previous three chapters, in the first place because the singular most obvious candidate for perspectival anchorage is Hiroko Ai, who sometime in *Green Mars* goes missing, and who also is never given a single chapter of her own. In the second place, the contours of viriditas, those moments when its seepage is clearest, are dispersed throughout different characters; yet, it is not accidental that these moments are often found in the narratives of Nirgal (son of Hiroko) and Zo Boone (his daughter). By abandoning the strict character focus of the previous chapters, this is the nearest this thesis gets to a full theorization of the Trilogy. But the scope is still partial, and the chosen scenes and moments, very specific. In talking about these passages, we must caution that viridical force not be taken as the single point into which all readings must collapse; such a project of totality is misguided, and would shut down interpretive meaning if held to be true in the same way as Jameson's historicising project discussed in chapter 2. Viridical force, instead, might be likened to the source of light that filters through the planetext into the spectrum of character perspectives. It makes no claims of the nature of this light in its purity, for, to restate this point, to say this is the origin of meaning in the text is to say nothing. It also claims nothing of the disturbances and tensions within the text between characters, except to show how these viewpoints are not equally antagonistic, that, as Yanarella wrote, the colonization of Mars is harshly biased against Ann,² and that Michel stands in a very problematic shadowing of interpretive strategies. Viridical force is unique because it cannot be reduced to individual characters, for what it is theorising is the enabling of viewpoints, the creating of a habitable space in which these men and women can argue and love each other.

The making of a stage or background for the drama coincides with the disappearance of Hiroko; that is, the spread of viriditas and the terraforming of Mars are coefficients of her vanishing. Without much to notice about her character, it is hard to simply allegorize Hiroko, as her place in the narrative is not to symbolise viriditas, but to relinquish her parenting of the nissei Martians, her children, into their own narrative presence, especially with Nirgal and Zo. How viriditas threads through aspects of their narratives is not immediately clear – except for Zo, whose only chapter is called 'Viriditas'. On this note, no critics have taken up the unique role of viridical force with enough depth to take note of its use by Hildegard of Bingen, and what her meaning gives to Robinson's borrowing. In the first place, viriditas spoke about sexuality and made a metaphorical leap between the dense green forests of her native Disibodenberg and her own feelings of sexual viridity or

² Yanarella, 'Terra/Terror-forming and Death Denial in Kim Stanley Robinson's Martian Stories and Mars Trilogy,' *Foundation* 89 (Autumn, 2003), 18-9.

freshness. She speaks of viridical energy as pouring³ into the world and her body from as diffuse and pervasive source of energy as the sun. In Robinson, Nirgal's thermogenesis, Zo's experience on the heat of Mercury (closest to the sun), Michel's self-identification with the phoenix, each speak to this mode of viridical heat as the seepage of viriditas through the body and the planet.

How viriditas resonates as a force leads us to note that the heat of viriditas is combined also with light. In three of Derrida's texts this mode of light, or heliocentrism, as the force toward patterning announces viridical force as a function of language, shaping phenomenal experience around Derrida's ideas of force, of soliciting and deconstructibility, and of the violence inherent in this metaphysics of light. In 'Violence and Metaphysics' the 'violence of light' (*Writing*, 84-92) brackets what he claims is one of the founding metaphors of western metaphysics and philosophy, the preference for enlightenment and visibility.⁴ In 'Force of Law', the difference between law and justice resides in the latter's deconstructibility, that is, deconstruction enables the possibility of justice to arise, while law enforces a limit on its disturbing of the structure of lawful rule ('Force of Law', 233, 243). And in 'Force and Signification', the most important for our present interest, these problems of the bias of light, enforcement of law, and a deconstructibility, take on an address toward literature. In his argument, force 'solicits'; that is, it entreats meaning from the signifier while it also 'shakes' or disturbs it (*Writing*, 6). Putting a claim down on the origination of force is confounded by this very shaking of the structure, for the 'strange movement within language' means language has a 'peculiar inability to emerge from itself' (*Ibid*, 27), and in this sense viridical force forms the frame of every one of its iterations throughout the narrative while always exceeding it. Force therefore speaks to the experience of the reader I maintain is current throughout the planetext, that the planet lies about him or her always ready-to-hand but also always exceeding anything claim on its nature or meaning. It forms a non-linear field of possible meanings always coalescing through the present of reading, and always *presque-vu*, always on the tip of the tongue.

³ 'Your flesh held joy, just as grass on which dew falls when greenness is poured into it,' cited in Bruce W. Holsinger, *Music, Body, and Desire in Medieval Culture* (California: Stanford University Press, 2001), 107.

⁴ 'A world of light and of unity, a 'philosophy of a world of light, a world without time'; 'If there is no history, except through language, and if language (except when it names Being *itself* or nothing: almost never) is elementally metaphorical, Borges is correct: 'perhaps universal history is but the history of several metaphors.' Light is only one example of these 'several' fundamental 'metaphors,' but what an example! Who will ever dominate it? What language will ever escape it?' (*Writing*, 90, 92).

This sense of visibility and out-of-sight presence is the pivot of Hiroko's place in the narrative, which is made especially unique by her disappearance from its stage into a mythological background; that this background itself is also the emerging terraformed planet needs also to be held as a correlative. Like John Boone after his death, the details of her identity fall out of focus as she is driven further into mythological status. By *Blue Mars*, claims of her appearance range across both Terra and Mars, at various locations, though none are confirmed. Recognition or misrecognition is literally evoked in Nirgal and Sax's *presque-vu* encounters on two different occasions: when Nirgal sees the face of Medusa carved in a rock with a faint resemblance to Hiroko (*Green*, 308-10); and when she supposedly saves Sax from a snowstorm, only to vanish again when he is safe. Even through a 'slush-smearred faceplate' (*Blue*, 709), he thinks he sees her face. Nirgal's is not an actual encounter like Sax's claims to be, but it has the same lack of conclusive certainty. In this case, the sculpted form backgrounds her face into the planet itself where it emerges incompletely from the rock.

This backgrounding Jameson addressed when referring to Hiroko's disappearance as a transmutation into allegory. She is 'absence itself', according to him. 'She negates empirical reality in the spirit of an ideal' (*Archaeologies*, 405). His terms cast her through the Hegelian kernel from a woman with 'hard compact flesh' (*Blue*, 710) to a spirit of viriditas. Mackenzie Wark spoke more generally of the Trilogy of 'what is visible and what is hidden'⁵ as points in the narrative's metabolism, its molecular flow. In both ways of reading, Hiroko becomes something of a Gaia of Mars, perhaps implied in her full name Hiroko Ai; some even worship her as such. But Wark's reading, though useful for naming the hiding and appearing of aspects of the narrative as metabolic rift (recalling for example Nirgal's metabolic burn, which we will soon come to), for the present focus of viriditas it only traces Hiroko's outline, and give no sense of how her hiddenness works at the level of language throughout most of the narrative (to be sure he never claims it does). And Jameson's allegorizing is no more useful. He turns Hiroko into a veiled version of himself, who saw, like Nirgal and Sax, a face in the novels, but could not fully recognise who it was.

What has not been investigated is how her disappearance works correlatively with the spread of viriditas on Mars, and therefore how viridical force as a function of the planetext works into this backgrounding, or aboutness of the planet, to generate meaning. In coming to this, we must first address the other major ignorance among critics, the origin and nuanced context of the term 'viriditas' itself. When it is spoken about as a term of special interest, critics tend to extend no further than its definition in *Red Mars* as 'greening power' (*Red*, 211), and its use claimed in the twelfth century by

⁵ Wark, *Molecular Red: Theory for the Anthropocene* (London: Verso, 2015), 190.

the 'Christian mystic of the Middle Ages', Hildegard of Bingen.⁶ Such a precedent has allowed viriditas no greater clarity of its place in the narrative than that given in Michel's Greimas plan in which it must be 'combined' with contrary and negative opposites (*Red*, 229), and that of the mystic, coloured white to the scientist's green (*Green*, 15). The holiness (*Green*, 15) of viriditas is rarely spoken of beyond this word, and especially not in its influence on the nature of writing and reading the planetext. Instances such as Jameson's subordinate the term and its meaning on the grounds of its already mystical, and therefore supposedly vague, outline. Yet, this approach leaves out Hildegard's use of the word for forming an eco-sexuality, and the more specific details of the term. Labels such as the 'spiritual core' of the Trilogy fall short of a clearer picture of what viriditas is and how it works in and around the text. For this, some of the more specific uses of the word in Latin literature introduces a set of features to find in Robinson's borrowing.

Of the rare use of the term in Latin literature around the time of Hildegard, Heloise's letters to Abelard lay a groundwork usage for speaking about natural life in relation to love and intimacy. In one letter she claims 'so far I have somehow been able to bear it, but now, deprived of your presence and stirred by the songs of the birds and the freshness of the woods, I languish for your love.' In another, she uses it to turn the freshness of the woods into the 'freshness of love.'⁷ This pairing is far more in tune with Hildegard's use than with others.⁸ For Hildegard, viridity resonated more in sexually explicit

⁶ See Markley, 'Falling into Theory,' 133, and Otto, 'Leopoldian Land Ethic,' 248.

⁷ Letter 25: '*Hactenus aliquo modo supportare potui, ast nunc tui presencia dum careo cantibus volucrum, viriditate nemorum permota, amore tuo languo*'; Letter 48: '*Amans amanti: amoris viriditatem.*' Heloise and Abelard, Constant J. Mews, *Lost Letters*, 236, 250.

⁸ Gregory the Great in his *Moralia on Job*: 'Nevertheless we not unsuitably understand 'earth' to represent the Church, which puts forth green grass in it, in that it brought forth fruitful works of mercy at the word of God. We sometimes understand 'grass' as knowledge and doctrine of eternal greenness'; quoted by Jeannette D. Jones, 'A Theological Interpretation of 'Viriditas' in Hildegard of Bingen and Gregory the Great', <http://www.bu.edu/pdme/jeannette-jones/>. Hildegard's analogy to the enclosed cloister echoes an early use of viriditas she may or may not have known in St. Augustine's *City of God*. In describing the 'eternal blessedness' of the Kingdom of Heaven, Augustine warns the reader not to mistake its eternity for the 'appearance of perpetuity', a semblance he finds in the seeming blessedness of a forest: 'as in an evergreen the same *freshness* seems to continue permanently, and the same appearance of dense foliage is preserved by the growth of fresh leaves in the room of those that have withered and fallen.' That the City of the blessed should be sustained on the foliage of the dead is perhaps too grim for Augustine to admit, but it also touches an anxiety in his sense of the city's defensive attitude to withering, and perhaps a need to distance the city from the supposedly evergreen forest, which has under it a 'compost of decay.' St. Augustine, *The City of God*, tr. Marcus Dods, EBook (New York: Modern Library Edition, 2000). Robinson's use works very much on this composting, from the dead krill on which the sand fleas feed (*Green*, 9) to the sense in which everything dies or 'goes white no matter what' (*Green*, 60). Robinson's Martian eco-cities are, unlike St. Augustine's, built on the dead. The

imagery from her valuing of virginity as a ‘greenness’ or *virginitas*⁹, her homosocial living in the monastery among other nuns, the natural fecundity of the forests around Disibodenberg where she lived, and her placement of the Sun with its ‘diffused’¹⁰ warmth.

The first appearance of Hiroko with this kind of viriditas is in Michel’s chapter of *Red Mars*, ‘Homesick’, in which she and her followers ‘rescue’ (*Green*, 246) him from disillusionment. The ‘fructiparous power’ of viriditas is present not only in Hiroko’s plentiful progeny¹¹ (as in the 1885 botanical use of fructiparous: ‘producing fruit in excess of the normal quantity’¹²), but also in the ceremonial orgy that takes place. This moment is startling for Michel, for whom the planet about him has until this moment overflowed with overdetermined phenomena. But viriditas offers an alternative overwhelming (*Red*, 230) excess ‘that would allow humans to exist here in a meaningful way’ (*Red*, 229). While Sax discovers some of this viridical meaning as a ‘love of place’, this scene with Michel is more clearly focused on the physicality of love and the freshness of viridical force not only as fructiparous but sexual. Hiroko’s words to Michel ‘this is our body’, offering him a handful of dirt ‘collapses’ (to use Michel’s word), the frame of body and planet into the heart of the areophany’ (*Red*, 228-9). This scene establishes quite early in *Red Mars* viriditas as a holistic, that is to say, a holy power acted through an intimacy of body and planet. Though everything and everyone is close to Michel, even to the extent of ingesting Martian dirt, the energetic spirit (*Red*, 229) of viriditas is always about him, drawn closer now but to diffuse throughout the Trilogy as a field without strict boundaries. Fructiparous energy speaks to this excessiveness, or constant flourishing beyond its ‘normal’ amount.

The orgasmic moment is enough to imbue for Michel viriditas as a sexual energy. But the imagery of his sexually detailed dreams and his distracted ruminations about Maya’s body (*Red*, 209) perhaps stifle this energy too much

second section of this chapter will focus on this crucial play of death and compost in the flourishing of viridical life.

⁹ ‘Hildegard... associated with virginitas or viriditas, the greenness which is for her the symbolic equivalent of virginity...’, Maud Burnett McNerey, ‘Like a Virgin: The Problem of Male Virginity in the Symphonia,’ *Hildegard of Bingen: A Books of Essays* (New York: Garland Publishing Inc., 1998), 139.

¹⁰ Holsinger, *Music, Body, and Desire in Medieval Culture*, 115.

¹¹ Contrast with the total sterility of Martian colonists in Brian Aldiss’s *Finches of Mars*, a novel which also counterpoints Robinson’s use of Hildegard with Christina of Markyate, whose vow of virginity has none of Hildegard’s greenness of life with which to charge with energy the forests around Disibodenberg. See Maria Velazquez’s review of *Finches of Mars* in *Strange Horizons*, issue 2. September 2013, <http://strangehorizons.com/non-fiction/reviews/finches-of-mars-by-brian-aldiss/>

¹² *Oxford English Dictionary*, s.v. ‘fructiparous’, <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/75044?redirectedFrom=fructiparous>, accessed May 15, 2017.

under a strictly masculine objectification.¹³ Viriditas is therefore focused on Hiroko as its main proponent, allowing it to move toward an eco-feminist grasp of sexuality and away from Michel's psychoanalytic language of libido and depression, one approximately formed in Hildegard's use of the term. But the significance of Hiroko saving both Michel and Sax, both men, announces a therapeutic or reparative power in viriditas as social as it is sexual. Flanagan claims some of Hildegard's cures contained in *Causae et Curae* put into effect the vigour and freshness, or viriditas, of trees. This medical approach is echoed in her music, which aimed to cure the soul; the ailment of which, according to McInernery, took on a gendered distinction. Purifying the soul, through an engagement with viriditas sought to retain and protect female virginity (Hildegard speaks of the 'cloister of the womb' being a 'locked gate'), as distinct from male virginity, which contained a different set of images, such as can be found in the medieval debate around nocturnal emissions, the root term of which is pollution. Male virginity (unpolluted: *duo non esc pollutum*) could therefore not be understood in the constellations of female virginity and desire, at least how each related to a sense of greenness and fecundity. Hildegard drew out the difference in the apple and the branch, where male is *duclis viriditas pomi* ('sweet greenness of the apple') and the female *viriditissa virga* ('greenness of branches'). The difference McInernery claims gives to viriditas a 'kind of always potential and therefore always undefiled flourishing.'¹⁴

The orgiastic scene with Michel is echoed much later in *Blue Mars* during Zo Boone's equally viridical but much more excessive orgy (*Blue*, 506-7).¹⁵ For Zo, orgasm is a cosmic mode of being: 'the rapture of the body, yet another echo of the Big Bang, that first orgasm'; 'nothing compared to the *status orgasmus*, a kind of running continuous orgasm that could last half an hour if one were lucky' (original italics; *Blue*, 506-7). In fact, the about-ness of orgasm as an 'undifferentiated mass of erotic sensation,' gives to her sexual experience the spaciousness of a 'sexsurround' (*Blue*, 507). In a description appropriate for Zo, Holsinger claimed Hildegard's music 'spread out in a kind of cartography of female desire.'¹⁶ Such sexsurround is voiced in Zo's loud 'purring' sex-sound; Holsinger writes: 'the music that celebrates the Virgin maternal womb possesses an eroticised spaciousness of its own; like the desirous womb itself, the *lignum*, or harp-frame, that resounds with sexual

¹³ See 'Michel in Antarctica,' *The Martians* (New York: Bantam Spectra Books, 1999), 12-5.

¹⁴ McInernery, *Hildegard of Bingen*, 139, 148.

¹⁵ For the precedent of orgiastic sex in science fiction, Martian fiction, and ecological science fiction, see Robert Heinlein's *Stranger in a Strange Land*, in which polyamory and communal sex are an expression of Valentine Michael Smith's spiritual utopianism. For 'polyamory' see Lewis Call's *BDSM in American Science Fiction and Fantasy* (New York: Palgrave Macmillan, 2013), 19-21, 28, 32, 132.

¹⁶ Holsinger, *Music, Body, and Desire in Medieval Culture*, 115.

pleasure, the music is diffused, dispersed, and spread out in a kind of cartography of female desire.' By fitting the diffusion of her feeling with the Big Bang, though it recalls some of Deleuze's cosmic megalomania, she is sensing the way in which sexual energy disperses and expands around her body, feeling it surrounding her in the form of an undifferentiated cluster of men and women.

This sexsurround of about-ness in the bathhouse applies just as much to the planet itself, and more particularly when Zo is flying over it: 'Sex, sex, there was nothing like sex, except flying, which it much resembled' (*Blue*, 506). Sensing the about-ness of viridical energy takes the shape in her flight of a diffusion of self-boundaries and world-boundaries. As we saw with Sax who lost his headedness and gained a worldliness, so too does Zo experience the orgasm of flying as a dissolution of self into planet, where again wind is the mode of contact:

The wind was erratic today, and it was an all-absorbing pleasure to play and tumble in it. This was the meaning of life, the purpose of the universe: pure joy, the sense of self gone, the mind become no more than a mirror of the wind. Exuberance; she flew like an angel, as they said.

...[the hawk's] mastery of the air was like a talent that she craved but could never have. But she could try: bright sun in the racing clouds, indigo sky, the wind against her body, the little weightless gut orgasms when she peeled over into a stoop... eternal moments of no-mind. (second ellipsis original; *Blue*, 505; 504)

Along with the curious image of wind in a mirror, which is hardly visual as much as 'somatic' (*Blue*, 504), recalling a famous expression of no-mind in Buddhism of the mirror of consciousness which is 'nowhere standing',¹⁷ her orgasms are diffused into the spacious movement of the wind. In this same Buddhist meaning, Hiroko speaks in *Green Mars* of viriditas as an attentional anchor to moments: 'this moment itself is all we ever have', with the corollary that you also 'feel the *kami* inside all things' (*Green*, 61), the spirit of inanimate things, as the spirit of the whiteness into which all living forms will disappear.

The movement of the body through a space, sky or bathhouse, speaks to the overlap between body and forest in the sexual life of the body and natural viridity found in trees and apples, demonstrated in both areas of Hildegard's output. With a shadow of Gregory's *Moralia on Job*, 'greenness' was to be 'cultivated' and gardened, through a 'knightly' 'pursuit of the heavenly life.' In the lyrics of her songs, most especially *O viridissima virga*, this gardening of the soul through the garden of the body is less of an active gardener's practice than a change of viewpoint. Her image of the morning dew (typically a symbol of virginity) shifts the view between body and grass, and the appearance of the morning dew as the seepage, residue, or perspiration of the

¹⁷ Thomas Merton, *Mystics and Zen Masters* (New York: Dell, 1961), 18-9.

‘flooding’ of the spirit of greenness: ‘your flesh held joy, just as grass on which dew falls *when greenness is poured into it*’ (emphasis mine).¹⁸ The images of grass and body take on a wider spatial arrangement in *O viridissima virga* with the heavens leaving the dew on the grass, surrounding it with the presence of sky: ‘And they have all appeared in pregnant greenness [*viriditate plena*]. / Whence the heavens bestowed dew on the grass and all the earth was made fruitful, because its very womb brought forth grain, and heaven’s birds made their nest in it.’¹⁹

When recalling being saved by Hiroko, Sax locates in his memory the feeling of her hand on his wrist as she pulled him away through the snowstorm of whiteness, ‘through the white noise, the white static’. Such an occurrence Nirgal would call the green (Hiroko) appearing inside the white. The saving hand lifts him up, ‘like viriditas itself, the green force *pouring* through him’ (emphasis mine; *Blue*, 709). But whiteness is given a more colourful valency than Sax alone is able, at first, to see. As his memory continues, he considers how her appearance is ‘the inexplicable seeping of the unexplainable into everything’ (*Ibid*). The colour symbolism of seepage only makes explicit sense with Nirgal’s schemata in mind, in which the ‘Great Unexplainable’ is the white world of Hiroko inside of which resides the green feeling of love and happiness; while for Sax, who dwelt in the green world, whiteness denotes ‘dangerous and awful’ inexplicable phenomena (*Green*, 15). This sense of the pouring of greenness and whiteness forms in the narrative as colour seepage, what we saw in the previous chapter to be the ‘seepage of Anthropos’, but is here the dew of viriditas. By being saved, and along with his therapeutic changes, as recounted in chapter 3, Sax can accept that ‘viriditas is a fundamental mystery,’ and that ‘there will never be a grand unified theory’ (*Blue*, 655). This mysteriousness depends as much on its disappearance or backgrounding (and the disappearance and mystery of Hiroko herself) as on its ‘spark’ (*Red*, 230), or, as we will see, its ‘fuse’ (*Blue*, 217).

Like Michel, Sax must be saved and given some direction. Nirgal instead embodies more of his mother’s generous hand of viriditas. When consoling Sax after his stroke, he

sat and collected himself. He located the fire within, and tried running some of it into his hand, and across into Sax. Heat, heat, a tentative jolt of whiteness, sent into the injured green... then feeling again, trying to read the heat of Sax’s head. (original ellipsis; *Green*, 281)

‘He poured into Sax every bit of viriditas he could muster’ (*Green*, 281). This concentration of generosity and caring moves away from Zo’s strictly sexual pressure of viriditas for a more therapeutic transference of energy. Yet, to

¹⁸ Holsinger, *Music, Body, and Desire in Medieval Culture*, 107.

¹⁹ *Ibid*, 117.

compare it with Zo's understanding of viridical force, both share in this crucial ingredient of heat, how this mysterious force is transferred from body to body. And heat we find in Hildegard's positioning of the Sun as the chief force in directing the diffuse and pervasive character of viriditas: 'pleasure in a woman is comparable to the sun, which gently, calmly, and continuously spreads the earth with heat, so that it may bring forth fruit.'²⁰ The spreading of warmth into a non-local place in which the Sun is evoked as the encompassing medium of experience, and an erotics which departs from the phallogocentric for a womb-like universe in which the forests of Disibodenberg are a place for gathering light and heat from the Sun which is 'poured' into them as 'greenness', a liquid she finds also in the solvent of such erotically suggestive contact between the planet and the Sun's warmth as the morning dew, quite distinct from nocturnal pollution.

This image of heat and fire first makes up a part of Michel's sexual experience among Hiroko and her follows in *Red Mars*. He not only conceives of his body aflame – 'his blood was fire'; 'he was too overwhelmed, completely aflame'; – but imagines himself a 'phoenix' passing through its necessary burning ritual of rebirth (*Red*, 230). Much later, Zo finds herself on hot Mercury amid a 'solar rapture' in which the 'Sol's corona' along the planet's horizon was 'like a forest fire in some silver forest just over the horizon.'

Zo's spirit flashed likewise, she would have flown like Icarus into the sun if she could, she felt like a moth wanting flame, a kind of spiritual sexual hunger, and indeed she was crying out in just the same involuntary orgasmic cries, *such* a fire, *such* a beauty. (original emphasis; *Blue*, 493)

The immense closeness of Mercury to the sun makes the solar rapture Icarian, as she notes, coming so close to the jolt of whiteness that viriditas ceases being something like an electrical charge and more a pouring of immense heat, only glimpsed in the corona over the horizon. This is as close Zo gets to the orgasmic nature of the Big Bang, the sun's source of viridical energy as experienced through an immense flaming forest of heat. As is befitting of Zo's fate, dying by the end of her only chapter 'Viriditas', the drawing of the moth to this solar flame shows the inexplicable force of the sun as inherently dangerous and violent as much as it is life-giving by pouring energy and heat into the atmospheres of Terra and Mars. Zo's dying foregrounds what shall concern us in the next section on the interplay of viriditas and death, that, as François de La Rochefoucauld famously said, 'neither the sun nor death can be looked at with a steady eye.'²¹ Viridical

²⁰ Holsinger, *Music, Body, and Desire in Medieval Culture*, 115.

²¹ François de La Rochefoucauld, *Moral Reflections, Sentences and Maxims* (New York: William Gowans, 1851), 12 (Maxim 27). Cf. Peter Sloterdijk, *Neither Sun Nor Death*, tr. Steve Corcoran (New York: Semiotext(e), 2011). For Sloterdijk on Hildegard of

force, owing in a literal sense to the sun, is just as tricky to spot, and is observable only through its phenomena. Saying the sun is the origin of viriditas, as Derrida suggests, 'is to say nothing'; 'by its very articulation [the sun] becomes a phenomenon' (*Writing*, 26-7).

Zo's wild aspirations are given a more temperate example in Nirgal's metabolic burn, his capacity to wilfully call on the spark of viriditas within to warm his body. Yet the bolt still comes from the sun. In a dream, he sees 'something much bigger and faster than him, with wings that flapped loudly as the creature dropped out of the sun, with huge talons that extended toward him. He pointed at this flying creature and bolts of lightning shot out of his fingertips' (*Green*, 19). Later, after being lifted from the icy waters of Zygote before drowning, he calls on this lightning bolt surge of energy to warm up:

He searched for the spot in his middle that was always warm, even now when he was so cold. As long as he was alive it would be there. He found it, and with every breath he pushed it outward through his flesh. It was hard but he could feel it working, the warmth traveling out into his ribs like a fire, down his arms, down his legs, into his hands and feet. (*Green*, 20)²²

This is a discovery to him, as the enthusiastic telegraphically-arranged composite of elements converge on this moment:

He stuck his feet in the water, which felt like liquid flame. Fish in water, sloshing free, out in the air, the fire within, white in the green, alchemy, soaring with eagles . . . thunderbolts from his fingertips! (*Green*, 21)

Almost drowning is here only gently reminding of what he later realises is the 'green fuse' of viriditas, which will 'someday explode back into nova whiteness' (*Blue*, 217).

For Nirgal's talent to be kinetic rather than static allows him to exploit the movement of viriditas, its vibration or shivering, to affect its force. The

Bingen, see *Spheres: Volume I: Bubbles, Microspherology*, tr. Wieland Hoban (New York: Semiotext(e), 2011), 363-7.

²² Sax earlier gives to Nirgal and the rest of his class in Zygote a theoretical description of metabolic burn: 'In nonshivering thermogenesis the body produces heat using futile cycles... it creates heat without using as much energy as shivering does. The muscle proteins contract, but instead of grabbing they just slide over each other, and that creates the heat... the amino acids in the proteins have broken covalent bonds, and the breaks release what is called bond dissociation energy... Covalent bonds are formed when two atomic orbitals merge to form a single bond orbital, occupied by electrons from both atoms. Breaking the bond releases thirty to a hundred kcals of stored energy.' This gradual focal change from futile cycles to atomic bonds ends, after much urging of his students with insistent 'but-why's, he would at last say:

'That's how the atomic force works. That's how things came out—'And they all would shout, 'in the Big Bang' (*Green*, 13-4).

metaphors of a fuse and of a sun which will one day go supernova, suggest that this movement of burning is not only heliocentric but also orgasmic, as in the case of Zo. Viriditas, however, is also consumed by this burning. Thermogenesis is as much an active pushing of viridical force as it is an expenditure of its energy. Bound to the idea of viriditas is a violence which Ann knows perhaps more than anyone, and the overriding presence of whiteness, void, viridical emptiness. Death in the novels is the clearest evocation of this violence, but one which comes to invigorate viridical life with its meaning. Before coming to discuss this point, the contours of viriditas as a force needs some attention.

In 'Violence and Metaphysics', Derrida's argument on the 'violence of light' as one of the determining metaphors of metaphysics and phenomenology can be drawn alongside viriditas firstly for its dawning, the moment of enlightenment, the shift in focus from non-vision to awareness. It is conceptually akin to the corona Zo sees on the horizon on Mercury. It provides an explication of the definitive metaphor of light. Derrida's different uses of force can help focus in and account for the way in which the planetext lies about the reader always with a viridical potency from which they solicit its meaning, but which is also always in excess at any moment of any meaning that can be said about it, always over the horizon. Viridical force as thought with Derrida's phrasing of how meaning both appears in signification and breaks free of it, combines both 'construction' and 'ruin' (*Writing*, 6). Rather than offering a labile planetext, Robinson's is stabile in acquiring both these qualities of force: the ability for generation, and for deconstruction. In the single term solicitation lies the act of drawing or entreating meaning from the standing reserve of the enframed planetext, as well as the act of shaking or disturbing it. In the first case, the perspectival focus of the Trilogy means that any adoption of a method necessarily shakes many of the others. But a careful analysis across this thesis of how this textual disturbance occurs reveals an appellation of different results, from Michel's confounding psychology, to Sax's reductionism and spur, and Ann's impossible geolinguistics. Viridical force is a way of theorising these disturbances and complications of meaning, but also for allowing them to unfold meaningfully in the context of the planetext.

The sense of viriditas as a 'force' speaks to Derrida's proposal of a similar force operating through the process of signification. The base of Derrida's force ranges across three texts: 'Force and Signification', 'Force of Law', and 'Violence and Metaphysics'. In 'Force of Law' force is placed in the operations of justice and law, in which justice is the setting in motion of deconstruction, or deconstructibility, and law the regulation of supposed justice enforced through structural means. And in 'Violence and Metaphysics', Derrida discovers in Levinas the supposition of a metaphysical law of heliocentrism, a structure of philosophy based around light and

enlightenment.²³ ‘Force and Signification’ posits a different meaning to force as a quality about a text which both articulates it as a phenomenon, and always stands coextensive to it. Force resides in the about-ness of a text where it both allows its ‘solicitation’, but is always exorbitant. In this sense force is noticeable in the viridical contours of the Mars Trilogy, and can be reasoned as both its enabling of meaning, while signifying such meaning through terraforming, and an always coextensive exorbitant deconstructibility. Viridical force relies on this disappearance and hiddenness of the planetext as it does on its burgeoning presence.

The heliocentric focus of force, from which derives its violence as Zo experienced on Mercury, gives the sense that it is only about light, and thus that we should follow Carol Franko and Luce Irigaray²⁴ into a non-photological understanding of language. But to reiterate the meaning of Sax’s spur as mostly hidden but exerting a push means viridical force can be discovered both in non-photological and visible experiences, and more importantly that each is keyed into the other to stand in the novels as the about-ness of the planetext. We saw that in Sax’s experience of mind when the planet most forcibly rose into view, it was also only its spur, the edge of a greater object which remains obscured and hidden. A proper attention to the unfolding of the spur in its momentariness is an attuning to the almost-seeing of meaning. Derrida’s term for this double function of force comes in ‘Force and Signification’ as the ‘soliciting’, meant in both sense to entice or entreat, and to ‘shake’ or ‘disturb’.

The shaking of the structure which also elicits meaning is taken up in the form of Sax’s building-analogies and the neuronal event of his stroke. The lesson of Sax’s changing methodology and his reductionism was that we, like him, do not abandon the Parthenon of science, but recognise its deconstructibility. This soliciting ability Derrida takes up in the ‘Force of Law’, in which the ‘violence of light’ is directed as the ethical possibility of deconstruction. In handling law as the building of a ‘metalanguage’, that the ‘intrinsic structure of law and justice’ supposedly ‘puts together’ – a clear echo of Sax’s ‘throwing together’ – Derrida distinguishes law and justice according to ‘deconstructibility’ (‘Force of Law’, 243). Law is a form of signifying justice, and so contains the same potential for misinterpretation and *aporia* (confusion of meaning)²⁵ as does signification. Michel’s confusion in the double bind is, generally, ethical. As such, law is always susceptible to deconstruction. In

²³ See Carol Franko, ‘Dialogical Twins: Post-Patriarchal Topography in Two Stories by Kim Stanley Robinson’, *Science Fiction Studies* 22 (1995): 305-22.

²⁴ Luce Irigaray, ‘The Fecundity of the Caress: A Reading of Levinas’, *Totality and Infinity*, ‘Phenomenology of Eros’, *An Ethics of Sexual Difference*, tr. Carolyn Burke and Gillian C. Gill (Ithaca, NY: Cornell University Press, 1993), 185-217; cf. Kate Ince, ‘Questions to Luce Irigaray’, *Hypatia* 11, no.2 (Spring 1996), 122-40.

²⁵ Jacques Derrida. *Aporias*, tr. Thomas Dutoit (Stanford: Stanford University Press, 1993).

these terms *viriditas* as the push toward patterning might be equivalent to the enforcement of law, or the enforcement of structural meaning, and hence the analogy in chapter 3 between the building and the planet itself under terraformation. Justice, on the other hand, is ‘undeconstructible’ (*Ibid*). To put this in terms of the impossibility of Ann escaping from the preference of light, ‘deconstruction is possible as an experience of the impossible’ (‘Force of Law’, 243). Yet before tracing this idea back to the beginning of this thesis, we need recognise that Sax’s scientific method, in Derrida’s terms, moves somewhere between the discovery of natural laws and the soliciting of these laws, a movement between structure and deconstruction, the building of meaning and its spur.

As an organising principle in the novels, it is no more ensuring and protective of their meaning than we can say Sax is their central character. He is not, and meaning in the Trilogy is never guaranteed. Derrida spots the spur of the moment of language, its reading and writing, as the ‘strange movement within language’ by which ‘force becomes a phenomenon’, yet is also ‘language’s peculiar inability to emerge from itself’. Robinson not only posited this in the novels by saying *viriditas* is infinitely ‘mysterious’, but also that the act of writing itself is, for him, just as confounding. How the writing at all appears is the mystery of *viridical* force, as Derrida wrote: ‘the accident or throw of the dice that ‘opens’ such a text does not contradict the rigorous necessity of its formal assemblage’ (*Dissemination*, 54). The warmth generated by this strange movement, we might say call it a kind of thermogenesis of meaning, never safely ensures its liveliness. Instead, the *viriditas* of meaning as the reader, and as characters, experience it always depends on the pressure of force. ‘Force and Signification’ details such force in the trepidations of discovery and loss: ‘*To comprehend* the structure of a becoming’, which Derrida claims is also ‘an adventure of vision’ a ‘spatializing’, ‘the form of a force, is to lose meaning by finding it’ (*Writing*, 26); that is to speak of the origin of meaning within a text such as the Mars Trilogy according to a methodology will also destroy the meaning at its discovery. This was the lesson of chapter 2 of this thesis, the archaeology of which once it uncovered the hermeneutic of Jameson ceased to give meaning to the text, or at least destroyed the fecundity of its force.

As we saw, Michel approaches this aporic nature of experience with an anguish which forms ahead of time his own fated overdetermination of meaning. His fear of language’s fragile handling of experience leads him to erect a structural hermeneutic of the political unconscious, to discourse a barrier between him and this fragility. His lability too quickly leads him to the ‘anguished’ ‘frenzy of experimentation and proliferation of schematizations’ (*Writing*, 6). By contrast, Sax learns to adapt to the spurring lability of moments through a ‘stable’ (*Red*, 219-20) management of attention. Derrida describes this enforced calmness as a muting of the ‘anxiety of the author’ inside an ‘illusion of technical liberty’. Paranoid

structuralism is an ‘unburdening ourselves of a mute anxiety’, it is to approach the moment of ‘menace’ (*Writing*, 6) (what will be in the final section of this chapter death itself) to more fully comprehend the structure:

Structure is perceived through the incidence of menace, at the moment when imminent danger concentrates our vision on the keystone of an institution, the stone which encapsulates both the possibility and the fragility of its existence. Structure then can be *methodically* threatened in order to be comprehended more clearly and to reveal not only its supports but also that secret place in which it is neither construction nor ruin but lability. This operation is called (from the Latin) *soliciting... shaking* in a way related to the whole. (*Writing*, 6)

In light of the labile and stabile autonomic responses of Michel’s schema (*Red*, 216-7), viridical force enables one to work through the text with a method tuned in to the proliferation of meaning and experimentation without the anguished frenzy. Force therefore enables a deconstructive shaking, an ability to ‘solicit Being’ on the planetext. To be clear, viridical shaking (or thermogenesis) is in Derrida’s texts the incidence of menace which, if encountered properly, allows a fuller comprehension of structural meaning. I claim this not only a way of reading the novels and finding the contours of its organising principles, but to also account for the strange movement of its planetary textuality. We can reword the above quotation to read: ‘structure can be *methodically* played with in order to be comprehended more clearly and reveal not only its supports but also that expansive place known as the planet in which it is both constructed and ruined, as well as stabile.’

To frame this in terms of chapter 1, from Ann Clayborne’s point of view, the terraforming project is an act of supreme violence. The question of the ethical decision to change the Martian environment, debated many times across the Trilogy, tends, when Ann is speaking, to follow two paths: the need to keep Mars untouched for its geological record, and the potential to devastate a native microbial Martian population. To the second, which is less Ann’s concern than maintaining geological integrity, the narrative keeps what it calls ‘Little Red People’ in its margins (see the following section), but visible enough to perform an ethical *aporia* over terraforming. Perhaps one reason for this hierarchy of concerns in Ann’s mind is the sharing of viridical life between the new and the old Martians, held together by a thread of biology. The appeal of geology is as an exit from the knots of biological imbrication, Martian or otherwise. Her attempts to move outside the inhabited regions, from driving to the north pole in ‘The Crucible’ very early in *Red Mars* to ‘Ann in the Outback’ in *Blue Mars* after so much of the planet had been irreparably changed, are acts of escape and avoidance, and can be understood as anti-humanist when read as escape attempts from Sloterdijk’s

Zoo. Her resistance to the ‘anthropogenic hothouse’²⁶ of Mars for the geological cold house of pre-terraformed Mars, is a resistance to the humanist project. But all along the possibility of exit remains narrow, perhaps illusory. Sax and Maya discuss, prior to leaving the Ares in orbit around Mars at the beginning of *Red Mars*, how settlement may prove to re-enact Sartre’s *Huis Clos* (No Exit) (*Red*, 90). Ann’s journey to the north must be rewound by returning to Underhill (the first Martian settlement), and the outback brings a polar bear and a change of perspective. She battles against what is almost inevitable.

Understanding Ann’s place in the narrative as a kind of balance to the ethical questions raised in the novels, giving room for the reader to make their own decisions, is undermined by this inevitability. Viridical view is contaminated by an apparently unethical degree of violence. To ‘sterilize’ (*Red*, 330) the whole settlement is an impossibility simply on the grounds that to sterilise is already to enact a project. Just as that to appreciate the geology of Mars, to practice *geophilia* and write and read according to a lithography, is already an imbrication in consciousness. This imbrication does not make a geo-linguistics impossible, but enables it in a uniquely human way. In this context, in a uniquely viridical way. All the same, Ann’s narrative helps to detail viriditas as an act of violence, unfolding at the linguistic level of areographia.

A key means by which Ann’s narrative reveals one of the ways in which the violence of viriditas is committed occurs when she travels to the outer Solar System and to the icy moon of Uranus known as Miranda, a rock in contrast to the other planetary body explored in the same chapter, Mercury, closest to the Sun with a surface reaching up to 700 Kelvin in daylight. The key to the contrast spanning the chapter ‘Viriditas’ is the varied influence of the Sun on the life and non-life of the planets. As a cosmic thread spreading throughout the universe, viriditas tends to arise in the paths opened by the Sun, and its violence is a violence of light and heat; too close and this violence becomes too much and life is impossible. Yet it remains a useful means of terraforming those planets too cold for harbouring life. From Sax’s soletta lens to the bright glow of impacting meteors, blinding light is the spray of the terraforming process, the mark of its violence with which it pummels, collides, and burns the surface of the planet. But the violence of the Sun as a tool for altering the climate is as much a blindness to the other environment of Mars, the untouched rocky pure-scape which is Ann’s preference and ethical allegiance. Perhaps for this reason regions of the outer Solar System appeal so strongly to her sense of rocks untouched in the dark such as Uranus and its moons. Toward the end of *Blue Mars*, prior to the collective memory recall

²⁶ Sloterdijk, ‘Rules of the Human Zoo: a response to the Letter on Humanism.’ Translated by Mary Varney Rorty. *Environment and Planning D: Society and Space* 27 (2009), 25.

of Sax's experiments on the brain, and Ann's subsequent relationship with Sax which ends the Trilogy, she along with Zo travel to Miranda, one of Uranus's five moons.

Before discussing the meaning of this violence in more theoretical terms as it relates to viriditas, the meeting of Zo and Ann can set up this discussion through their opposing preference for light. By this late in *Blue Mars*, distances from the Sun influence the means by which the new terraformers of the narrative, after the success of Mars, take up the power invested to them to change planetary climates. 'Viriditas' begins on Mercury and explores as far from Mars as Uranus, a span which sets up sunlight as one path to take through the chapter. By the beginning of 'Experimental Procedures' (Sax's focal chapter in *Blue Mars*, following on a little after 'Viriditas'), Jackie is leaving the Solar System altogether on a multi-generational starship for another star system. At this stage in the Trilogy, the frame of viriditas has been cast so wide and begun to spread beyond the planets into interstellar space that the forms it takes do not necessarily remain the same from planet to planet. Despite interplanetary travel, the planets reside far enough apart that their unique environments express viriditas in very singular ways, and proximity to the Sun appears to speak to or modulate this variety of expressions.

The case of Venus is, at least to Zo and many other people (*Blue*, 496), a project of madness. Yet, despite the supposed insanity of the 'mystical' Venusians, Zo cannot help find their work 'beautiful' and 'magnificent', a case of her deep viridical hold on the burning experience of the planets. When on Mercury, dangerously closer to the Sun than Venus, while watching the corona of its horizon from Terminator (a city crawling perpetually over the planet, and a reminder of Priest's *Inverted World*), the display of the 'explosive phosphorescent dancing line' of the approaching Sun which will burn the city in an instant, takes the form in her imagination of a 'forest fire', which has an inner correlative of a spirit 'flashing likewise' like a moth to the flame. A metaphysical moth. She experiences a 'Solar rapture', 'a kind of spiritual sexual hunger', 'crying out in just the same involuntary orgasmic cries, *such* a fire, *such* a beauty.' In drawing her own likeness to 'Icarus', she is understanding her pleasure through an all-consuming surrender to the fire of the Mercurian corona. The energy of flame and the experience of burning is both a symbol of death and the fuel of pleasure (*Blue*, 493).

The irony of her experience on Mercury, and of the Venusian mystics, is that both inhabit spaces of darkness. The Mercurians must crawl through a perpetual night, and Venus must be cast into darkness to cool down its furnace temperatures, both in contrast to Mars which must be brought out into the sunlight via lens and mirrors to warm its surface and melt its ice. But different to all three, away from the infernal shallows of the Sun and the Goldilocks region of Earth, sit the outer icy planets, among them Uranus and its moon Miranda, to which Ann travels in Zo Boone's chapter 'Viriditas'.

This chapter not only serves to illustrate the span of viridical force from Mercury to Uranus, but also contrasts Zo's pleasure seeking mentality with Ann's areological obsession.

At the same time that Mars must be brightened to warm it up, it must be done in order to make an atmosphere to protect from UV radiation. With Ann's preference for a cold rocky Mars comes a constant assault of radiation, which has 'marked' her skin with 'wens', 'warts', and 'scars', 'skin-disorders', effectively she has been 'fried' during 'a long life spent outdoors'. Zo notes that Sax too has a face just as 'severe', 'withered', and 'sun-dried', but Ann's is 'even more silent and strange'. The likeness to the landscape of old Mars with her 'lizard slash' mouth imagines Ann as a traveller through a hostile environment, to a degree she fits the life of an extremophile (*Blue*, 523). Even *geophilia* is not without its violence, and light (or UV radiation) is ever-present as a force of destructive energy even on an uninhabited pre-terraformed Mars. Appreciation for such a world entails a dangerous encounter with one of the determining forces which has kept it without life for the duration of its history.

By this stage in the narrative, light is the chief resource for the altering of the planets and moons of the outer Solar System. While passing the Jovian moons, Zo and Ann are given the opportunity to see the terraforming process in action. The 'lack of light' this far out means that mirrors and 'gas lanterns' (*Blue*, 526) have to compensate. Such lanterns are lowered into Jupiter where they ignite its reserves of helium₃ into 'points that were too brilliant to look directly at for more than a second'. This is a mock reminder that Jupiter once could have been a Sun itself, resulting in a binary star system. By transmuting its captive energy, Jupiter is used as a lantern to shine on the deep planets and moons. There is even mention in a discussion while passing the gas giant of 'dropping a small black hole into Jupiter's upper atmosphere' and 'stellarising Jupiter', then 'you'd have all the light you needed,' obviously a case of what Zo calls 'divine madness', a case definitely resulting in the planet going 'nova' and consuming everything around it but Pluto (*Blue*, 530).

These immense monstrosities of viridical force perhaps carry their extreme nature only to fit against the case of Miranda, the 'wilderness' of the Solar System. It is similar in topology to the high regions of Mars kept at certain millibars of pressure to ensure some state of preservation of original conditions, a compromised Red-Green tolerance of terraformed regions. Zo's sense of Miranda is as a 'dark backward and abysm of time' (*Blue*, 537), a 'climber's world... looked at and nothing more. A natural work of art' (*Blue*, 536). This last recognition of the built status of wilderness does speak to the impossibility of Ann's reach for a sterile interaction with the moon, but it appears so only on the basis of looking and nothing more. Her comments later to Ann that 'this hole in a rock' is not as 'sublime as even a phrase of *Hyperion*' (*Blue*, 539), gives more form to Miranda as a particular kind of artwork, one void of intelligent expression. As developed in chapter 1 of this

thesis, Ann's *geophilia* and areological method is pointed to the surface alone, and directs the interpretive mind away from the symptom of the rock. Michel's psychiatric evaluation of Ann is that she bears a death-wish, an interpretation which also bears an anti-areological move against the surface in favour of Ann's psychological depth. The organisation of Miranda into a wilderness-artwork, mostly by partitioning it as not for terraforming, is an organisation of surfaces. Its hermeneutic is therefore the approach of the rock without depth. Many times over the novels (many more than can be counted or adequately cited), even outside of Ann's narratological spotlight (and perhaps especially outside her spotlight) there is displayed much the same appreciation and detailed notation of surfaces as this passage in which an event early in Miranda's astro-geological history created a unique geography:

...But the moon had cooled before the coalescing was quite finished.

The result was a landscape out of a dream, violently divergent and disarranged. Some regions were as smooth as skin, others were ripped raw; some were metamorphosed surfaces of two proto-moons, others were exposed interior material. And then there were the deeply grooved rift zones, where the fragments met, imperfectly... (*Blue*, 536)

Ann's ethical dimension, the frame of her experiences with the lithospheres of the Solar System, almost demands the reader look no deeper than the smoothness of the rock, and construct a history only of collisions and accretions. The 'big rifts' on Miranda, caused by the 'tremendous torques involved in the collision' are 'visible from space as hack marks, incised scores of kilometres deep into the side of the gray sphere' (*Ibid*). To interpret into these marks a meaning beyond their surface is to fall into one of two mistakes: Zo's heliocentric view of viridical life in the Solar System, making for a hermeneutic of illumination; or, Percival Lowell's mistaken reading of the Martian canals, also visible from space, as the marks of intelligent beings. To reiterate the point made in chapter 1, a geomedia is the disappearance of a writer in the making of a language, one reason for which is the basic inhospitable nature of the geosphere. In the above passage, the reader is reminded of this hostility. The 'violently divergent' (*Ibid*) arrangement of the surface not only betokens artworks without artists, but also artworks that are effectively hostile to them. For this reason, to repeat chapter 1, psychological depth has to be abandoned in favour of the surface, the violence of collision, igneous metamorphosis, rift, and shattering.

The complication that arises between Zo and Ann while on Miranda is not simply between two opposing views, but, in this context of viridical force and geosphere, between the plastic nature of the act of enframing. Zo's point (quoted at length below) that the intrinsic worth even of a barren rocky moon of ice such as Miranda lies in the 'glory' of their minds, a kind of cosmic solipsism, is challenged by Ann's sense of the planet as the very 'matrix life emerged out of'. Viridical force, it seems, while expressing itself as a glory of

mental arrangement, is predated by another force, which is gravitational but nonetheless heliocentric. When it comes to speaking about the network of living organisms on Mars in the novels, areology falls short. But given the ripples of contextual embeddedness, viridical force must be held in tandem with gravitational force, the narrative of collisions and accretions. And this earlier force – still, of course, operational and *impactful* – served and serves to *enframe* viriditas as a bedrock, what the novels call *kami*. Ann's narrative and the use of addressing it through a confluent surface reading is to remind the reader of this context, a fact often obliterated by the bright light of viridical awareness, the 'glory' of mind.

The chapter 'Viriditas' most of all illustrates that viridical force is heliocentric, and its bubble is the Ort cloud. At one point while hiking over Miranda, Zo dispenses her opinion of Ann's areology as a case of 'locating intrinsic worth in the wrong place'. Her philosophy of experience in the heliosphere is instead photonic, and neatly expresses the spark between mind and rock:

'It's like a rainbow. Without an observer at a twenty-three-degree angle to the light reflecting off a cloud of spherical droplets, there is no rainbow. The whole universe is like that. Our spirits stand at a twenty-three-degree angle to the universe. There is some new thing created at the contact of photon and retina, some space created between rock and mind. Without mind there is no intrinsic worth.' (*Blue*, 540)

This sense of experience establishes a metaphysics of light as the code for illuminating meaning. It is also a clear demonstration of what Derrida called in 'Violence and Metaphysics' the 'violence of light', the habit for Western philosophy to approach its projects in terms of illumination and enlightenment.

Zo's encounter with the face of Ann brings her up close to the marks and scores of 'one of the most famous people in history' (*Blue*, 535). Zo's perception of her face is one in which the exposure of recognition and exposure to sunlight fold over each other. In contrast to Hiroko's face, which both Nirgal (at Medusa) and Sax (in the storm) possibly misrecognise, Ann's is almost brutally clear. This moment unfolds the contradiction of a phenomenology of the other, in Ann's case the areological world which has been marginalised and shadowed behind the force of terraforming. Her face is burnt and beaten to much the same degree as the planet itself. This recognition of fame is not a moment of allegorising Ann into her areology, but a surfacing of areology, finding it in the lines and blemishes of her skin.

The contradiction of this moment, and indeed of all Ann's areological encounters, and which Zo is only clumsily pointing to when she claims that Ann's value of the landscape is mental rather than intrinsic, is that some edge of violence always persists even in areology. Of this Derrida says:

...it is difficult to maintain a philosophical discourse against light. And thirty years later, when the charges against theoretism and (Husserlian) phenomenology became the essential motifs in the break with tradition, the nudity of the face of the other – this epiphany of a certain non-light before which all violence is to be quieted and disarmed – will still have to be exposed to a certain enlightenment. Especially as concerns the violence implicit in phenomenology. (*Writing*, 85)

Whichever way Ann relates to the rocky planet it is but a repeat of the way Zo recognises her face. Both partake in a ‘heliopolitics’ (*Writing*, 90). In Zo’s words, phenomenology is only possible at twenty-three-degrees. In building a history of Ann’s face, or a history of the Solar System, the overriding metaphor is light, as well as gravity, its invisible coefficient. The point to be made here is that viridical force is inherently heliocentric to different degrees, and areographia is heliographic just as much as *areology*, writing which takes place equally on the face as on the planet, so that the face of the planet and the landscape of the face are interchangeable.

In a crucial event that frightens Ann into some kind of survival instinct, a white polar bear chases her back to her rover. As she sees it coming ‘it flowed over [the rocks] like a white nightmare, a thing beautiful and terrifying, the liquid flow of its muscles loose under thick yellow-tipped white fur.’ It is an image that apparently focuses her senses to the viridical life surging toward her: ‘all this she saw in a single moment of the utmost clarity, everything in her field of vision distinct and acute and luminous, as if lit from within’ (*Blue*, 262-3). This is Nirgal’s green fuse exploding into polar whiteness, her own impending death running at her. Just as at the close of the Trilogy, the instruction is ‘live’ (*Blue*, 281). From this event on, there will always be a ‘white flash out the corner of her eye’, an instance of *presque-vu*, almost-seeing.

The final section of this chapter will detail experiences of death as one of the most explicit expressions of this solicitation of Being, as is summed up most swiftly in Ann’s wish to live after the suspicion of a heart attack at the close of the Trilogy: ‘Beat on, heart’ (*Blue*, 761). The clearest way in which this functions in the novels is the occurrences of death, the dead, of near death experiences, the meaning of longevity, and suicide. The final section of the chapter to come urges the reader to approach death as both the moment of deconstruction as well as the enactment of viridical force, force as violence, force as justice, force as patterning, as that which gives meaning both to the lives of the Martians and to the text. In this sense, the second half speaks to the deconstructibility of the planetext, and the feature by which it stands always about the moment of reading and experiencing the planet, and is gotten to by way of the strange movement within language, by which it fails always to properly emerge from itself.

In the Martian Bardo: Dying as the instruction of viridical life

One could refer to this book as 'The Tibetan Book of Birth'. The book is not based on death as such, but on a completely different concept of death. It is a 'Book of Space'. Space contains birth and death; space creates the environment in which to behave, breathe, and act, it is the fundamental environment which provides the inspiration for this book.

– Chögyam Trungpa Rinpoche

'Hiroko is dead.'

– Kim Stanley Robinson

The corpse may gain its own subject power, either by thwarting the Handy Man, or by becoming one herself.

– Istvan Csicsery-Ronay Jr.¹

DECONSTRUCTION IS THE METHOD by which we have come to speak about viridical life and its strange movement within the planetext. It remains to speak of the peculiar logic of viriditas occurring around the definite and yet perilous core of death, and how its force paints a picture of Robinson's Martians as equally concerned with dying as with living. The incorporeal Hiroko is again the focus who reveals all others, and this disclosure of the planet rendered through her own death or disappearance begins a reading of the double nature of viridical force. Both the non-living planetext and dying were of focal interest in our discussion of Ann. Bridging those points to these of the final analysis of the Mars Trilogy serves to bring out the *différential* core of the text being carried through its management of scenes of dying, impending death, wished-for death, suicide, and assassination. It may seem that *différance* lies most clearly in the deferral of death itself in the longevity treatment. But while Jameson stated the treatment allowed for history and personal memory to more closely coincide (*Archaeologies*, 118), Yanarella's reminder of its denial of death allows us to credit Ann, and most especially

¹ Trungpa Rinpoche, *The Tibetan Book of the Dead: The Great Liberation Through Hearing in the Bardo* (Boston & London: Shambhala, 2000), 1; Robinson, *Blue Mars* (United States: Bantam, 1996), 407, 409; Csicsery-Ronay, *The Seven Beauties of Science Fiction* (Middletown CT: Wesleyan University Press, 2008), 252.

Hiroko, with delivering ecofeminist deconstructions of those ‘strategies of death denial and death anxiety in ritualised or technological form [that] have been associated with the violent history of patriarchy.’²

This challenge over the meaning of death in utopia and its correlations with history will concern us initially, in which this retention of history, as Jameson understands it, moves the fact of death into alignment with the projects of utopia. That is, utopia is not supposed to rid us of dying but reveal it to us in all its ontological bareness of Being. Heidegger is his anchorage for the deconcealment of Being in such moments when death arrives or is witnessed by an observer. At first, such a project is worthy as a deconstruction, for viridical force is really disclosing to Robinson’s characters the ultimate horizon of their lives which is both impending and unknowable. For these moments to provide an instruction (or solicitation) of viridical Being means their lives only here garner their greatest sense of worth, liveliness, and clarity. This is the pedagogical lesson of Robinson’s Buddhist motifs. And yet, despite their mutual conduct toward Being, Robinson’s Buddhism and Jameson’s historicist utopia depart from one another in the bardo, the arena of reincarnation in which the inherent explosion of the polarity of life and death challenge the longevity technique. Dying cannot adequately be historicised.

The strange movement of life through the bardo, by which it turns through dying, and recomposes itself, announces viridical force as a writing of death. The strange movement of bardo-language is depicted in the novels as telepathy, an act both spoken and written as it is carried between the two regions of text, italicised passages and chapters. The complication over the mode of speaking makes the bardo form grammatological, in that speech as a more satisfactory trace of origin is lost under the written-ness which founds the voices of the little red people of Mars within the italicised section. The bardo space of the italics, is a book of space containing both birth and death, as Trungpa informs us, folded at the strange point at which one becomes the other. Using the bardo as a book of traces, of Martian literary history as Robinson engages with it, signals the return, resurrection, or reincarnation of previous Mars’s and Martians within Robinson’s own. The bardo’s non-historicist movement solicits a viridical writing so far as it is a *differential* zone of the dead. The turning of *Ka*, as the name for the red planet carried through its successive generations of world languages, releases the Egyptian spirit-double from its *khat* as a wandering signifier.

² Yanarella, ‘Terra/Terror-forming and Death Denial in Kim Stanley Robinson’s Martian Stories and Mars Trilogy,’ *Foundation* 89 (Autumn 2003), 22.

In his overview of the fertile corpse motif in science fiction, Csicsery-Ronay refers to Hiroko's place in the Mars Trilogy as an 'agronomist leader' constituting a 'formidable formal *détournement*' from the usually problematic nature of the inert planet as corpse waiting for the productive hands of the handy man³. A key element to the corpse is its 'insentience', which opens its availability as an object to be controlled and enforced upon. Csicsery-Ronay underlines the insentience by stating that it is 'usually not represented in human form, but as a region with strongly displaced qualities of feminine reproduction'.⁴ An ecocritique of the mother-earth *topos* of the planet commonly found in environmental narratives does the same work as this unveiling of the planet's corpse through feminine signification. The planet as fertile and insentient not only implies a pre-ordained violence against the land, but it also suggests, as Csicsery-Ronay claims, a move of the masculine handy man against the feminine; the corpse is 'the residue of a distributed life-force that has no consciousness'.⁵ Robinson's *détournement* therefore constitutes an ecofeminist counter-production of the planet signified through a gendered frame as without consciousness, exploitable, and inert.⁶ To signify Hiroko as Gaia, or the great mother of Mars, is not to reproduce the mother-earth topology, which is insentient. Hiroko's place in the Trilogy, including her disappearance in the hidden regions of the narrative, helps approach the productivity of Mars against the problematic handy man exploitation of Martian resources.

A deeper sense of where the fertile corpse originates in relation to Csicsery-Ronay's use of the motif for talking about *Robinsonades*, comes in Marx's chapter of *Capital Vol. 1*, where the 'fetish of the commodity' is raised in relation to Crusoe.⁷ A feature of viriditas I have wanted to draw out is its religious-spiritual focus, and so Marx structures the 'mysterious character of

³ Csicsery-Ronay, *Seven Beauties*, 250-1. The origin of the handy man Csicsery-Ronay locates in Odysseus, whose *polymetic* skillset – the 'many-wiled man', (cf. Rainer Fredrich, 'Heroic Man and *Polymetis*: Odysseus and the *Cyclopeia*,' *Greek, Roman and Byzantine Studies* 28, no.2 (Summer 1987), 121 – enables him to transform the inert resource of the land through a line of production into a valuable commodity. Because the inertness of the land is so important to an unproblematic extraction as a resource, the *polymetis* is, with regards to this plundering, enacted in the *Robinsonade* (*Seven Beauties*, 225-35) of which the fertile corpse and the handy man are elements derived from *Robinson Crusoe*, *ibid*, 228).

⁴ *Ibid*, 227-8.

⁵ *Ibid*, 228.

⁶ Csicsery-Ronay says that 'Hiroko's technology is nonetheless radically at odds with the techno-scientific domination represented by sf's Handy Man in general.' *Ibid*, 251.

⁷ Karl Marx, 'The Fetishism of the Commodity and Its Secret' in *Capital: A Critique of Political Economy*, vol. 1, (Great Britain: Penguin Books, 1988), 163-77.

the commodity-form⁸ as its means of hiding the secrets of its production. Marx presents the alienation of labour from market value, or capital, against Crusoe, for whom this process has yet to occur. He is, by contrast to the social nature of labour, a ‘free man’ in which ‘different forms of labour-power’ are ‘in full self-awareness as one single social labour force.’⁹ He enjoys the use of his labour as it is in direct service of his needs. In a sense different from above, Crusoe fishes, hunts, and builds in a pre-*detoured* form, that is, before labour is split or alienated from its force¹⁰. The magic of the commodity is the hiding of labour from the visibility of the market of social exchange. Csicsery-Ronay is therefore speaking of *detouring* the fertile corpse back through this magical vanishing act, and reinstalling the use-value of the planet through an unalienated relation to labour. The corpse or land-produce, withheld as an ‘objectified husk’¹¹ as Marx describes, gains a subjective power.

How, so far as viridical force is an engine for resurrecting consciousness and producing a meaningful relatability to the planetext, does the planet become a subjectified husk? According to Csicsery-Ronay, the Mars Trilogy successfully counters the negative mode of production chiefly through two narratives: Ann’s resistance by way of advocating for the planet’s basic ‘nonproductiveness’, and Hiroko’s hijacking or rerouting of the polymetic ‘technoscientific domination’ of the corpse by way of imbuing it with intelligence, or focusing on the ‘emergence of sentience from the resource’ which is ‘ineluctably resistant’, and the ‘inability’ of the handy men against the ‘vast and mutable power of nature’.¹² In also claiming that the fertile corpse can as another option ‘become a handy man herself’¹³, he is tracing the same unification of labour and value as Crusoe’s pre-*detoured* independence. Although Csicsery-Ronay does not go any deeper than this in his reading, nor embellish with this description from *Capital*, the reader can already spot the emergence of intelligence in Hiroko Ai, or A. I. This way of understanding Hiroko also implies that the emergent property of terraforming rises out of the corpse via a *détournement* of its force, force that was already latent. In terms of giving some theoretical shape to the space of

⁸ *Ibid*, 164.

⁹ *Ibid*, 171.

¹⁰ Marx says: ‘The determination of the magnitude of value by labour-time is therefore a secret hidden under the apparent movements in the relative values of commodities. Its discovery destroys the semblance of the merely accidental determination of the magnitude of the value of the products of labour, but by no means abolishes that determination’s material form.’ *Ibid*, 168.

¹¹ Marx, *Value: Studies*, tr. and ed. Albert Dragstedt (London: New Park Publications, 1976), 36.

¹² Csicsery-Ronay (2008), 250-1.

¹³ *Ibid*, 251.

this latency, this is a rerouting from a sentient matrix. Ann and Hiroko share this matrix through their resistance, a field of origin for both that is non-productive and reproductive at the same time.

This interpretation is useful for a few reasons. It characterises the force of production (economic, but also here interpretive) in the fertility of a corpse (something believed to be infertile or dead), and it gestures to the role of death in the Trilogy as a potential anchor for this understanding. It is therefore through Hiroko's death and life after death (on which Csicsery-Ronay does not focus), and the mythical cloud in which it sits more uncertainly as a disappearance, that the viridical force of this matrix can be best approached. In wider terms, this final section of the chapter will address the role of such deaths, some of which retain a ghostly presence, some of which are avoided, some counted, and some deaths which while desired are not met. From the death and subsequent half-lives of Hiroko and John Boone, the near-death experiences of Sax, Frank, Zo, Ann, and Nirgal, to the suicidal wishes of Michel and Ann, the presence of death serves in these moments as the instruction of viridical life. This begins with the disappearance of Hiroko very early in *Red Mars* into a hideout somewhere in the South of the planet, to appear again sporadically. Her own dissolution into the planet can occur as a figure-grounding, appearing to the reader as the fertile corpse rising from the dead in the form of a terraformed planet. The *détournement* of which Csicsery-Ronay speaks is the taking of this path through death into a flourishing of life. Like the Tibetan lesson of Simhamukha engulfed in the flames of the Fire Sermon, these destructive forces can be hijacked and directed elsewhere. The focus of this final section is on how the many encounters with death express this viridical force of textual and planetary flourishing. Yet this mention of a Buddhist orientation to dying, such as the novels take up in the form of the Tibetan bardo, begins to shake the dialectical nature of the fertile corpse. Buddhism and Marx, as we shall see, do not fold so neatly over each other.

The Marxist mechanics of Csicsery-Ronay's fertile corpse brings the concept into the orbit of Jameson's understanding of death in utopias, and it is here that the contrast of viriditas as shaped by dying is best held against the Jamesonian methodology. The basic problem arises that death cannot be adequately historicised, and so if by resurrecting or rerouting the fertile corpse into subjectivity is also meant historicising it, the terms on which Csicsery-Ronay understands Hiroko begin to fade, and the fog of her disappearance thickens. The religious focus of viriditas appears to reinstall the mystery of the commodity to some degree. This, I contend, is meaningful only through the presence of death, the utmost mystery, but something which also escapes full commodification. Jameson's reading of death in Platonov's *Chevengur* in *Seeds of Time* reveals the difficulty of historicising dying, and so

suggests in the Martian utopia we reallocate or detour its function, if it has one. The shroud of mystery around Hiroko's death, more than anyone else's death, points directly to the force underlying viridical mystery, or, rather, the magic of viridical force. The power of viriditas to produce meaning is closer to a Derridean excess or supplement (*Grammatology*, 141-64)¹⁴ than to labour force, which brings it more into the ambit of writing.

'It is not the function of Utopia', Jameson assures us, 'to bring the dead back to life nor to abolish death in the first place.' The political and social goals of utopia abandon the tensions of interpersonal and bodily existences for the simpler goal of creating a space that 'allows them free reign' (*Seeds*, 110-11).¹⁵ Chögyam Trungpa calls this the 'Book of Space', neither as a book nor a space which tries to destroy death, but which allows it to be meaningfully held in its transitional arena. This point of apparent likeness between Jameson and a Tibetan Buddhist seems to make sense, at least superficially, that both take an approximately 'Heideggerian perspective': the 'deconcealment of Being' which is the exposure of death at the 'heart of Being'. Jameson carries this *enframing* of Being into his reading of *Chevengur*, which 'begins and ends with an exemplary suicide' (*Seeds*, 110).

This neat overlap of Buddhism and Jameson begins to slip apart in the quotation from the opening of *Chevengur*, in which the fisherman who comes to drown due to a morbid interest in the 'province' at the bottom of the lake, first speaks with some 'muzhiks' about his intentions. Those in agreement tell him 'What the hell, Mitry Ivanich, nothing ventured, nothing gained. Try it, then come back and tell us.' Dmitry Ivanich tried – they dragged him from the lake after three days and buried him near the fence of the village' (*Seeds*, 110-12).¹⁶ The reportage of what the fisherman saw there only appears in the form of his body, and the telling of the 'province' of death is obstructed by the dead body itself, which of course cannot speak and yields only a brutal

¹⁴ For a clear defining of 'supplement' see Barbara Johnson's 'Introduction' to *Dissemination*, and in particular: In French, the word *supplément* has two meanings: it means both 'an addition' and 'a substitute.' Rousseau uses this word to describe both writing and masturbation. Thus, writing and masturbation may *add* to something that is already present, in which case they are *superfluous*, AND/OR they may *replace* something that is *not* present, in which case they are *necessary*. Superfluous and necessary, dangerous and redemptive, the supplement moves through Rousseau's text according to a very strange logic' (original emphases) xiii; x-xiii.

¹⁵ Not only does the publication of *Seeds of Time* coincide with *Green Mars*, but it also gestures to Jameson's later focus on Robinson in a single statement on the political dimension of the Trilogy – at this stage yet to be completed – 'which will surely be the great political novel of the 1990s', 65.

¹⁶ Also see Platonov, *Chevengur*, tr. Anthony Olcott (United States: Ardis, 1978), 6-7.

surface no more penetrable than the surface of the lake.¹⁷ The surfacing of the body appears to destroy the illusion of the province of death, which for the fisherman is utopian so far as it is unimaginable. It is also a reprieve from the boredom of town life. Yet Jameson appears mistaken in reading the consistency of death and utopia through this passage in terms of the ‘distraction’ of the former from the ‘organic boredom of the latter’ (*Seeds*, 111). The case for the fisherman plays out the opposite by finding the bottom of the lake ‘much more interesting than living in a village or on the shores of a lake.’¹⁸ When the province of death is utopian, something in the process of the deconcealment of Being has turned rotten. Those who drag his body from the lake are brought up close to this rottenness and can interpret it no other way than is obvious. The brutal surface of the body contains no inner province of meaning. By burying him they attempt some kind of retrieval of meaning, as with Virginia Woolf’s fish of thought¹⁹ which, on another subject matter, is more meaningful if it is thrown back in the water than dropped onto the grass.

This example from *Chevengur* sets up Jameson’s handling of the role of death in a utopia. The most peculiar element of which appears to be that the

¹⁷ While on an ice-ringed beach Ann Clayborne stumbles on the washed-up corpses of seals: ‘Suddenly she saw the birds’ target, lying in a cleft at the edge of the ice: the mostly eaten remains of a seal. Seals! The corpse lay on tundra grass, in the lee of a patch of sand dunes, sheltered by another rocky ridge running down into the ice. The white skeleton emerged from dark red flesh, ringed by white blubber, black fur. All torn open to the sky. Eyes pecked out’ (*Blue*, 259). Compare the abrupt surfacing of bodies with the infamous and grotesque horse’s head from Gunter Grass’s *Tin Drum* which a Baltic fisherman uses to catch eels. The frightful image, for Agnes Bronski at least (Oscar’s mother), is not the head but the eels feeding inside it which the fisherman retrieves from its various openings. The point of this comparison may be not only in Agnes’s vomiting but also her suicide by overeating fish. The fisherman of *Chevengur* feels that the fish were ‘special beings that definitely know the secret of death’, a sentiment which is not quite found in the lives of eels in their own province of the head or Baltic Sea, but by their slithering from it. Virginia Woolf said that the fish at the end of the line should sometimes be thrown back in the river, if the fisherman is smart. These retrievals of objects from bodies of water all seem to suggest the secret of death is plain. It has no province but only that which is hidden within our own. The management of the body in *Chevengur* is simply to place it back, only this time in the ground. Also recall from chapter 1 Aldo Leopold finding death in the eye of the wolf, much as the fisherman: ‘He would show Zakhar Pavlovich the eyes of the dead fish and say, ‘Look – there’s wisdom!’” 6.

¹⁸ Platonov, *Chevengur*, 6.

¹⁹ Woolf writes: ‘Thought... had let its line down into the stream. It swayed, minute after minute... until... the sudden conglomeration of an idea at the end of one’s line... Alas, laid on the grass how small, how insignificant this thought of mine looked; the sort of fish that a good fisherman puts back into the water so that it may grow fatter and be one day worth cooking and eating. ‘A Room of One’s Own’ in *Penguin Great Ideas: A Room of One’s Own* (London, Penguin Books, 1945, 2004), 5-6.

problem of dying is un-socializable, in that it cannot be allegorised or understood through the political unconscious, and its sites may be at best *heterotopian*.²⁰ The surfacing of the fisherman suggests this in its destruction of the province of death. But even while it is not the business of utopia to avert or fix dying, Jameson's sole approach to it is to try to make it at least interesting, to try to unconceal it much as the fisherman hoped. While the deconcealment process does suggest a similar coping principle as *The Tibetan Book of the Dead*, the main point of difficulty between death and utopia is over the issue of interest. Death is perhaps too 'boring' in the Jameson utopia because it is pure surface. Too much, it seems, is unconcealed, there is no darkness for political closure to occur. Fear of death cannot easily be held under suspicion without reallocating it to fear of something else, in the case of the fisherman an inverse fear of 'life and sexuality' (*Seeds*, 111). This particular combination of fear fits the same diagnosis Michel gave to Ann Clayborne, of her 'denial of life' (*Blue*, 52). But reading Ann through Michel's program signals the limitation of his interpretive measures to grasp the significance of death to her narrative, or especially in his own case. It is no surprise that Ann's close encounter with death, on more than one occasion, brings out an affirmation for living and therefore confuses the simple reading that she harbours a death-wish, unlike Michel who stumbles through depression until his own death takes him over.

Though *Red Mars* begins with an exemplary death, it is crudely political in nature, and while it could have ended with another – Ann's suicide (*Red*, 566-7); or her heart attack, (*Blue*, 761) –, this inevitable event is postponed beyond the space of the pages. In the case of the former, the assassination of John Boone is perfectly mappable onto the social unconscious of the Trilogy. The textual organisation and timing of the death speaks to its easy assimilation into the historical narrative. It opens the Trilogy *in medias res*. His death occurs in the Martian time-slip – the daily hour-long pause in the planetary clock between 12:00:00 and 12:00:01 – during the Bakhtinian carnival.²¹ The

²⁰ Michel Foucault claims the graveyards, as one such place which 'disturbs' the *heterotopia*. He argues it is because they destroy the coherence of language: 'they secretly undermine language...make it impossible to name this *and* that... shatter or tangle common names...'; 'Preface' of *The Order of Things: An archaeology of the human sciences* (London, Routledge Classics, 2002 [1989]), xix. For comment on graveyards see Foucault's essay (with Jay Miskowiec) 'Of Other Spaces: Utopias and Heterotopias', *Diacritics* 16, no.1 (Spring 1986), 22-27.

²¹ Carol Franko, for example, discusses Bakhtin's dialogic, polyphony, and carnival in her essay 'The Density of Utopian Destiny in *Red Mars*', in which she focuses on Boone as the access point into the dense political strata of *Red Mars*. She claims 'Boone's death transforms the theme of utopian destiny in *Red Mars* – transforms utopian destiny in the sense of carnivalizing it – making it dense with time and change, death and renewal, and also dense with stories.' 120.

murder was consciously planned by Frank Chalmers. The festival appears as the only stage of dying in which it can satisfactorily be historicised. The construction of the festival space, the organisation of the crime, the convenience of the timing, each point to a textual controlling of death which enables Boone's body to yield a political meaning, just as later in 'Falling into History' Boone identifies the dead body in his sleeping quarters to have been murdered, an echo of his own, making sections of the chapter a detective story of his own death. In Bakhtin's understanding of the carnival, the grotesque appearance of the body in all its decay and waste can be located into an historicising arc, that where there is death there is also birth. As he writes in *Rabelais and His World*: 'In the endless chain of bodily life it retains the parts in which one link joins the other, in which the life of one body is born from the death of the preceding, older one.'²² The fact that 'Festival Night' opens the Trilogy speaks to the valuing of Boone's death as a political event, igniting the process of Martian history.

This note of resurrection speaks in the long run of this chapter to the Buddhist idea of *samsara*, the wheel of life and death. It also directs our attention to the language of Hiroko's viriditas, when Hiroko liberates Michel from his suffering in Underhill, early in *Red Mars*. It is noteworthy the sexual ceremony takes place at the end of 'Homesick', when this liberation occurs, and continues directly into 'Falling into History', Boone's only chapter of the series. This continuity may at first seem to speak to the carnivalesque nature of Michel's rite of initiation into the areophany. However, when Hiroko's viriditas is considered, the 'celebration of the body of Mars' (*Red*, 230) is a figure-grounding of Michel's own rebirth amid a crowd of bodies. By describing this scene through the culminating image of Michel's dreams, as the 'phoenix' (*Ibid*) or the lizard that 'sloughs' its skin,²³ viridical force is taking up death through a cycling process to excel its production. At the beginning of Michel's chapter, the imagery of his dreams and rebirth are suggested in the form of a general description of the planet-wide bioengineering of new organisms at this very early stage of terraforming. The quick rate of 'microbial generations (say ten per day)' (*Red*, 204) enables closer control over the direction of mutation. The lichens which cover the cliffs of *Valles Marineris* act as a composting of generations, the dead matter of the previous recycled into the present. The 'suicide genes' which trigger in order to control 'excess success' (*Red*, 205) of organisms work in an apoptotic rather than necrotic way. That is to say, necrosis is a pathology of cellular death, whereas

²² Bakhtin, *Rabelais and His World*, tr. Helene Iswolsky (Indiana: Indiana University Press, 1984), 318.

²³ '...he was a lizard on the top of the Pont du Gard... His diamondback skin had sloughed off around his tail, and the hot sun burned the new skin in crisscross lines.' *Ibid*, 225.

apoptosis is cell death which assists in the growth of an organism.²⁴ Perhaps along these lines, Michel's own suicidal depression is necrotic in so far as it fails to generate meaning for himself, whereas the life cycle of viriditas, as displayed in Michel's own rebirth (which is significantly metaphorical), is more apoptotic, the sloughing or falling off of a previous skin.

On what basis then is Hiroko's viriditas a force of death as well as life, as understood through Buddhism? And how does this Buddhist element appear? Why does its force compel Michel to be reborn? The only critical precedent for the place of Buddhism in Robinson, that is of any analytical depth, is Csicsery-Ronay's reading of the California Trilogy; by far the most attention Robinson's Buddhist interests have received.²⁵ 'Possible Mountains and Rivers' remains a strong case for the role of Zen in shaping the 'narrative protocols', 'linguistic style', and 'reader-text relationship' on those novels²⁶. It is also a valuable resource of American Zen scholarship and an exemplary case of reading *tathata* ('suchness')²⁷ in the Trilogy, which recurs in the Mars Trilogy in Sax Russell's narrative. 'Possible Mountains and Rivers' might therefore act as a lens for understanding *tathata* in the Mars Trilogy. However, I will not attempt to do so for several reasons. Conducting such an exercise would firstly contribute little that he has not already said about the *California* Trilogy, which would amount to a simple transplanting of a reading into another context. It would also miss the Tibetan features of the Mars books which, I want to insist, are at odds with the dialectical approach.

²⁴ *Oxford English Dictionary*, s.v. 'necrosis' <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/125717?redirectedFrom=necrosis>, accessed November 14, 2016; s.v. 'apoptosis' <http://www.oed.com.ezproxy1.library.usyd.edu.au/view/Entry/249068?redirectedFrom=apoptosis>, accessed November 14, 2016. The OED records that J. F. R. Kerr wrote in the *British Journal of Cancer* in 1972 of the derivation of apoptosis, notable for its transition from horticultural to medical pathology: 'The word 'apoptosis' (ἀπόπτωσις) [sic] is used in Greek to describe the 'dropping off' or 'falling off' of petals from flowers, or leaves from trees.'

²⁵ Also see: Sullivan, Bruce Millen, 'Fluid Selfhood, Human and Otherwise: Hindu and Buddhist Themes in Science Fiction,' *IR* 17, no.4 (2014), 489-508; Rose, Andrew, 'The Unknowable Now: Passionate Science and Transformative Politics in Kim Stanley Robinson's Science in the Capital Trilogy,' *Science Fiction Studies* 43, no.2 (July 2016), 260-86.

²⁶ Istvan Csicsery-Ronay, 'Possible Mountains and Rivers: The Zen Realism of Kim Stanley Robinson's *Three Californias*', *Configurations*, 20 (2012), 149.

²⁷ Suchness and haecceity share traits. Jeffrey Hopkins defines suchness, or *tathata*: 'Suchness' refers to 'emptiness' because whether Buddhas appear or not the nature of phenomena remains as such. A suchness is also a 'natural nirvana' which does not refer to an actual passage beyond sorrow, that is, an overcoming of the afflictions, but to an emptiness itself that naturally is passed beyond inherent existence.' *Meditation on Emptiness* (Boston: Wisdom Publications, 1996), 218-9.

A line of thought which might be followed out of this reading is that life and death work in *viriditas* as a dialectic, the process of viridical force could therefore be dialectical. Bearing this in mind when approaching Zen seems to imply this cannot be the case. After all, the limitation of Csicsery-Ronay's reading of Zen in the *California* series is his claim that it grafts onto Marxism apparently without a problem. The shared trait, he argues, is tension – 'dialectical history and utopia' (Marxism); 'ceaseless change' and 'the home ground of the present'²⁸ (Zen), and so the handling of these tensions is more a demonstration of the dialectic than Zen restfulness. The historical stages of the dialectic therefore overwhelm the Zen approach by fitting it into a periodic history of California. Zen simply provides a useful set of protocols and styles which push the dialectic into action. To argue on these terms into the Mars Trilogy, life and death become points of tension, of two opposing forces, when instead they might be one, at least so far as *viriditas* is their single generative force.

In short, a complication which may arise from an otherwise exemplary exposition of Zen realism, is that it too strictly theorises within a Marxist discourse. Approaching Zen from the Marxist tradition gives Csicsery-Ronay a select amount of terms and concepts with which to dissolve an otherwise expansive horizon of Zen Buddhism, which in the end disables him from distilling a Zen reading in any other way than by historicising. In The few occasions when a more deconstructive linguistic set is used – Heidegger's 'comport'²⁹; and a footnote on the critical literature on Buddhism and deconstruction³⁰ – another method is glimpsed.

Of the two examples on which to focus, the first is the inventive application of the famous representation of Zen experience, quoted in Alan Watts's *Way of Zen* (an important text in the American awareness of Zen Buddhism): 'first there is a mountain. Then there is no mountain. Then there is.'³¹ These, Csicsery-Ronay grafts onto the California books, each corresponding to each stage. In this way he echoes Tom Moylan's fitting of the Trilogy into a process in which first comes the dystopian *Gold Coast*, then the apocalyptic *Wild Shore*, and finally the reinstallation of the mountain utopia in *Pacific Edge*. The arc of delusion and suffering – apocalyptic wiping of the slate – and recuperation might also be traceable in the Mars books

²⁸ Csicsery-Ronay, 'Possible Mountains and Rivers', 157. This final quote derives from Nishitani, quoted in Steven Heine's 'History, Transhistory, and Narrative History: A Postmodern View of Nishitani's Philosophy of Zen,' *Philosophy East and West* 44:2 (1994), 251-278, 256.

²⁹ Csicsery-Ronay, 'Possible Mountains and Rivers', 161.

³⁰ *Ibid*, 151.

³¹ Csicsery-Ronay, 150; Alan Watts, *The Way of Zen* (London: Penguin Books, 1990 [1957]), 146.

along Michel's sense of home: 'Homesick' (*Red Mars*); 'Homeless' (*Green Mars*); 'Home at Last' (*Blue Mars*). This structuring of trilogies neatly takes the form of the dialectic, of which the Michel-Jameson anchorage in the Mars books is a reminder.

Csicsery-Ronay's primary approach into the Californias Trilogy is to its ordinariness of experience, on which is built a Zen realism. The scattered use of Heidegger's 'comportment' of *Dasein* suggests this focus is a form of conducting oneself towards Being in everydayness. Zen is for him a posture toward the everyday. When thought about as a phenomenology, Zen realism is therefore also subject to an analysis of its comportment toward a reading. The 'tensions' of the Trilogy believed to constitute the blending of the dialectic with Buddhism, make for a tense understanding of Zen, that is an understanding which is essentially dialectical in which its resolution is synthetic. By resolution I mean the product of a reading. This means that 'comporting' toward the text through the ordinariness of its moments (*tathata*) reveals something not quite Zen but a dialectic of history. As seen in previous chapters, for synthesis to reside in the product of a reading brings out the troublesome Jamesonian guardrail of the novels, and mundanity as seen in Sax's engagement with it does not at all suggest a dialectical approach.

To repeat the issue in *Seeds of Time*, the interest of utopia is only a distraction from the boredom of death. Ordinariness alone has no meaning, and so one must comport oneself toward it from the interesting place of utopia. This appears to be an inverted kernel of Robinson's realism, that the extraordinary object of a utopian planet can be approached only through the experience of the ordinary. To recall Jameson's comments earlier, utopia makes death interesting, but only because it installs it within history. Zen appears to do the work of the dialectic generating the ordinariness of the Robinson utopia as uniquely interesting. On this basis a reading of Robinson's Zen realism is comported, a seeing of Zen through a dialectical perspective. And so Robinson's Buddhism is of critical *interest* precisely because he engineers the dialectic of Zen science fiction, a fiction which, at least as displayed in the *Californias*, usually focuses on the extraordinary, but which instead elevates the ordinary to a utopian status. Zen is a gesture toward experience, not an account of it. To move through this gesturing from a dialectical conduct is potentially in danger of mistaking the very gesture itself. In the end, it may be no more than an assimilation of terms and ideas into the Marxist canon.

This deployment of Csicsery-Ronay is not to discredit his use of Zen, nor his reading of the *Californias*, which is beyond the scope of this thesis. It is instead to measure the ill-fitting suit of Buddhism on dialectical materialism. By seeing this through Jameson's reading of death in utopia in *Seeds of Time*, what is called ordinary becomes a challenging knotty occurrence when it is

suspended in a dialectic with what is interesting. The totalising impact of the political unconscious cannot help but feed this through history, and so death is never boring so long as it can be read inside historical tensions. Csicsery-Ronay does state his awareness of the ‘anti-historicist’ nature of Zen, yet there is an edge of ‘spiritual materialism’³² which keeps the employment of Zen as a possible hijacking of concepts. The task of holding the dialectic together with Zen Buddhism places them in some kind of tension which may not be fully described in his reading. Yet, a good sense of the problem of this tension³³ can be pointed to in a text referred to but not quoted, *Zen in the Art of Archery*, by Eugen Herrigel.

It is in the ‘everyday mind’³⁴ of Zen that Herrigel approaches the ‘mundane’³⁵ art of archery. Csicsery-Ronay claims this text is ‘gently

³² Chögyam Trungpa diagnosed the habit of American experiments with Buddhism, that on occasion perverted itself, which he called ‘spiritual materialism’, the power of the ego to hijack the spiritual path for its own survival. So far as the conduct of a Zen-dialectical reading is inauthentic to its Zen components, such a method would appear in Jameson’s opinion that a proper conduct toward a utopian text involves a cost paid for its authenticity. The violence in *Chevengur*, which critics usually claim* marks the novel’s ‘nonironic’ critique of socialism, is the ‘very price to be paid for the authenticity of its Utopian impulse.’ (Jameson, ‘Introduction’, *Seeds*, xvii). Trungpa’s trap, in which fell the likes of Jack Kerouac in *Dharma Bums*, is the violence of forcing the dialectic onto Zen, turning it into a materialism. This is simply to say it is possible for a dialectical reading to hijack Zen for its own interpretive force.

* This is the opinion of Jameson, see page xvii of Introduction to *Seeds of Time*.

³³ To retain hold of this resistance, to relate to the string’s tension, is to continue holding to the belief there is someone holding the bow and the arrow together, and who must release the force and resolve the tension. Jameson is correct that the resistance the naïve realist is met with is built into his or her beliefs about the solidity of Being and unyielding reality, but the Zen approach cuts much deeper than this. The constructedness of Being is not an issue until a method points to the unexamined belief in a constructor of this Being. The Japanese archer does not resolve the tension of his bow, because he cannot. He must let go of the tension and allow the string to cut through his thumb. When this finally occurs to Herrigel, the resistance of Being is broken, and the arrow pierces its bullseye. The target is the self. The pointedness of uncovering (in meditation practice called *Samadhi*, or one-pointedness) is not a process of tension but its letting go. The Marxist phenomenology too readily reinstalls the self within its state of tension in order to resolve it, and when it shares its methodology with Zen this is what Trungpa called spiritual materialism, the ego hijacking spiritual paths, or in this case the dialectic rerouting itself through Zen Buddhism. This type of reading comports itself to the Zen elements of the text via the dialectic.

³⁴ ‘Zen is the ‘every-day mind,’ as was proclaimed by Baso (Ma-tsu, died 788)’. Daisetz T. Suzuki, ‘Introduction’, Eugen Herrigel, *Zen in the Art of Archery* (United States, Random House, Inc., 1981), viii.

³⁵ *Ibid*, 3.

parodied' in Kevin's baseball batting streak in *Pacific Edge*.³⁶ Yet an opportunity in Herrigel's book goes unnoticed: the crucial component of Zen aesthetics of everyday mind as an ego-critique. Whether it be ink painting or archery, these practices are secondary to the overriding empty nature of experience. The act of constructing an ink painting or pulling the string of the bow is to target the self, and to destroy its building. The 'symbolic freight'³⁷ of Kevin as a carpenter is therefore less a symbol than an opportunity to recognise the essential metaphor of the Buddha describing the moment of his enlightenment:

Oh housebuilder! You have now been seen.
You shall build the house no longer.
All your rafters have been broken,
Your ridgepole shattered.³⁸

Mark Epstein recognises the housebuilder to be 'craving' itself, that 'the Buddha is praising the destructive capacity of wisdom.'³⁹

The firing of an arrow, the painting of an ink picture, the reading of a text, is, according to this Zen approach, 'diamondlike in its strength and precision'⁴⁰, and is deconstructive rather than dialectical. Herrigel continued to strive throughout his time in Japan to grasp this essential concept, except that striving itself is what keeps it conceptual. The rafters only break when there is no process to resolve the tension by tensing up. As a hermeneutic, it might make no sense to speak of a resolving of the tensions between Marxism and Zen, except by letting go of their conceptual framework. The moment of Michel's orgasmic initiation into the areophany appears to him too baffling to fit into a schema of such a kind. In this moment he senses that all terms and dialectical allocations folded inward 'into a beautiful rose'. How this happened is not clear, and nor does he dispense any tension to find out why: 'His jaw was slack, his skin was burning, he could not explain it and did not want to. His blood was fire in his veins' (*Red*, 229). Perhaps this is what Herrigel recounts as 'truth by fire'⁴¹, a fire which in the Buddha's words show the house builder himself and break his rafters. The rose too, much like the Buddha's lotuses, is the essential image of over-signification. It apparently means nothing, and yet in the understanding of Zen this nothing is the vital

³⁶ Csicsery-Ronay, 'Possible Mountains and Rivers', 178.

³⁷ *Ibid.*

³⁸ Joseph Goldstein and Jack Kornfield, *Seeking the Heart of Wisdom: The Path of Insight Meditation* (Boston: Shambhala, 1987), 83.

³⁹ Mark Epstein, *Thoughts Without a Thinker: Psychotherapy From A Buddhist Perspective* (New York, Basic Books, 1995), 76.

⁴⁰ *Ibid.*

⁴¹ Herrigel, *Zen in the Art of Archery*, 8.

life-force of meaning for Michel in this moment of exultation and metaphorical death.

The reader ought also recognise that at this early stage in the Trilogy, little has been resolved. This moment therefore unfolds as a baffling explosion of sensation, much unlike the resolution of Boone's death, after which Frank tells himself 'now we'll see what I can do with this planet' (*Red*, 23).⁴² The sexual energy of Michel's encounter appears to evaporate along with Hiroko in hiddenness. Yet, if Hiroko's viridical life-force is, as Csicsery-Ronay claims, a *détournement*, or hijacking of the fertile corpse for the development of subjectivity, how can we begin to *reroute* Buddhist phenomenology through viriditas without falling into Trungpa's trap? Or, more on point, what do the Mars books do with Buddhism, and how is it viridical?

What, then, is the meaning of viriditas as death, as supplement, as Tibetan bardo? How is viridical force also the strange movement within writing by which we are conducting ourselves toward the planetext? In the first sense, it is the groundless horizon of the novels on which meaning is continually generated. Zen readers may conduct themselves through the fire in Michel's veins, and adopt its feeling for new life. But, in the second sense, they are also approaching death or near-death experiences, which must be included as encounters with viridical force. Such experiences are structured through a viridical phenomenology on which is based the understanding that the meaning of any experience, including the experience of reading the Trilogy, is always in excess of any 'reading' that can be distilled from it. Instead of interpreting death as incomprehensible⁴³, in which meaning is

⁴² Bud Foote interprets this line through its self-reference to Martian literature, the most obvious being the Martian time-slip gesturing to Philip K. Dick's novel of the same name. Frank's line can be read as Robinson's own voice partaking in the literary history of Mars. Implying that some part of this history has first to be killed does not bode well for his own. As will be shown below in the presence of Bradbury in the Mars Trilogy, Martian literary history has a way of returning from the dead; Kim Stanley Robinson: Premodernist,' *Imaginative Futures: Proceedings of the 1993 Science Fiction Research Association Conference* (San Bernardino: Jacob's Ladder Books, 1995), 340.

⁴³ Consider for example Fredrich Schlegel discussing the possible benefit of incomprehensibility: 'Yes, even man's most precious possession, his own inner happiness, depends in the last analysis, as anybody can easily verify, on some such point of strength that must be left in the dark, but that nonetheless shores up and supports the whole burden and would crumble the moment one subjected it to rational analysis. Verily, it would fare badly with you if, as you demand, the whole world were ever to become wholly comprehensible in earnest. And isn't this entire, unending world constructed by the understanding out of incomprehensibility or chaos?' 'On Incomprehensibility', in *Fredrich Schlegel's Lucinde and the Fragments*, tr. Peter Firchow (Minneapolis: University of Minnesota, 1971), 268.

overdetermined and lost, the greater instruction is that what is often mistaken as a vanishing of meaning, or the danger of losing it, can be rotated into its continual generation.

Hiroko's vanishing speaks to her death as much as to the sentient planet that replaces her, to the fruition of viridical force, and to the impact in the narrative of viriditas on the lives of other Martians. Nirgal's brush with death uncovers the nesting of viriditas (a green fuse) in the white world, and conversely the white nested in the green. The fabled indigenous little red people of Mars dwell in the bardo, the zone between life and death. Ann's threatening encounter with a white bear urges her to rethink her sense of life without abandoning her ethical geophilia, a supposedly anti-life ethic. Maya offers up the moment as a path through which to experience the bardo, a moment which must be lived on the spontaneity of its spur. Each of these experiences offers instructions in viridical life, how death and dying are integral to the continual generation of viridical experience, rather than moments in which meaning is potentially lost or in danger of being lost.

This approach is recognisably Tibetan. The bardo experience, usually the way station before reincarnation, also serves in metaphorical terms to describe the bondage of life and death. Trungpa opens his analysis of the metaphorical nature of bardo in *Transcending Madness: The Experience of the Six Bardos* by clarifying the 'misconception' that it is chiefly concerned with 'death and after-death experience'⁴⁴:

Bardo is a Tibetan word: *bar* means 'in between' or, you could say, 'no-man's-land,' and *do* is like a tower or an island in that no-man's-land. It's like a flowing river which belongs neither to the other shore nor to this shore, but there is a little island in the middle, in between. In other words, it is present experience, the immediate experience of newness – where you are, where you're at.⁴⁵

'Every step of experience... is bardo experience.'⁴⁶ To conduct a reading of the text as bardo experience, to comport toward planet as bardo experience, to give shape to the planet itself as bardo, speaks to the connection of viridical life and death. The flagstone of bardo phenomenology appears, as Trungpa suggests, in the in-between place, the flowing river, the air that surrounds the tower. The movement of the river and the air builds the 'basic space' and 'bardo is that sudden glimpse of experience which is constantly developing.'⁴⁷

⁴⁴ Chögyam Trungpa Rinpoche, *Transcending Madness: The Experience of the Six Bardos* (Boston & London, Shambhala, 1992), 3.

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

Areographia as bardo is a phenomenology of transience and atmospherics, of meaning that is constantly emerging.

How does bardo enable such an infinity of meaning even at the very foot of the empty tower? How can we address experiences of death in the novels as moments that generate a more-than-knowable panorama of planet, a phenomenon which doubles for the reader's sense of planetary story space? The in-between-ness of bardo helps reveal the points of intersecting movement which makes up the flow of interpretive experience. Recognising this means that *viriditas* moves in a variety of non-linear directions, and cannot be accounted for except as diverse and multidirectional. The force of writing is therefore intersectional and exchanging. Carol Franko suggested exactly this kind of writing in Robinson's shorter fiction such as 'Green Mars', which can be extended into his novels.⁴⁸ To approach *areographia* as intersectional, both in method and in content, means a dimension of it can be contoured along the lines of a postcolonial ecofeminism. That Hiroko is Japanese-American and female makes *viriditas* with Tibetan Buddhism a conversation worth investigating along feminist lines. We can then approach *areographia* as *écriture féminine*.

Hélène Cixous put forward the concept of 'feminine writing' in 'The Laugh of the Medusa,' a passage from which opens Franko's essay. The passage deserves to be read in full both for its relevance to writing, dying, subjectivity, and the continual dynamism of exchange:

To admit that writing is precisely working (in) the in-between, inspecting the process of the same and of the other without which nothing can live, undoing the work of death – to admit this is first to want the two, as well as both, the ensemble of the one and the other, not fixed in sequences of struggle and expulsion or some other form of death but infinitely dynamized by an incessant process of exchange from one subject to another.⁴⁹

That writing can somehow undo the work of death through exchange speaks, we will remember, to Sloterdijk's favouring of books as letters to friends. Such letters, to reiterate, created the space as an archive for humanizing to take place. In this same sense, writing does not so much expel death but make life worth living – the cultivation of a meeting point 'without which nothing can live.' *Areographia* is not a 'sequencing of a struggle and expulsion' but is 'infinitely dynamized.' Franko picks this idea out of *Pacific Edge* as utopian,

⁴⁸ Franko, 'Working the 'In-Between': Kim Stanley Robinson's Utopian Fiction,' *Science Fiction Studies* 21 (1994), 191-211.

⁴⁹ Hélène Cixous, 'The Laugh of the Medusa,' *Signs: A Journal of Women in Culture and Society* 1, no.4 (1976), 883.

quoting from the novel: 'Utopia is when our lives matter.'⁵⁰ Drawing from the feminist work of Kathy Ferguson and the psychoanalysis of Jessica Benjamin,⁵¹ Franko interprets the eco-subjectivity of Robinson's narrative to prefer 'interconnection' over 'conflict', and 'mutual recognition'⁵² of an ecology which 'participates in rather than dominates the physical world.'⁵³ Other critics have brought to attention Robinson's ecofeminism,⁵⁴ but none, it needs saying, in the context of a phenomenology of viridical force. It remains to speak of the postcolonial character of viriditas.

The theme of postcolonialism has its place in Robinson criticism, especially in Patricia Kerslake's chapter of *Science Fiction and Empire*, 'A Postcolonial Imagination: Kim Stanley Robinson's *Mars*'.⁵⁵ However, Kerslake's analysis focuses on the diaspora of the Martians, and the 'neo-empire'⁵⁶ of the red planet. The postcolonial planet, in her analysis, gives a good expansive view of the novels. An option remains open, however, to approach this expanse of empire in its more specific handling of the feminine subject. To speak of the planet's emergence out of Hiroko's hiding perhaps renders the planet as a fetish of her own reproductive body, a concept which Gayatri Chakravorty Spivak referred to as 'worlding'⁵⁷, a 'vulgarism'⁵⁸ she claims from Heidegger's use of the word in 'The Origin of the Work of Art'.⁵⁹ In her 'Three Women's Texts and a Critique of Imperialism', the label of 'Third World' is a version of Marx's commodity fetish 'as a signifier that

⁵⁰ Franko, 'Working the 'In-Between,' 194.

⁵¹ Even the arrangement of referential material suggests something of a rhizome of interconnectivity. Mark Epstein draws on the work of Benjamin in his own linking of psychoanalysis and Buddhism. He credits her with critiquing the usual sexism implied in psychoanalysis. He brings out attention to *The Bonds of Love* in which Benjamin argues for the 'birth of the subject' (Epstein's wording: *Open to Desire*, 133): 'the challenge for women, she decided, is to move from being just an object of desire to becoming a subject: *she who desires*.' Benjamin, *The Bonds of Love: Psychoanalysis, Feminism, and the Problem of Domination* (New York: Pantheon Books, 1988), 86-7; Epstein, *Open to Desire: The Truth About What the Buddha Taught* (New York: Gotham Books, 2006), 131-9.

⁵² Franko, 'Working the 'In-Between,' 193.

⁵³ *Ibid.*

⁵⁴ Most significantly: Elizabeth Leane, 'Chromodynamics: Science and Colonialism in the Mars Trilogy,' in Burling, *Kim Stanley Robinson Maps the Unimaginable*, 144-56.

⁵⁵ Patricia Kerslake, *Science Fiction and Empire* (Liverpool: Liverpool University Press, 2007), 146-67.

⁵⁶ *Ibid.*, 6, 165.

⁵⁷ Gayatri Chakravorty Spivak, 'Three Women's Texts and a Critique of Imperialism', *Critical Inquiry* 12 (Autumn 1985), 243.

⁵⁸ See footnote 1, Spivak, 'Three Women's Texts' (1985), 260.

⁵⁹ For 'worlding' see Heidegger, 'The Origin of the Work of Art', in *Poetry, Language Thought*, tr. Albert Hofstadter (New York: Harper Perennial, 1977), 17-87.

allows us to forget the ‘worlding’ of the ‘imperial project’⁶⁰ of nineteenth-century British literature. Spivak unfolds this through a reading of the monster in Mary Shelley’s *Frankenstein*. Here, like Hiroko’s planet, the ‘monster is a bodied corpse’, and Dr Frankenstein is he who ‘usurps the place of God and attempts... to sublimate woman’s physiological prerogative.’⁶¹ The *other* physiology (the monster’s aborted partner) lies on the floor of Frankenstein’s laboratory (his own ‘artificial womb’); a body which was never fully constituted, remaining a ‘half-finished creature... scattered on the floor,’⁶² an image reminiscent of the disassembly of ships and towns very early in *Red Mars* (*Red*, 106). Spivak’s worlding (and Heidegger’s before her) can help in speaking to the ecofeminism of Hiroko’s fertile corpse, yet a significant departure must be made from it on the basis that in this case the female physiology *is* ‘constituted’⁶³ through a subjectification, and the displacement between body and planet is not a hysteria over reproduction, but an incorporation and understanding of death into its very creativity. The reader should remember that Frankenstein was driven to build his monster in order to escape the very process of decay.

This worlding of the planet in the specific site of the body has a textual expression which enables the monster to escape the discourse of empire – the safe installation of the monster into the humanist project. The fate of the monster’s bodied corpse ‘by the end of the *text* of *Frankenstein* is ‘borne away on an ice raft’, as if ‘he too cannot be contained by the text’.⁶⁴ The worlding or fetishizing of flesh is shaken and burnt in the monster’s act of ‘self-immolation’ on ‘his funeral pyre’.⁶⁵ The problem of the textual worlding of his body is shown at exactly this moment of death, which cannot be shown. This is perhaps analogous to the hiding of Hiroko, whose own death, if she did in fact die, remains in the dark. Yet the similarity of the fated body announces in Hiroko’s case the appearance of the other body of Mars itself. By preaching ‘this is our body’ to Michel (*Red*, 228), the dust of Mars is the very worlding of her disappearance, the creation, as Kerslake suggests, of a neo-empire. But it is left to the feminine subject to comport towards it without fear of objectifying the planet and its diaspora. Spivak fits this occurrence into a textual space in *Frankenstein* most interestingly in speaking about Margaret

⁶⁰ Spivak, ‘Three Women’s Texts’, 243.

⁶¹ *Ibid.*, 255.

⁶² *Ibid.*

⁶³ Spivak mourns that the horror Frankenstein harbours at having ‘mangled the living flesh’ of the female body is over the ‘hysteria of masculinism into the idiom of (the withdrawal of) sexual reproduction rather than subject-constitution’, 255.

⁶⁴ Spivak, ‘Three Women’s Texts’, 258.

⁶⁵ *Ibid.*

Saville, the 'beloved sister'⁶⁶ and recipient of the letters which make up the epistolary *Frankenstein*. Her lack of response to the letters, Spivak argues, breaks the frame of the novels much like Ann's beach, opening a space through which the monster can exit from the text, and go 'beyond' it and become 'lost in darkness.'⁶⁷ It is crucial to keep in mind the waystation of the bardo is this kind of textual opening through which the reader can access the planetext's written component. Unlike Ann's beach, the bardo more successfully allows the reader in through its textual disclosure, for death does not occur at the end of the book so much as constantly throughout it, permitting Hiroko to permeate its structure with less equivocation of meaning.

Spivak's reading transposes onto Hiroko's place in the Trilogy in two ways: that viriditas speaks to the postcolonialism of the novels, and in the setting up of frameless frames through which the reader can pass into and out of the text, an in-between space in which the viridical force is both generative and invisible. We are prompted then to examine these interstitial wide-lens sections of the Trilogy that sometimes gesture to the subalterns of Mars, the 'little red people'. The rare scattering of mentions of such people, the closest the novels come to an indigenous life, point to an alternate Mars Trilogy in which terraforming is halted by the discovery of Martian life, or perhaps another when the indigenous population is violently subjugated. This alternative world sitting invisible under and through it announcing its presence in the first case in the margins of the narrative.

The two significant mentions of the little red people are in the italicized section of 'Tariqat' in *Green Mars*, and the second in which they are located in the Tibetan bardo, is in 'A New Constitution' in *Blue Mars* (*Green*, 272-4; *Blue*, 111-3). These sections (placed before every chapter) serve a variety of functions throughout the Trilogy. In the case of the very first of the Trilogy it displays a shifting of audiences, signalling a movement of interpretive conduct. The Trilogy opens with a brief historical account of Mars, before and after it entered human consciousness, in which the addressee must be the reader herself. If this is not immediately clear, the words then topple over the frame of the section into the actual chapter. It ends: '*And so we came here. It had been a power; now it became a place*', to pass into the voice of Boone giving a speech before an audience at Nicosia: 'And so we came here' (*Red*, 3-4). The technique opens a textual chute down into the planet and into the narrative at a particular point in time, in this case *in medias res*. Time in the italicized zone appears thin or non-existent, pronouns shift, are entirely vague, or

⁶⁶ *Ibid*, 259. Mary Shelley, *Frankenstein; or, The Modern Prometheus* (London: Penguin Books, 2003), 22.

⁶⁷ Spivak, 'Three Women's Texts,' 259.

sometimes unattributed. And a reason why Boone speaks these opening words arises much later in *Green Mars*, long after his death, when the account of the little red people is given within this zone. The reader is told 'it is true that the first human to see the little red people was John Boone' (*Green* 273), and it is he who listened to their stories, learnt their language, and was the first to tell stories about them.

The movement of conduct between the writing of the interstitial zone and the speaking of the Nicosia speech perhaps rehearses the issue in *Of Grammatology* over the preference for speech over writing⁶⁸. While we are told the little red people 'set up whole towns in the porches of every ear on the planet', their voices produce only 'tinnitus' (*Blue*, 113), and the planet remains deaf to their presence. The subaltern cannot be heard. Their solution, interestingly, is not, as we might expect, some kind of writing, but telepathy. Robinson described his own writing method of perspective as akin to telepathy, or 'plugging-in' to characters like an old style switchboard operator.⁶⁹ Yet these interstitial textual cracks in the narrative allow telepathy to be handled in a peculiarly writerly way, as when it is noted the indigenous population of Ray Bradbury's *Martian Chronicles* communicated to the new colonists largely by telepathy.

The urgency of speech allows for a more spontaneous sense of mind to be spoken, a mind which Maya in the novels enacts on 'the spur of the moment' (*Red*, 19, 20, 68; *Green*, 423-550). This stranger case of telepathy (force at a distance), however, announces a different kind of transmission. On Rousseau's hierarchy, telepathy grants an even greater sense of spontaneity, and might do away with noise or tinnitus altogether. Yet, as it is positioned in the bardo, it appears more as the meeting point between writing and speaking, rather than neither. It is also imbued with a transcendent reach. For the little red people of Robinson and the Martians of Bradbury, telepathic talk bridges across the divide of life and death. The Martians of *The Martian Chronicles* are killed by chicken pox⁷⁰, an echo of Native American deaths from smallpox under colonisation, and haunt the colonists in a variety of ways, sometimes hostile and other times helpful. The bardo is where the little red people communicate with Gyatso Rinpoche (the eighteenth reincarnation of

⁶⁸ This preference belongs to Jean-Jacques Rousseau, who believed, in Derrida's words, that writing was 'that dangerous supplement', whereas speech was 'natural or at least the natural expression of thought.' 'Writing is added to it, is adjoined, as an image or representation.' In Rousseau's words: 'languages are made to be spoken, writing serves only as a supplement to speech.' *Of Grammatology*, 141-57.

⁶⁹ See Ira Flatow interview Robinson for *New York 2140*: 58:20, <https://www.youtube.com/watch?v=IWVAFbr9q1k> (accessed June 28, 2017).

⁷⁰ Ray Bradbury, *The Martian Chronicles* (United State, Doubleday, 1950, Bantam, 1979), 51.

the Dalai Lama), whom they mistake for the ghost of John Boone. The removal of punctuation marks from the conversation between Gyatso and the red people takes away the spoken element and scatters it through the description of the scene.

Telepathic capacity signals a partial victory over death, but to the little red people, the humans appear not to possess any such skill, and so think their enslavement to ‘pheromones’ a fatalism of will. The conflict between the little red people and the Martian colonists of Robinson’s *Mars* is over the ‘travesty’ of human life, which is their absence of ‘will’ under the force of their ‘human pheromones’. The red people’s attempt to speak to them begins with the human voice in the bardo, belonging to Gyatso Rinpoche. ‘Humans are spiritual beings, this voice insisted.’ Before this meeting, the red people had little interest in human affairs, but when the voice ‘transmigrated into one of the little red specks’ and so came ‘in the same instant’ to inhabit all the specks ‘all over Mars’, the little red people find themselves ‘infused’ with the ‘compassionate spirit of the Dalai Lama.’ They decide to ‘try one more time’ to alert the colonists. But alert them to what? Their messages, carried on telepathic lines, are the Buddhist values ‘compassion, love agreeableness, wisdom, even a little common sense.’ (*Blue*, 111-3)

In relating humans to the domesticated ants of the little red people (‘humans have no more will than these ants we are riding around on’, 111), they are removing from them the categorical imperative of humanness. The reader may take advantage of Spivak’s inclusion of Kant’s categorical imperative into her discussion of worlding in *Frankenstein*, in order to fit this section of *Green Mars* into the constellation of animalness, free will, and the exceptionalism of human beings to command a rational law. Sloterdijk’s humanist project of the Human Zoo speaks to the taming of the human animal toward this categorical imperative. Sha LaBar locates the taming against the ‘Martian critter’ as focusing too sharply the exception of the human. LaBar notes: ‘An important conceit of anthropocentric *worlding* is that the ‘human’ remains a stable, even unmarked, category’ (my italics). The fact that Robinson’s little specks are ‘people’ rather than xenomorphic organisms perhaps draws too firm a line around humanness, yet a posthumanism emerges out of their unsettling of categories between human and Martian. To become Martian is to some extent to shed a sense of being human as defined by a terrestrial environment. One potential problem remaining is the infusion of the Dalai Lama’s life-force, the categorical imperative of compassionate humanness, a kind of Buddhist missionary to Mars.

The tale of the Martian missionary, also a dimension of Hiroko’s role as a religious leader, occurs in the Bradbury short story ‘The Fire Balloons’ in *The Martian Chronicles*, and provides an opportunity for thinking about the instruction of death for viridical living, which sits in the telepathic and

referential ambit of Robinson's Mars. When Father Peregrine and Father Stone set out into the Martian desert, Peregrine tells of the myth of the dead Martians, whom he hopes now live in the hills as 'spheres of blue fire'. When he is eventually saved from the desert by these fire balloons, he considers this act to display a remarkably human intellect, or as he tells Father Stone he has found 'the human in the inhuman.'⁷¹ However, the little red people do not seem to fit so neatly the human fire balloon inside a Martian body, as if this body has only to be shed and become humanised. Yet, they do speak to the education needed in order to speak to the colonists via the Dalai Lama. Their new function of speech given by Gyatso Rinpoche is a humanisation. It is the pedagogy of the Dalai Lama that supplies them with what is not found in nature, a language.

The coordination of the voice of this new language remains messy. It is not clear if the fire balloons (or spiritual-being) of the little red people continue to supply their life, but they do gesture to a life after life. Positioning them in the bardo gives the little red people an almost *more than* quality, an exorbitant status. In talking about the supplement as exorbitant, Derrida animates the meaning of representation as spilling out of the intermediate zone, 'the midpoint and the mediation'; in short, the bardo. The microscopic scale of these people makes them effectively invisible (spotted only in the 'peripheral'; *Green*, 273), and so the possibility to remain blind to them is real; and continuing to follow Derrida through his explication, blindness is a necessary component of the supplement. The bardo must remain dark. All the same, the generating of exorbitant life '(the indefinite multiplication)', or life in the bardo, doubles in this sense for the pedagogic value bestowed on the little red people. They supply a new language at the same time as the Dalai Lama offers one in return.

In these terms, the little red people constitute the more than human element in the areophany, and offer a chance to become Martian. Humanness as it came to inhabit Mars was, to these indigenous people, a noise of violence and pheromones. And so, the vibrancy of the dust in the corners of rooms on Mars is the emergent property of a new Martian being, a combination of planet and person (little reds, as well as humans), reminiscent of Donna Haraway's concept of cyborg, neither human nor machine but both. The key to this primal rewiring (and rewriting) of being is found in the bardo, where the little red people reside, textually, at their most discoverable. It is a place which accentuates death in the act of becoming Martian. Where they go after this visibility, when the chapter begins proper and we hear no more of the Dalai Lama and the little reds, is gestured to in

⁷¹ Bradbury, 'The Fire Balloons', *The Stories of Ray Bradbury* (New York: Borzoi, 1980), 189.

the final line as a momentous act of atmospheric speech: ‘And so all the little red people all over Mars looked up and took a deep breath’ (*Blue*, 113).

From Nirgal’s Tibetan breathing method *lung-gom pa* to the very writing of the Trilogy itself, this great in-breath is expelled throughout the rest of the Trilogy, as if exhaled right into the sky, oxygenating it. The new air is distinctly Martian, as Nirgal finds out when he travels back to Earth and almost dies from the denser air pressure. As he lies sick in bed, the Bernese Alps outside his window in Switzerland seem to be the ‘white breaking out of the green, like death itself rearing up out of life, crashing through to remind him that viriditas was a green fuse that would someday explode back into nova whiteness’ (*Blue*, 217). Nirgal experiences this strange open and closed nesting and pervasiveness of death when looking at the mountains feeling that the summit of Jungfrau is ‘shoving up his throat’.⁷² Fuse, throat, mountain, nova explosion. This life-threatening moment shows the knot of green and white to be a fuse not only providing a green light but also a nova explosion of white light. It is an experience of death rearing up from within, white inside green, while also the more expansive object of the mountain swallowing him up inside of it, green inside white (*Blue*, 217).

Nirgal’s near-death experience allows us to frame the exorbitant nature of the white nova explosion. The bardo seems capable of maintaining a fluid subjectivity for its travellers. The infusion of the Dalai Lama with the multiple little red people, confuses the simple presence of an individual, a belief held by those who experience the areophany, as when Hiroko tells Michel after offering him the soil of Mars to ingest: ‘this is our body’ (*Red*, 228). The potential for a problematic to arise out this treatment of the little red people (with a gentle shadow of the racist red Indian) works as a haunting. As we will see, this is one way in which Ray Bradbury’s Martians, and the colonial genocide inflicted on them, will always be a potential for human colonisation of the red planet. In order to retain an ethical awareness, the bardo holds on to the primacy of death in any generation of life, that is death is built in to the privilege of living.

When Bradbury’s colonists declare ‘the Martians are telepathic’⁷³, they are realising a uniquely Martian way of communicating. A way which

⁷² At the intersection of the mouth, the passage of speech and breath, the bardo most resembles the Bhavachakra - རྩིང་པའི་འཁོར་ལོ་ (a Tibetan mandala ubiquitous in the Buddhist world), the Wheel of Life, caught in the jaws of Yama, the lord of death and desire.

⁷³ The visual and auditory hallucinations in ‘The Third Expedition’ in *The Martian Chronicles* suggest that telepathy has a unique topology of body and planet, a writing which is as spatial as it is auditory. These hallucinations, however, function to ward off the colonists. The dead and dying Martian natives, however, cannot speak for themselves. Their account has to be supplemented through the voice of Spender in

extends to reading: ‘you could see Mr. K himself in his room, reading from a metal book with raised hieroglyphs over which he brushed his hand, as one might play a harp. And from the book... a voice sang.’⁷⁴ The field of the reader’s experience is as much a hearing as a seeing and feeling. How telepathic individuals read reveals something of the overlap of speaking and writing in grammatology. This book that speaks inverts the path of supplementation. The effect is simply a synaesthesia, a feeling of speech, a hearing of symbols or hieroglyphs. Michel comes closest to experiencing this special Martian song in Hiroko’s areophany when the ingesting of dust makes for a chant, a song spoken with a throat lined with Martian dirt: ‘aaaay, ooooo, ahhhh, iiiiii, eeee, uuuuuu’ (*Red*, 229). This is perhaps the closest notation of an orgasmic voice in the novels that has almost no meaningful notation at all but the sound of vowels, the music of the orgy which introduces Michel to the areophany. That the supplement is also ‘seductive’ (*Grammatology*, 151) speaks to the pedagogy of this moment for Michel, it leads him toward a uniquely areographic experience. Later, in *Blue Mars*, Zo Boone’s own orgy experience echoes the same overflowing excess as Michel’s, which gives way to speech but also apparently meaningless as a symbol: ‘after a while it was all an undifferentiated mass of erotic sensation, sexsurround, Zo purring loudly’ (*Blue*, 507). The experience of the supplement in these moments is a conflation of book and body. The bodies of Zo and Michel are played, so to speak, like Mr. K’s metal book; as Derrida says ‘the supplement will always be the moving of the tongue or acting through the hands of others’ (*Grammatology*, 147).

The place of Bradbury in the Mars Trilogy is one among a parade of references to Martian literature, yet it is a unique example pointing to the way in which the novels present the literary history of the planet as a haunting presence. Robert Crossley opens his book *Imaging Mars: A Literary History* with a statement of Percival Lowell’s own misreading of landmarks he saw through his telescope: ‘what is the use in the history of an error?’⁷⁵ What Lowell thought were canals, betokening intelligent design, turned out to be natural riverbeds. Robinson said that Lowell’s scientific study of what would famously be misnamed the ‘canals’ of Mars should be bracketed by Lowell’s

‘— and the Moon be Still as Bright’, who declares himself the ‘last Martian’ before combatting the negligent colonists guilty of killing the Martians with chicken pox. Later in the novel this supplementation takes the form of the fire balloons, and the euphoric experience which is for the pastor educative. The fire balloons supply the force of the dead Martians beyond their life, and so are imagined as ethereal heliospheres, 32-47, 48-72.

⁷⁴ *Ibid*, 2.

⁷⁵ Crossley, *Imaging Mars: A Literary History* (Middleton CT: Wesleyan University Press, 2005), ix.

own conviction toward his story: that the Martians were a ‘dying civilization that was trying to move water from the poles to the equator’.⁷⁶ The impact of this mistake or misreading of the Martian *canali* on the future experience of the planet will be in the recurrence of the actual creation of canals and other terraforming topology. Lowell’s mistranslation from *canali* to canal speaks to the impact of the naming of landmarks.

One case of mentioning the famous canals in *Green Mars*, takes place in Wallace Crater, a subtle embedding of the debate between Lowell and Alfred Russel Wallace over the existence of Martians. While in Wallace Crater, Ann and Sax argue over terraforming methods, to which Sax adds that the lens was ‘unnecessary’, ‘things are warming up fast enough.’ The lens, he tells Ann, was used only ‘because they could. Canals. I don’t believe in canals’ (*Green*, 414). Perhaps Ann and Sax are replaying the Lowell-Wallace debate, but the more significant point in this scene is how the namings of places influence present actions in all kinds of ways. Old names are left as residue on the planet. And in some cases, the terrestrial names deface the surface of the planet. In the short story in *The Martian Chronicles* titled ‘The Naming of Names’, we are told of the palimpsest of colonisation: ‘The old Martian names were names of water and air and hills.’⁷⁷ But then ‘the rockets struck at the names like hammers, breaking away the marble into shale’, the same rockets that ‘made climates.’⁷⁸ The ‘use’ of an error, as Crossley urges us to consider, can point to a history of names, and the way they displace the true story of the planet on which they are written. The metaphorically continuous image of this displacement is compost. Yet, the referential point of Crossley’s sentence suggests how this composting of names might in fact be positioned in the terms of the feminine fertile corpse.

Crossley’s opening sentence is an echo of Nietzsche’s brief ‘History of an Error,’ which serves to align Lowell’s narrative of the ‘true world’ of Mars with the fable it would become. In *Spurs*, Derrida reads each stage in Nietzsche’s ‘History of an Error’ according to ‘positions’, as Spivak describes, of ‘subject (man) – object (woman) relations’. She continues: ‘As Derrida explains (*Spurs*, 96), the first two sentences are reversals, the third a displacement. The displaced ‘position’ sees the woman as ‘affirming’. Deconstruction ‘affirms’ (*Spurs*, 36). Deconstruction is or affirms the other (woman) after its simple alterity (otherness) has been reversed and displaced.’⁷⁹ The carrying through of old topological names on Mars into the

⁷⁶ Robinson, ‘Martian Musings and Miraculous Conjunction,’ in *Visions of Mars*, 146.

⁷⁷ Bradbury, *Martian Chronicles*, 102.

⁷⁸ *Ibid*, 1.

⁷⁹ Spivak, ‘Displacement and the Discourse of Woman,’ in *Feminist Interpretations of Jacques Derrida*, ed. Nancy J. Holland (Pennsylvania: Pennsylvania State University Press, 1997), 56.

Trilogy – from Burroughs, Bradbury Point, Olympus Mons, to Sheffield Crater (in which is built the Clarke elevator), to name a few – speaks to a composting of storied history, a history it is now possible to read as displacement and reversal. The shale of place names is both a deconstruction as well as a reminder, and remainder, of the errors of asserting a linguistic topology violently onto the slate of the planet itself under the belief in the truth of the history they tell.

As Walter Benn Michaels reminds us, the little red people are a ‘myth invented by humans’.⁸⁰ His attention drawn to Robinson is worth mentioning for his discussion of the ‘shape of the signifier’ of the name of Mars itself. In using the Mars Trilogy to make a broader semiotic point, the Martian language exemplified by the little red people’s use of the word ‘Ka’, he claims that what I have called his *areographia* is founded on a deep ecology, that the planet itself has a language. ‘But [Robinson] doesn’t think that language is English.’⁸¹ To avoid getting tied up in Michaels’s overriding argument in his book, his short reading of Robinson does enough work to gesture to the importance of the word ‘Ka’ in speaking about an areographia and viridical force. As it is told in the italicised zone of ‘Tariqat’, Ka is a kind of atomic unit for all names of Mars – *Qahira* (Arabic), *Kasei* (Japanese); ‘a whole lot of Earth names for Mars have the sound ka in them somewhere’ (*Green*, 274). The reader is then told ka is the preferred name used by the little red people. It is an exorbitant point in which a whole experience of Mars is contained, and from which it explodes outwards.

And so the ka watch us and they ask, who knows Ka? Who spends time with Ka, and learns Ka, and like to touch Ka, and walks around on Ka, and lets Ka seep into them, and leaves the dust in their rooms alone?’ (*Green*, 274)

What exactly Ka refers to remains out of view. At the same time, it can be traversed, met, learnt, imbibed, and touched. The significance however is its generative function as an exorbitant word⁸², a kaleidoscope through which the many names of Mars are produced and so enables these encounters.

⁸⁰ Walter Benn Michaels, *The Shape of the Signifier: 1967 to the End of History* (Princeton: Princeton University Press, 2004), 51.

⁸¹ *Ibid.*

⁸² Another use of Ka not yet mentioned in Robinson criticism is the Egyptian term Ka, or life-force. Introducing the *Egyptian Book of the Dead*, E. A. Wallis Budge defines ka as ‘a word which by general consent is translated ‘double.’ Budge directs us to a specific section of the *Book of the Dead* in which is written: ‘he [the deceased] says to his heart, ‘Thou art my KA, the dweller in me, Khnemu who / ‘knitteth together and strengtheneth my limbs,’ this passage ‘proves how intimate was the connection of the heart with the KA.’ By this meaning Ka as a dweller within the *khat* (body) may also work to express the knitting together of the little red people and the Dalai

To shift metaphors, the kaleidoscope of Ka can also be imagined as a composted word. Its topology of names for Mars is a sedimentation (geological force) and compost (viridical force). These names act as an areographic experience of the supplement. The composting of names means they continue to give meaning, and gesture to the expanse of the planet and its history, yet also must. The position of writing Mars carries always the violence built in to the structure of the compost. Conducting a Martian writing, or areographia, necessarily retains a heliographic force, a forcing of the planet into the light. As such the dangerous supplement is a reminder that terraforming is never safely utopian, that it retains a violence which is core to its process.

To return to Bradbury with this in mind, Robinson's own opinion of the place of Bradbury in the shale and compost of the Martian imagination is of the haunting of this error. Robinson claimed in 'Martian Musings and the Miraculous Conjunction', that Bradbury contributed a version of Asimov's laws of robotics, the three laws of Mars: i) the ghosts of our Martian stories... are going to be there when we arrive; ii) there will be a 'private horticultural war on Mars', as Bradbury says, between those who want to change the planet (greens) and those who do not (reds); and iii) 'the famous and beautiful finish to the novel' (of *The Martian Chronicles*): 'we are the Martians.'⁸³ The operation of the second is obvious enough in the fractioning of terraforming and anti-terraforming social bodies between the Reds and the Greens. More in need of exposition is how the ghosts of our stories both inhabit and haunt, and yet also allow for the Martian colonists to become *the* Martians, how the composting of narratives can produce a future utopian people. The question over the potential for native Martian life has to remain open for this producing to work the way it does. Were the First Hundred to set down on the planet and encounter a native population, the path of terraforming would most surely either be a history of outright colonial violence, or not exist at all. The fabling of this indigenous life as little red people is not a statement of their non-existence, but an affirmation of their displacing position in the narrative. Hiroko's terraforming efforts are conducted on an awareness of what it is to be 'Martian', and only then can Bradbury's and Robinson's colonists effectively become the Martians themselves, by *Blue Mars*, Michaels

Lama. The key to evaluating the significance of this Egyptian definition of Ka is the place it is given in the *Book of the Dead*. The preservation of the *khat* by mummification as instructed by the book enabled the ka to roam about the tomb with the body. E. A. Wallis Budge, *The Book of the Dead* (London: Kegan Paul, Trench, Trübner & Co., 1909), lix, cix.

⁸³ Robinson, 'Martian Musings,' 150.

alerts us, the colonists come to speak of themselves as ‘the indigenous people of Mars’ (*Blue*, 360).⁸⁴

When Derrida understands the fable as an affirming of the feminine, the process of areoformation falls neatly along its lines. The history of Martian fiction understands that the areoforming process arises out of the composting of the bardo space, a space of reversal, a space in which to turn through the strange movement within language. An areographic phenomenology is a reading of this historical displacement and deconstruction. The bardo is the reader’s space, in which they can ‘plug-in’ to each character as if through a switchboard or telepathy as their thoughts are communicated to us. It underscores the need to always listen for a bardo-language, to hear its *différential* tones.

⁸⁴ Michaels, *Shape of the Signifier*, 52.

CONCLUSION

Leaving the planet

Near the end of *Blue Mars*, Nirgal ascends the space elevator to see off Jackie Boone as she prepares to leave the solar system on a starship. When she mentions Hiroko doing likewise to 'spread viriditas', Nirgal says: *'It's as likely as any other story... And it was true; he could imagine Hiroko doing it, taking off again, joining the new diaspora, of humanity across the stars, settling the nearby planets and then on from there. A step out of the cradle. The end of prehistory'* (*Blue*, 634-5). Just how far a planetary imagination will take her, or even Nirgal, is left poised on this new shore of history, the note on which the Trilogy closes. It suggests the question of where next to take such a study of the planetexts of Mars.

The view of other planets, particularly that of *Green Earth*, begins to indicate points of departure, and other critical destinations too. Much remains to be explored of those narratives of the Mars Trilogy left out in this thesis. The intertwined arcs of John Boone, Frank Chalmers, and Maya Toitovna, make up a large part of the Trilogy, and urge to be read through the approach this thesis has adopted. If such a reading were undertaken, the major science under direction would be political science, exploring rhetorical methods as primary political agents on Mars. John's rousing speeches might be read against Frank's Machiavellian manoeuvres, and both in turn through Maya's love of each man. Then there is Frank's umbrage as the defiant colleague, embroiled in Boone's death in *Red Mars* and the signing of a treaty allowing UNOMA easier access to the planet. But the real focus might lie with Maya, whose own narrative extends beyond the lives of both men, and stands as the other defiant colleague, the woman among two men known for their American machismo and sociobiology proclivities. The first half of such a study might look at the three figures together, the nature of political science as a hermeneutical key, bringing into relevance also the meaning of the Russian contingent of the novels and the recalling of second world and Russian pre-Soviet literature, referenced in Arkady Bogdanov and Alexander Bogdanov's 1908 novel *Red Star*. The travels of Frank and John foreground the planetext as a populated place, and pressure the reader to find a democratic approach by which to read this diverse population, as well as the issues brewing over migration, diaspora, and areophany as a kind of globalising force. The second half of such a possible reading, then, would be a treatment of Maya's narrative without Frank or John, in *Green Mars* and *Blue Mars*, her relationship with Michel (which would pull it into the orbit of his interpretant), her engagement with Martian theatre performances of Bertolt Brecht, and the interpretive consequences of her manic depression. The ultimate value in such an additional reading would be to pull another thread from the social

and political meaning of the Trilogy given most engagement by Jameson, and the crowd of Jamesonian readings. It might therefore promote a deeper understanding of the place of the political unconscious within the text.

Even in those narratives explored – Sax, Michel, Ann, Hiroko, Nirgal, and Zo – much was left out. Future study might supplement the selections here made with readings of those scenes and moments I did not explore. There is also room to consider how these different methodological approaches might intersect and alter each other. It is true that this challenges the irreconcilable independence of character I have argued makes this kind of intersecting problematic, but many such interactions do make up a large part of the Trilogy, and something might be said of Robinson's attempts to bring different characters together and drive others apart. This study has hardly come close to gaining a wide view of the Martian planetext. And though I have argued for ways in which its immense scale is apparent always in the corner of the reader's eye, always surrounding them, the planetary imagination is also always inviting further reading, and wider exploration. In its viridical form, the liveliness of the planetext depends on this opening of possibility.

With this said, it is tempting to widen the frame even further and begin to chart an interplanetary path, and take into account Robinson's narratives on Earth, perhaps the most prominent of them being *Green Earth*, named in its republished form, it seems, to bring it into the same district as the plainly titled colour scheme of the Mars Trilogy. In terms of Robinson's other work, *Icehenge, 2312*, and *The Memory of Whiteness*, with the topos of Mars alone, are points of departure. But the real horizons lie not in any one text, or group of texts, but in a comprehensive book-length analysis of Robinson, which remains to be written. Such a task would be an immense undertaking. In the first place, Robinson's oeuvre is structured according to a very approximate historical cycle, reaching from the paleolithic (*Shaman*) to the next millennium (*Aurora*). The degree to which all his works can, to some very vague extent, coexist is interesting not for the detective work of linking them, but for understanding the necessary distortions between each text, that Earth as it exists in the Science in the Capital Trilogy (later remained *Green Earth*) is not too far away from the environmental disasters of *Antarctica*, or Terra in the Mars Trilogy. The hope of mapping his historical scope runs into the same challenges as this present analysis, yet that is more reason to undertake his unique way of engaging with its particular distortions, dystopian and utopian. Such a wide scope would sacrifice the detailed attention which this thesis has sought to bring to Robinson scholarship. Yet, a study of this kind might in fact yield a similar point, that his fiction depends in the end on a planetary scientific imagination, and that each text (especially the major ones) suggests the others, much as local experiences imply the global.

Bibliography

- Abbott, Carl. 'Falling into History: Imagined Wests in Kim Stanley Robinson's 'Three Californias' and Mars Trilogy. *Western Historical Quarterly* 34.1 (Spring, 2003): 27-47.
- . *Frontiers Past and Future: Science Fiction and the American West*. Kansas: University of Kansas Press, 2006.
- Althusser, Louis. *For Marx*. Translated by Ben Brewster. London: The Penguin Press, 1969.
- . *Reading Capital*. Translated by Ben Brewster. London: NLB, 1970.
- Amato, Joseph A. *On Foot: A History of Walking*. New York: New York University Press, 2004.
- Anderson, Nicole. 'The Ethical Possibilities of the Subject as Play: In Nietzsche and Derrida', *The Journal of Nietzsche Studies*, issue 26, (Autumn 2003): 79-90.
- Augustine, St. *The City of God*. Translated by Marcus Dods. EBook. New York: Modern Library, 2000.
- Bailey, K. V. 'Mars is a District of Sheffield.' *Science Fiction Foundation* 68 (Autumn 1996): 81-6.
- Bakhtin, Mikhail M. *Speech Genres and Other Late Essays*. Translated by Vern W. McGee, edited by Caryl Emerson and Michael Holquist. Austin: University of Texas, 1986.
- . *Problems of Dostoyevsky's Poetics*. Translated and edited by Caryl Emerson. Minneapolis: University of Minnesota Press, 1984.
- . *Rabelais and His World*. Translated by Helene Iswolsky. Indiana: Indiana University Press, 1984.
- Bateson, Gregory. *Steps to an Ecology of Mind*. Chicago: University of Chicago Press, 2000.
- Benjamin, Jessica. *The Bonds of Love: Psychoanalysis, Feminism, and the Problem of Domination*. New York: Pantheon Books, 1988.
- Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press, 2010.
- Best, Stephen and Sharon Marcus. 'Surface Reading: An Introduction.' *Representations* 108, no.1 (Fall 2009): 1-21.
- Bitto, Emily. "'Simple Fact of Light and Stone': The Eco-Phenomenology of Anthony Lawrence. *Australian Literary Studies* 23, issue 3 (2008): 251-63.
- Boyne, Roy. *Foucault and Derrida: The Other Side of Reason*. London: Unwin Hyman, 1990.
- Bradbury, Ray. *The Martian Chronicles*. United States: Doubleday, 1950; Bantam, 1979.
- . *The Stories of Ray Bradbury*. New York: Borzoi, 1980.
- Brawley, Chris. 'The Fading of the World: Tolkien's Ecology and Loss in *The Lord of the Rings*.' *Journal of the Fantastic in the Arts* 18, no.3 (71) (2007): 292-307.

- Brewster, Sir David, K. H. *Memoirs of the Life, Writings, and Discoveries of Sir Isaac Newton, Volume II*. Edinburgh: Thomas Constable and Co., 1855.
- Bronowski, Jacob. *The Ascent of Man*. Boston: Little, Brown and Company, 1973.
- Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge: Belknap-Harvard University Press, 1995.
- Buhle, Peter. 'Green Dreams of Space.' *Capitalism Nature Socialism* (June 1998): 125-28.
- . 'Kim Stanley Robinson, Science Fiction Socialist.' *Monthly Review* 54, no.3/4 (July 2002): 87-90.
- Bunning, Jennies Harrison. 'The Playground of the Gods.' *Lodestar Anthology* 7. <https://lodestarsanthology.co.uk/2017/03/the-playground-of-the-gods/>
- Burgess, Helen J. "Roads of Giants': Nostalgia and the Ruins of the Superhighway in Kim Stanley Robinson's Three Californias Trilogy.' *Science Fiction Studies* 33, no.2 (2006): 275-90.
- Burling, William J. ed. *Kim Stanley Robinson Maps the Unimaginable: Critical Essays*. Jefferson: McFarland & Company, Inc. Publishers, 2009.
- . 'The Theoretical Foundation of Utopian Radical Democracy in Kim Stanley Robinson's *Blue Mars*.' *Utopian Studies* 16 (2005): 75-96.
- Bush, Fred. 'The Time of the Other: Alternate History and the Conquest of America.' *Strange Horizons* (15 July 15, 2002).
- Butler, Andrew M. 'Heading Toward Utopia: Kim Stanley Robinson's Mars Trilogy.' *Vector* 189 (September/October 1996): 7-8.
- Call, Lewis. *BDSM in American Science Fiction and Fantasy*. New York: Palgrave Macmillan, 2013.
- Canavan, Gerry and Kim Stanley Robinson, eds. *Green Planets: Ecology and Science Fiction*. Middletown: Wesleyan University Press, 2014.
- Chesterton, G. K. *The Everlasting Man*. San Francisco: Ignatius Press, 2008.
- Cho, K. Daniel. 'Tumults of Utopia: Repetition and Revolution in Kim Stanley Robinson's Mars Trilogy.' *Cultural Critique* 75 (Spring 2012): 65-81.
- . "When a Change Came for Everything to Change: Messianism and Wilderness in Kim Stanley Robinson's Abrupt Climate Change Trilogy. *Criticism* 53, no.1 (Winter 2011): 23-51.
- Cicero. *De Oratore*. Translated by E. W. Sutton. Loeb Classical Library. Cambridge, MA: Harvard University Press, 1942.
- Cixous, Hélène. 'The Laugh of the Medusa.' *Signs: A Journal of Women in Culture and Society* 1, no.4 (1976): 875-93.
- Clark, Timothy. *Ecocriticism on the Edge: The Anthropocene as a threshold concept*. London: Bloomsbury, 2015.
- Clarke, Amy. 'Martian Odysseys: Travel and Narrative Unrest in Kim Stanley Robinson's *Red Mars*.' In *Fantastic Odyssey's: Selected Essays from the Twenty-Second International Conference on the Fantastic in the Arts*. Edited by Mary Pharr. Westport, CT: Praeger, 2003: 133-8.
- Cohen, Jeffrey Jerome, ed. *Prismatic Ecology: Ecotheory Beyond Green*. Minneapolis: University of Minnesota Press, 2013.
- . *Stone: An Ecology of the Inhuman*. Minneapolis: University of Minnesota Press, 2015.

- . *Inhuman Nature*. Washington: Oliphaunt Books, 2014.
- . & Lowell Duckert. *Elemental Ecocriticism: Thinking with Earth, Air, Fire and Water*. Minneapolis: University of Minnesota Press, 2015.
- Cole, Diana and Samantha Frost, eds. *New Materialisms: Ontology, Agency, and Politics*. Durham: Duke University Press, 2010.
- Copernicus, Nicolaus. *On the Revolution of the Heavenly Spheres*. Translated by Charles Glenn Wallis. In *Great Books of the Western World 16. Ptolemy Copernicus Kepler*. Editor in chief Robert Maynard Hutchins. Chicago: University of Chicago Press, 1959: 505-844.
- Coverley, Merlin. *The Art of Wandering: The Writer as Walker*. Great Britain: Old Castle Books, 2012.
- Crane, Mary Thomas. 'Surface, Depth, and the Spatial Imaginary: A Cognitive Reading of *The Political Unconscious*.' *Representations* 108, no.1 (Fall 2009): 76-97.
- Cronon, William, ed. *Uncommon Ground: Rethinking the Human Place in Nature*. New York: Norton & Company, 1995.
- Crossley, Robert. *Imagining Mars: A Literary History*. Middleton CT: Wesleyan University Press, 2005.
- Csicsery-Ronay, Istvan. *The Seven Beauties of Science Fiction*. Middletown, CT: Wesleyan University Press, 2008.
- . 'Possible Mountains and Rivers: The Zen Realism of Kim Stanley Robison's *Three Californias*.' *Configurations* 20 (2012):149-185.
- Curry, Patrick. *Defending Middle Earth: Tolkien: Myth and Modernity*. New York: Houghton, 2004.
- Davis, Doug and Lisa Yaszek. "'Science's Consciousness': An Interview with Kim Stanley Robinson.' *Configurations* 20 (2012): 187-94.
- Deleuze, Gilles and Felix Guattari. *What is Philosophy?* New York: Columbia University Press, 1994.
- and Felix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. London: University of Minnesota Press, 1980.
- Dennett, Daniel. *Consciousness Explained*. New York: Little, Brown, 1991.
- De La Rochefoucauld, François. *Moral Reflections, Sentences and Maxims*. New York: William Gowans, 1851.
- De Man, Paul. 'The Concept of Irony'. In *Aesthetic Ideology*. Edited by Andrzej Warminski. Minneapolis: University of Minnesota Press, 1996.
- DeRoo, Neal. 'From Deferring to Waiting (for the Messiah): C's Account of Futurity.' In *Futurity in Phenomenology: Promise and Method in Husserl, Levinas, and Derrida*. Iowa: Fordham University, 2013: 115-28.
- Derrida, Jacques. *Writing and Difference*. Translated by Alan Bass. Chicago: University of Chicago Press, 1978.
- . *Margins of Philosophy*. Translated by Alan Bass. Great Britain: The Harvester Press, 1982.
- . *Of Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: John Hopkins University Press, 1974.
- . *Spectres of Marx: The State of the Debt, the Work of Mourning and the New International*. Translated by Peggy Kamuf. New York: Routledge, 1994.

- . *Spurs: Nietzsche's Styles*. Translated by Barbara Harlow. Chicago: University of Chicago Press, 1979.
- . *Aporias*. Translated by Thomas Dutoit. Stanford: Stanford University Press, 1993.
- . *Dissemination*. Translated by Barbara Johnson. London: Athlone Press, 1981.
- . *Ulysse gramophone: Deux mots pour Joyce*. Paris: Galilée, 1987.
- . *Demeure: Fiction and Testimony*. Translated by Elizabeth Rottenberg. Stanford, CA: Stanford University Press, 2000.
- . *Cinders*. Translated by Ned Lukacher. Minneapolis: University of Minnesota Press, 2014.
- . *The Gift of Death and Literature in Secret*. Translated by David Wills. Chicago: University of Chicago Press, 2007.
- . *The Work of Mourning*. Edited and Translated by Pascale-Ann Brault. Chicago: University of Chicago Press, 2003.
- Dobbs, Betty Jo Teeter. *The Janus face of genius: The role of alchemy in Newton's thought*. Cambridge: Cambridge University Press, 1991.
- Dolphijn, Rick and Iris van der Tuin. *New Materialism: Interviews & Catrographies*. University of Michigan: Open Humanities Press, 2012.
- Dynes, William. 'Multiple Perspectives in Kim Stanley Robinson's Mars Series,' *Extrapolation* 42, no. 2 (2001): 150-64.
- Elkins, James. *Pictures & Tears: A History of People Who Have Cried in Front of Paintings*. New York: Routledge, 2004.
- Ellis, Havelock. *A Study of British Genius*. Boston: Houghton Mifflin, 1926.
- Ellison, Harlan. 'A Voice from the Styx'. In *The Book of Ellison* edited by Andrew Porter. New York: ALGOL Press, 1978: 117-40.
- Elmusa, Sharif S. 'The Ecological Bedouin: Toward Environmental Principles of the Arab Region.' *Alif: Journal of Comparative Poetics*, no.33 *The Desert: Human Geography and Symbolic Economy* (2013): 9-35.
- Epstein, Mark. *Open To Desire: The Truth about What the Buddha Taught*. New York: Gotham Books, 2006.
- . *Thoughts Without a Thinker: Psychotherapy from a Buddhist Perspective*. New York: Basic Books, 1995.
- Estok, Simon. Letter. *PMLA* 114 (1999).
- Eubanks Cecil L. and David J. Gauthier. 'The Politics of the Homeless Spirit: Heidegger and Levinas on Dwelling and Hospitality.' *History and Political Thought* xxxii, no.2 (Spring 2011): 125-46.
- Farrington, Benjamin. *Greek Science*. London: Penguin, 1953.
- Felski, Rita. *The Limits of Critique*. Chicago: University of Chicago Press, 2015.
- . 'From Literary Theory to Critical Method.' *Profession* (2008): 108-16.
- . 'Critique and the Hermeneutics of Suspicion.' *M/C Journal* 15, no.1 (2011) <http://journal.media-culture.org.au/index.php/mcjournal/article/view/431>.
- Feyerabend, Paul. *Against Method. Fourth Edition*. London: Verso, 2010.
- . 'Consolations for the Specialist.' In *Criticism and The Growth of Knowledge: Proceedings of the International Colloquium in the Philosophy of Science, London, 1965, volume 4*. Edited by Imre Lakatos and Alan Musgrave. Cambridge: Cambridge University Press, 1970: 197-230.

- Fishbaugh, Katheryn, E. and James W. Head III. 'Chasma Boreale, Mars: Topographic characterization from Mars Orbital Laser Altimeter data and implications for mechanisms of formation.' *Journal of Geophysical Research* 107, no.E3 (2002): 1-23.
- Fisher, Mark. 'What is Hauntology?', *Film Quarterly* 66, no.1 (fall, 2012): 16-24.
- Fitzgerald, F. Scott. *Tender is the Night*. London: Penguin Books, 2000 [1934].
- Flatley, Jonathan. *Affective Mapping: Melancholia and the Politics of Modernism*. Cambridge: Harvard University Press, 2008.
- Foote, Bud. 'Kim Stanley Robinson: Premodernist.' In *Imaginative Futures: Proceedings of the 1993 Science Fiction Research Association Conference*. San Bernardino: Jacob's Ladder Books, 1995: 329-40.
- . 'Notes on Kim Stanley Robinson's *Red Mars*.' *Science Fiction Studies* 21, no.1 (March 1994): 61-6.
- Foucault, Michel. *The Order of Things: An archaeology of the human sciences* London: Routledge, 2005 [1966].
- . *Archaeology of Knowledge*. Translated by A. M. Sheridan Smith. London: Routledge, 1989 [1969].
- . *History of Madness*. Translated by Jean Khalfa. London: Routledge, 2006 [1961].
- . *Madness and Civilization: A History of Insanity in the Age of Reason*. Translated by Richard Howard. New York: Vintage Books, 1988 [1965].
- . 'What Is an Author?'. Translated by Josué V. Harari. In *Aesthetics, Method, and Epistemology: Essential Works of Foucault 1954-1984*. Edited by James D. Faubion. New York: The New Press, 1998.
- and Jay Miskowiec. 'Of Other Spaces: Utopias and Heterotopias.' *Diacritics* 16, no.1 (Spring 1986): 22-27.
- Fowler, David. 'Mathematics in Science Fiction: Mathematics as Science Fiction.' *World Literature Today* 84, no.3 (May/June, 2010): 48-52.
- Franko, Carol. 'The Density of Utopian Destiny in Robinson's *Red Mars*.' *Extrapolation* 38 (1997): 57-65.
- . 'The Density of Utopian Destiny in *Red Mars*.' In Burling, *Kim Stanley Robinson Maps the Unimaginable*: 115-21.
- . 'Dialogical Twins: Post-Patriarchal Topography in Two Stories by Kim Stanley Robinson.' *Science Fiction Studies* 22 (1995): 305-22.
- . 'Working the 'In-Between': Kim Stanley Robinson's Utopian Fiction.' *Science Fiction Studies* 21 (1994): 191-211.
- Freeman, Lisa A. 'Why We Argue About the Way We Read: An Introduction.' *The Eighteenth Century* 54, no.1 (Spring 2013): 121-4.
- Fredrich, Rainer. 'Heroic Man and *Polymetis*: Odysseus and the *Cyclopeia*.' *Greek, Roman and Byzantine Studies* 28 no.2 (Summer 1987): 121-33.
- Freud, Sigmund. *Totem and Taboo: Some Points of Agreement between the Mental Lives of Savages and Neurotics*. Translated by James Strachey. United Kingdom: George Routledge & Sons, 1919.
- . *The Interpretation of Dreams*. Translated by James Strachey, and edited by Angela Richards. London: Pelican Freud Library, 1975.
- . 'Mourning and Melancholia', *The Complete Psychological Works of Sigmund Freud Volume XIV, On the History of the Psycho-Analytic Movement*,

- Papers on Metapsychology and Other Works*. Translated by James Strachey. London: Hogarth Press, 1957: 243-58.
- . *Civilization and its Discontents*. Translated and edited by James Strachey. New York: W. W. Norton & Company, 1961.
- Frisch, Adam J. 'The Subjective Objective in *The Years of Rice and Salt*.' *Foundation* 34, no.4 (2005): 31-38.
- Gardiner, Bruce. 'Talking of Michelangelo: Routine and Radical Inquiry into Literature and Aesthetics.' *Literature and Aesthetics* 21, no.2 (December 2011): 180-98.
- Glasberg, Elena. *Antarctica as Cultural Critique: The Gendered Politics of Scientific Exploration and Climate Change*. New York: Palgrave MacMillan, 2012.
- Gleick, James. *Chaos: Making a New Science*. Cardinal: Sphere Books, 1988.
- Gödel, Kurt. 'What is Cantor's continuum problem?' In *Collected Works, Volume II Publications 1938-1974*. Edited by Solomon Feferman. New York: Oxford University Press, 1990: 176-88.
- Goldstein, Joseph and Jack Kornfield. *Seeking the Heart of Wisdom: The Path of Insight Meditation*. Boston: Shambhala, 1987.
- Gomel, Elena. 'Mystery, Apocalypse, and Utopia: The Case of the Ontological Detective Story'. *Science Fiction Studies* 22, no.3 (November 1995): 343-56.
- Goonan, Kathleen Ann. '2312 by Kim Stanley Robinson.' *Configurations* 20 (2012): 199-203.
- Gros, Frédéric. *A Philosophy of Walking*. Translated by John Howe. London: Verso, 2014.
- Gross, Paul R. 'On the 'Gendering' of Science', *Academic Questions*, vol. 5, issue 2 (June, 1992): 10-23.
- , and Norman Levitt. *Higher Superstition: The Academic Left and Its Quarrels with Science*. Baltimore: John Hopkins University Press, 1998.
- Grosz, Elizabeth. *Chaos, Territory, Art: Deleuze and the Framing of the Earth*. New York: Columbia University Press, 2008.
- . *The Incorporeal: Ontology, Ethics, and the Limits of Materialism*. New York: Columbia University Press, 2017.
- Hacking, Ian. *Why is There Philosophy of Mathematics At All?* Cambridge, Cambridge University Press, 2014.
- . *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science*. Cambridge: Cambridge University Press, 1983.
- Haeffner, Mark. *Dictionary of Alchemy: From Maria Prophestessa to Isaac Newton*. London: Aeon Books, 2004 [1991].
- Handley, George B. 'Toward an Environmental Phenomenology of Diaspora.' *MFS Modern Fiction Studies* 55, no.3 (Fall 2009): 649-57.
- Haraway, Donna. 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective.' *Feminist Studies* 14, no.3 (Autumn, 1988): 575-599.
- Hardin, Garrett. 'Meaninglessness of the word protoplasm', *A Review of General Semantics* 13, no.3 (Spring 1956): 193-208.
- Harding, D. E. *On Having No Head: Zen and the Re-Discovery of the Obvious*. Guernsey: The Guernsey Press, 1986.

- Harding, Sandra. *The Science Question in Feminism*. Ithaca: Cornell University Press, 1986.
- Harrison, Robert Pogue. *Forests: The Shadow of Civilization*. Chicago: University of Chicago Press, 1992.
- Hayles, N. Katherine. *Chaos and Order: Complex Dynamics in Literature and Science*, ed. Hayles. Chicago: University of Chicago Press, 1991.
- Haynes, Roslynn. *From Faust to Strangelove: Representations of the Scientist in Western Literature*. London: John Hopkins University Press, 1994.
- Heidegger, Martin. *Being and Time: A Translation of Sein und Zeit*. Translated by Joan Stambaugh. New York: State University of New York Press, 1996.
- . *Basic Writings: From Being and Time (1927) to The Task of Thinking (1964)*. Edited by David Farrell Krell. London: Harper Perennial, 1993.
- . 'The Origin of the Work of Art.' *Philosophies of Art and Beauty*. Edited by Albert Hofstadter and Richard Kuhns. New York: University of Chicago Press, 1964: 650-708.
- . *Poetry, Language Thought*. Translated by Albert Hofstadter. New York: Harper Perennial, 1977.
- . *The Question Concerning Technology and Other Essays*. New York: Harper and Row, 1982.
- Heine, Steven. 'History, Transhistory, and Narrative History: A Postmodern View of Nishitani's Philosophy of Zen.' *Philosophy East and West* 44, no.2 (1994): 251-278.
- Heinlein, Robert A. *Beyond This Horizon*. New York: Signet Books, 1952.
- Hegel, Georg Wilhelm Friedrich. *The Philosophy of History*. Translated by J. Sibree. New York: Dover, 1956.
- Hendrix, Howard V., George Slusser, and Eric S. Rabkin, eds. *Visions of Mars: Essays on the Red Planet in Fiction and Science*. North Carolina: McFarlane Publishing Co., 2001.
- Herrigel, Eugen. *Zen in the Art of Archery*. United States, Random House, Inc., 1981.
- Hitchcock, Alfred, et al. *Marnie* dir. Alfred Hitchcock. California: Universal Studios, 1964.
- Hofstadter, Douglas. *Gödel, Escher, Bach: An Eternal Golden Braid*. New York: Penguin Books, 2000 [1979].
- . and the Fluid Analogy Research Group, *Fluid Concepts & Creative Analogies: Computer Models of the Fundamental Mechanisms of Thought*. New York: Basic Books, 1995.
- . and Emmanuel Sander, *Surfaces and Essences: Analogy as the Fuel and Fire of Thinking*. New York: Basic Books, 2013.
- Holland, Nancy J. 'The Death of the Other/Father: A Feminist Reading of Derrida's Hauntology', *Hypatia*, vol. 16, no. 1 (winter, 2001): 64-71.
- Holsinger, Bruce W. *Music, Body, and Desire in Medieval Culture*. California: Stanford University Press, 2001.
- Hopkins, Gerard Manley. *Poems and Prose*. London: Penguin Books, 1985.
- Hopkins, Jeffrey. *Meditation on Emptiness*. Boston: Wisdom Publications, 1996.
- Horace. *Horace's Complete Works*. London: J. M. Dent & Sons Ltd., 1953.

- Huston, Shaun. 'Murray Bookchin on Mars! The Production of Nature in Kim Stanley Robinson's Mars Trilogy.' *Lost in Space: Geographies of Science Fiction*. Edited by Rob Kitchin and James Kneale (New York: Continuum, 2002): 167-79.
- . 'Murray Bookchin on Mars! The Production of Nature in the Mars Trilogy.' In Burling. *Kim Stanley Robinson Maps the Unimaginable*: 231-41.
- Ince, Kate. 'Questions to Luce Irigaray'. *Hypatia* 11, no.2 (Spring 1996): 122-40.
- Irigaray, Luce. *An Ethics of Sexual Difference*. Translated by Carolyn Burke and Gillian C. Gill. New York: Cornell University Press, 1993.
- Iser, Wolfgang. *The Act of Reading: A Theory of Aesthetic Response*. London: Routledge & Kegan Paul, 1978.
- Jameson, Fredric. *The Political Unconscious: Narrative as a Socially Symbolic Act*. New York: Routledge Press, 1981.
- . *Postmodernism; or, The Cultural Logic of Late Capitalism*. Durham: Duke University Press, 1991.
- . *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. London: Verso, 2005.
- . 'Of Islands and Trenches: Naturalization and the Production of Utopian Discourse,' *Diacritics* 7, no.2 (Summer, 1977): 2-21.
- . *Antinomies of Realism*. London: Verso, 2013.
- . *The Seeds of Time*. United States: Columbia University Press, 1996.
- Jirat-Wasiutynski, Wojtech. 'Vincent Van Gogh's Paintings of Olive Trees and Cypresses from St.-Rémy'. *The Art Bulletin* 75, no.4 (December 1993): 647-70.
- Johns-Putra, Adeline. 'Ecocriticism, Genre, and Climate Change: Reading the Utopian Vision of Kim Stanley Robinson's Science in the Capital Trilogy.' *English Studies* 91, no.7 (November 2010): 744-60.
- Jones, Jeannette D. 'A Theological Interpretation of 'Viriditas' in Hildegard of Bingen and Gregory the Great.' <http://www.bu.edu/pdme/jeannette-jones/>.
- Kabat-Zinn, Jon. *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*. London: Piatkus, 1994.
- Kahn, Charles H. *The art and thought of Heraclitus: An edition of the fragments with translation and commentary*. Cambridge: Cambridge University Press, 1979.
- Katerberg, William H. *Future West: Utopia and Apocalypse in Frontier Science Fiction*. Kansas: University Press of Kansas, 2008.
- Kerslake, Patricia. *Science Fiction and Empire*. Liverpool: Liverpool University Press, 2007.
- Kilgore, De Witt Douglas. 'Making Huckleberries: Reforming Science and Whiteness in Science in the Capital.' *Configurations* 20 (2012): 89-108.
- Kneale, James. 'Counterfactualism, utopia, and historical geography: Kim Stanley Robinson's *The Years of Rice and Salt*.' *Journal of Historical Geography* 36 (2010): 297-304.
- Knoespel, Kenneth. 'Reading and Revolution on the Horizon of Myth and History: Kim Stanley Robinson's Mars Trilogy.' *Configurations* 20 (2012): 109-36.
- Klingan, Katrin, Ashkan Sepahvand, Christoph Rosol, and Bernd M. Sherer, eds. *Textures of the Anthropocene: Grain Vapour Ray*, 4-vol. Set. Massachusetts: MIT Press, 2015.

- Kreider, Tim. 'Our Greatest Living Novelist?' *The New Yorker Magazine*. December 12, 2013. <http://www.newyorker.com/books/page-turner/our-greatest-political-novelist>
- Kuhn, Thomas. *The Structure of Scientific Revolutions*, Fourth Edition. Chicago: University of Chicago Press, 2012 [1962].
- . *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago, 1977.
- Lakoff, George. *Women, Fire, and Dangerous Things: What Categories Reveal About the Mind*. Chicago: University of Chicago Press, 1987.
- , and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.
- . *Philosophy in the Flesh: The Embodied Mind & its Challenges to Western Thought*. New York: Basic Books, 1999.
- Latour, Bruno. *The Pasteurization of France*. Translated by Alan Sheridan and John Law. Cambridge, Massachusetts: Harvard University Press, 1988.
- . *We Have Never Been Modern*. Translated by Catherine Porter. Cambridge, Massachusetts: Harvard University Press, 1993.
- and Steve Woolgar. *Laboratory Life: The Construction of Scientific Facts*. Beverly Hills: Sage Publications, 1979.
- Laudadio, Nicholas C. "Harmony Endowed with Gifts of the Stars': Kim Stanley Robinson's The Memory of Whiteness and the Orchestrionic Instrument.' *Foundation* 46, issue 126 (2017): 61-73.
- Lavitavistara Sūtra: The Voice of the Buddha, The Beauty of Compassion Volume II*. Translated by Gwendolyn Bays. California: Dharma Publishing, 1983.
- Leane, Elizabeth. 'Antarctica as a Scientific Utopia.' *Foundation: The International Review of Science Fiction* 32.89 (2003): 27-35.
- . *Antarctica in Fiction: Imaginative Narratives of the Far South*. New York: Cambridge University Press, 2012.
- . 'Reading Aldiss and Penrose's White Mars as 'Science Fiction.' *Foundation: The International Review of Science Fiction* 34.1 (2005): 18-25.
- . 'Chromodynamics: Science and Colonialism in the Kim Stanley Robinson's Mars Trilogy.' *Ariel* 33, no.1 (2003): 83-104.
- . 'Chromodynamics: Science and Colonialism in the Mars Trilogy.' In Burling. *Kim Stanley Robinson Maps the Unimaginable*: 144-56.
- . 'Antarctica as a Scientific Utopia.' *Foundation* 32, no.89 (2003): 27-35.
- Leopold, Aldo. *A Sand County Almanac: With Essays on Conservation From Round River*. United States: Oxford University Press, 1970.
- Le Guin, Ursula. *The Unreal and the Real: Selected Stories of Ursula K. Le Guin Volume Two Outer Space, Inner Lands*. Easthampton: Small Beer Press, 2012.
- . 'The Carrier Bag Theory of Fiction.' In *The Ecocriticism Reader: Landmarks in Literary Ecology*. Edited by Cheryll Glotfelty & Harold Fromm. Georgia: University of Georgia Press, 1996: 149-54.
- Levinas, Emmanuel. *Totality and Infinity: An Essay on Exteriority*. Translated by Alphonso Lingis. Boston: Martinus Nijhoff Publishers, 1979.
- Limerick, Patricia Nelson. *Desert Passages: Encounters with the American Deserts*. New Mexico: University of New Mexico Press, 1985.

- . *Legacy of Conquest: The Unbroken Past of the American West*. New York: W. W. Norton & Company, 1987.
- Liu, Xiaoli. 'Gödel's Philosophical Program and Husserl's Phenomenology.' *Synthese* 175, no.1, *Analytic Philosophy in China* (July, 2010): 33-45.
- Llewelyn, John. *Gerard Manley Hopkins and the Spell of John Duns Scotus*. Edinburgh: Edinburgh University Press, 2015.
- Lodge, David. *Nice Work*. London: Secker and Warburg, 1988.
- Lorenz, Edward N. 'Deterministic Nonperiodic Flow.' *Journal of the Atmospheric Sciences* 30 (March 1963): 130-41.
- . 'The Mechanics of Vacillation.' *Journal of the Atmospheric Sciences* 20 (September 1963): 448-64.
- . 'The Problem of Deducing the Climate from the Governing Equations.' *Tellus XVI* (1964). 1-11.
- Love, Glen A. *Practical Ecocriticism: Literature, Biology, and the Environment*. Charlottesville: University of Virginia Press, 2003.
- Love, Heather. 'Close but not Deep: Literary Ethics and the Descriptive Turn.' *New Literary History* 41 (2010): 371-91.
- Lucas, J. R. 'Minds, Machines and Gödel.' *Philosophy* 36, no.137 (April-July, 1961): 112-27.
- Macauley, David. 'Walking the Elemental Earth: Phenomenological and Literary Footnotes.' In *Passions of the Earth in Human Existence, Creativity and Literature*. Edited by Anna-Teresa Tymieniecka. New Hampshire: Springer Science + Business Media, 2001.
- . 'The Rhetoric of Temporality.' In *Blindness and Insight: Essays in the Rhetoric of Contemporary Criticism*, Second Edition. Minneapolis: University of Minnesota Press, 1983: 187-228.
- Manguel, Alberto. *A History of Reading*. London: Penguin, 1996.
- Markley, Robert. *Dying Planet: Mars in Science and the Imagination*. Durham: Duke University Press, 2005.
- . 'Falling into Theory: Simulation, Terraforming, and Eco-Economics in the Mars Trilogy.' In Burling. *Kim Stanley Robinson Maps the Unimaginable*: 122-43.
- . 'Falling into Theory: Simulation, Terraforming, and Eco-Economics in Kim Stanley Robinson's Martian Trilogy.' *Modern Fiction Studies* 43 (1997): 773-99.
- . "'How to go forward': Catastrophe and Comedy in Kim Stanley Robinson's Science in the Capital Trilogy.' *Configurations* 20 (2012): 7-27.
- . 'Boundaries: Mathematics, Alienation, and the Metaphysics of Cyberspace.' In *Virtual Realities and Their Discontents*. Edited by Robert Markley (Baltimore: John Hopkins University Press, 1996): 55-77.
- Marshall, Cynthia. 'Reading 'The Golden Key': Narrative Strategies of Parable', *Children's Literature Association Quarterly* 14, no.1 (Spring, 1989): 22-5.
- Marx, Karl and Fredric Engels. *The German Ideology*. Moscow: Progress, 1976.
- . *The German Ideology: Part One*. Edited by C. J. Arthur. New York: International Publishers, 1970.
- . *Capital: A Critique of Political Economy Volume One*. Translated by Ben Fowkes. London: Penguin Books, 1988.
- . *Capital: A Critique of Political Economy Volume Three*. Translated by David Fernbach. New York: International Publishers, 1977.

- . *The Revolutions of 1848*. Edited and Translated by David Fernbach. London: Pelican Marx Library, 1973.
- . *Value: Studies*. Translated and edited by Albert Dragstedt. London: New Park Publications, 1976.
- McInerney, Maud Burnett, editor. *Hildegard of Bingen: A Books of Essays*. New York: Garland Publishing Inc., 1998.
- McVeigh, Kevin. 'Red Prophet, Green Man, Blue Adept: Kim Stanley Robinson in Conversation with Kevin McVeigh.' *Vector* 189 (September/October 1996): 3-6.
- . 'The Edge of Utopia? Kim Stanley Robinson's *Pacific Edge*.' *Vector* 189 (September/October 1996): 8-9.
- Meeker, Joseph W. *Comedy of Survival: Literary Ecology and a Play Ethic*. Tuscan: University of Arizona Press, 1997.
- Merton, Thomas. *Mystics and Zen Masters*. New York: Dell, 1961.
- Meillassoux, Quentin. *After Finitude: An Essay on the Necessity of Contingency*. Translated by Ray Brassier. London: Continuum Press, 2008.
- Mews, Constant J. *The Lost Love Letters of Heloise and Abelard: Perceptions of Dialogue in Twelfth-Century France*, Second Edition. Translated by Neville Chiavaroli and Constant J. Mews. New York: Palgrave Macmillan, 1999.
- Michaels, Walter Benn. 'Political Science Fictions.' *New Literary History* 31, no.4 (Autumn 2000). 649-64.
- . 'The Shape of the Signifier.' *Critical Inquiry* 27 (Winter 2001): 266-83.
- . *The Shape of the Signifier: 1967 and the End of History*. Princeton: Princeton University Press, 2006.
- Milbank, Alison. *Chesterton and Tolkien as Theologians: The Fantasy of the Real*. London: T&T Clark, 2009.
- Milburn, Colin. 'Greener on the Other Side: Science Fiction and the Problems of Green Nanotechnology.' *Configurations* 20 (2012): 53-87.
- Miller, Ryder W. 'Reflections on the 100-year Anniversary of 'The War of the Worlds': A Frontier and Literary History of Mars.' *Mercury* 27, no.3 (May/June 1998), 12-16.
- Mitchell, Andrew J. and Sam Slote, eds. *Derrida and Joyce: Texts and Contexts*. New York: State University of New York Press, 2013.
- Moran, Bruce T. *Distilling Knowledge: Alchemy, Chemistry, and the Scientific Revolution*. Cambridge, Massachusetts: Harvard University Press, 2005.
- Mornet, Daniel. *Le Sentiment de la Nature en France au XVIIIe siècle de Jean-Jacques Rousseau à Bernardino de Saint-Pierre*. Paris, 1932.
- Morton, Oliver. *Mapping Mars: Science, Imagination, and the Birth of a World*. New York: Picador, 2003.
- Morton, Oliver. 'Kim Stanley Robinson: Heroes of the Environment 2008.' *Time Magazine*. Wednesday, September 24, 2008. http://content.time.com/time/specials/packages/article/0,28804,1841778_1841779_1841803,00.html
- Morton, Timothy. *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge, Massachusetts: Harvard University Press, 2007.
- . *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis: Minnesota Press, 2013.
- . *The Ecological Thought*. Cambridge, Massachusetts: Harvard University Press, 2010.

- . *Dark Ecology: For a Logic of Future Coexistence*. New York: Columbia University Press, 2016.
- Moylan, Thomas. 'The Moment is Here... And It's Important: State, Agency, and Dystopia in Kim Stanley Robinson's *Antarctica* and Ursula Le Guin's *The Telling*.' In *Dark Horizons: Science Fiction and the Dystopian Imagination*. Edited by Rafaella Baccolini and Tom Moylan. New York: Routledge, 2003: 135-54.
- . *Scraps of the Untainted Sky: Science Fiction, Utopia, Dystopia*. Boulder, CO: Westview Press, 2000.
- . 'Utopia is When Our Lives Matter: Reading Kim Stanley Robinson's *Pacific Edge*.' *Utopian Studies* 6.2 (1995): 1-25.
- . 'Witness to Hard Times: Robinson's Other Californias. In Burling, *Kim Stanley Robinson Maps the Unimaginable*: 11-47.
- Nagel, Ernest and James R. Newman. *Gödel's Proof*. Revised Edition. New York: New York University Press, 2001.
- Nasar, Sylvia. *A Beautiful Mind*. New York: Simon & Schuster, 1998.
- Neumann, John von. 'First Draft of a Report on the EDVAC – June 30, 1945.' Stanford, CA: Stanford University Press, 1992.
- Nicholson, Geoff. *The Lost Art of Walking: The History, Science, Philosophy, and Literature of Pedestrianism*. New York: Riverhead Books, 2008.
- Nicholls, Stan. 'The Colours of Mars.' *Starlog* (June 1993): 58-60.
- Nietzsche, Friedrich. *Human All Too Human*. Translated by R. J. Hollingdale. Cambridge: Cambridge University Press, 1996.
- Noone, Timothy B. 'Universals and Individuation'. In *Cambridge Companion to Duns Scotus*. Edited by Thomas Williams (Cambridge: Cambridge University Press, 2003): 100-128.
- Otto, Eric. 'Kim Stanley Robinson's Mars Trilogy and the Leopoldian Land Ethic.' *Utopian Studies* 14, no.2 (2003): 118-35.
- . 'The Mars Trilogy and the Leopoldian Land Ethic.' In Burling. *Kim Stanley Robinson Maps the Unimaginable*: 242-56.
- . *Green Speculations: Science Fiction and Transformative Environmentalism*. Columbus: The Ohio State University Press, 2012.
- Pak, Chris. *Terraforming: Ecopolitical Transformations and Environmentalism in Science Fiction*. Liverpool: Liverpool University Press, 2016.
- . "'All energy is borrowed' – terraforming: a master motif for physical and cultural re(up)cycling in Kim Stanley Robinson's Mars Trilogy.' *Green Letters* 18 issue 1 (2014): 91-103.
- Palmer, Christopher. 'Kim Stanley Robinson: From *Icehenge* to *Blue Mars*.' In *Visions of Mars: Essays on the Red Planet in Fiction and Science*. North Carolina: McFarlane Publishing Co., 2001: 139-46.
- Parez, Stanislav and Einat Aharonov. 'Long runout landslides: a solution from granular mechanics.' *Frontiers in Physics*. October 06, 2015. <https://doi.org/10.3389/fphy.2015.00080>
- Parikka, Jussi. *Geology of Mind*. Minneapolis: University of Minnesota Press, 2015.
- Pechey, Graham. *Mikhail Bakhtin: The Word in the World*. London: Routledge, 2007.
- Peters, John Durham. *The Marvelous Clouds: Towards a Philosophy of Elemental Media*. Chicago: University of Chicago Press, 2015.

- Platonov, Andrei. *Chevengur*. Translated by Anthony Olcott. United States: Ardis, 1978.
- Pliny the Elder. *Natural History* Volume VI, Books 22-23. Translated by W. H. S. Jones. Loeb Classical Library. Cambridge, MA: Harvard University Press, 1951.
- Pöppel, Ernst and Frederick Turner. 'The Neural Lyre: Poetic Meter, the Brain, and Time'. *Poetry Foundation* 142, no.5 (August 1983): 277-309.
- Popper, Karl. *The Poverty of Historicism*. Reading: ARK Paperback, 1957.
- Potts, Stephen. 'A Tale of Two Cultures: Science Studies and Science Fiction.' In *Science Fiction and the Two Cultures: Essays on Bridging the Gap Between the Sciences and the Humanities* Edited by Gary Westfahl and George Slusser (Jefferson: McFarland & Company, Inc. 2009): 49-66.
- Prendergast, Christopher. 'Derrida's Hamlet.' *SubStance* 34, no.1, issue 106 (2005): 44-7.
- Prettyman, Gib. 'Daoism, Ecology, and World Reduction in Le Guin's Utopian Fictions.' In *Green Planets: Ecology and Science Fiction*. Edited by Kim Stanley Robinson and Gerry Canavan. Middletown: Wesleyan University Press, 2014. 56-76.
- . 'Living Thought: Genes, Genre, and Utopia in the Science in the Capital Trilogy'. In Burling, *Kim Stanley Robinson Maps the Unimaginable*: 181-201.
- Priest, Christopher. *The Inverted World*. Ebook. New York: Harper & Row Publishers, 1974.
- Proust, Marcel. *Remembrance of Things Past – The Captive*. Translated by C. K. Scott Moncrieff. London: Chatto & Windus, 1972.
- Pynchon, Thomas. *The Crying of Lot 49*. Philadelphia: J. B. Lippincott, 1965.
- Pyne, Stephen. *The Ice: A Journey to Antarctica*. Seattle: University of Washington Press, 1986.
- Quinones, Peter. 'Kim Stanley Robinson on Mars.' *Firsts: The Book Collector's Magazine* (October 1999): 24-31.
- Rancière, Jacques. *On the Shores of Politics*. Translated by Liz Heron. London: Verso, 2007.
- Reynolds, Simon. *Retromania: Pop Culture's Addiction to Its Own Past*. New York, Faber & Faber, 2011.
- Roberts, Brian Russell. 'Archipelagic Diaspora, Geographical Form, and Hurston's *Their Eyes Were Watching God*.' *American Literature* 85, no.1 (March 2013): 121-49.
- Robinson, Kim Stanley. *Antarctica*. New York: Bantam Spectra Books, 1998.
- . *Blue Mars*. New York: Bantam Spectra Book, 1996
- . *Future Primitive: The New Ecotopias*. Edited by Robinson. New York: A Tom Doherty Associates Books, 1994a.
- . *Green Mars*. New York: Bantam Spectra Books, 1994b.
- . *Red Mars*. New York: Bantam Spectra Books, 1993.
- . *The Martians*. New York: Bantam Spectra Books, 1999.
- . *Pacific Edge*. Grafton: Harper Collins, 1990.
- . *A Short, Sharp Shock*. Grand Rapids, MI: Anti-Oedipal Press, 2015 [1990].
- . 'Remarks on Utopia in the Age of Climate Change', *Utopian Studies* 27, no. 1 (2016): 2-15.
- . *Green Earth*. New York: Del Ray Books, 2015.

- Robson, Justina. 'The American Planet: Kim Stanley Robinson's Martian Melting Pot.' *Nova Express* 4, no.4 (Winter/Spring, 1998) 18-20.
- Rosalind, Ann. 'Writing the Body: Toward an Understanding of L'écriture Feminine.' *Feminist Studies* 7, no.2 (1981): 247-63.
- Rose, Andrew. 'The Unknowable Now: Passionate Science and Transformative Politics in Kim Stanley Robinson's Science in the Capital Trilogy.' *Science Fiction Studies* 43, no.2 (July 2016): 260-86.
- Rota, Gian-Carlo. 'Misreading the History of Mathematics.' In *Discrete Thoughts: Essays on Mathematics, Science, and Philosophy, Second Edition*. Edited by Mark Kac, Gian-Carlo Rota, and Jacob T. Schwartz. Boston: Birkhäuser (1992): 231-4.
- Sagan, Carl. *Cosmos*. London: Abacus, 2009 [1981].
- Sapolsky, Robert. *Why Zebras Don't Get Ulcers*, Third Edition. New York: Henry Holt and Company, 2004, [1994].
- Sartre, Jean Paul. *Nausea: The Wall and Other Stories, Two Volumes in One*. Translated by Lloyd Alexander. New York: MJF Books, 1998.
- Schiller, Johann, Christoph Friedrich von. *The Poems and Ballads of Schiller*. Translated by Sir Edward Bulwer Lytton. New York: Harper & Brothers, 1844.
- Schlegel, Friedrich. *Friedrich Schlegel's Lucinde and the Fragments*. Translated by Peter Firchow. Minneapolis: University of Minnesota, 1971.
- Sedgwick, Eve Kosofsky. *Touching Feeling: Affect, Pedagogy, Performativity*. Durham: Duke University Press, 2003.
- Sellars, Roy. 'Waste and Welter: Derrida's Environment.' *Oxford Literary Review* 32, no1 (2010): 37-49.
- Shakespeare, William, Stephen Greenblatt, Walter Cohen, Jean E. Howard, Kathern Maus, and Andrew Gurr. *The Norton Shakespeare*. New York: W. W. Norton, 2008.
- Shaviro, Steven. *Doom Patrols*. London: Serpent's Tail, 1996.
- Shelley, Mary. *Frankenstein; or, The Modern Prometheus*. London: Penguin Books, 2003.
- Sherman, Stuart. 'Pluralistic Predilections: Surface Reading as Not-Altogether-New Resource.' *The Eighteenth Century* 54, no.1 (Spring 2013): 133-8.
- Simonton, Dean Keith. 'Scientific Creativity as Constrained Stochastic Behaviour.' *Psychological Bulletin* 129, no.4 (2003): 475-94.
- Sloterdijk, Peter. 'Rules of the Human Zoo: a response to the Letter on Humanism.' Translated by Mary Varney Rorty. *Environment and Planning D: Society and Space* 27 (2009): 12-28.
- . *An Egyptian: On the Problem of the Jewish Pyramid*. Translated by Wieland Hoban. Malden, MA: Polity, 2010.
- . *Neither Sun Nor Death*. Translated by Steve Corcoran. New York: Semiotext(e), 2011.
- . *Spheres: Volume I: Bubbles, Microspherology*. Translated by Wieland Hoban. New York: Semiotext(e), 2011.
- Slotkin, Alan R. 'The Ecological Newspeak of Kim Stanley Robinson.' *American Speech* 72 (1997): 440-3.
- . 'Ecological Newspeak.' In In Burling, *Kim Stanley Robinson Maps the Unimaginable*: 227-30.

- Smith, Jeremy. 'A World, Not a Nation: The Martian Utopias of Kim Stanley Robinson.' *Dollars & Sense* (September/October 2001): 55-6.
- Smithson, Robert. 'A Sedimentation of Mind: Earth Projects.' In *Robert Smithson: The Collected Writings*. Edited by Jack Flam. Berkeley University of California Press, 1996.
- Sokal, Alan and Jean Bricmont. *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science*. New York: Picador, 1998.
- Solnit, Rebecca. *Wanderlust: A History of Walking*. New York: Penguin Group, 2000.
- Sontag, Susan. 'Against Interpretation.' In *Against Interpretation and Other Essays*. New York: Octagon Books, 1982.
- Spargo, P. E. and C. A. Pounds. 'Newton's 'Derangement of the Intellect'. New Light on an Old Problem.' *Notes and Records of the Royal Society of London* 34, no.1 (July 1979): 11-32.
- Spivak, Gayatri Chakravorty. 'Three Women's Texts and a Critique of Imperialism.' *Critical Inquiry* 12 (Autumn 1985): 243-61.
- . 'Displacement and the Discourse of Woman.' In *Feminist Interpretations of Jacques Derrida*. Edited by Nancy J. Holland. Pennsylvania: Pennsylvania State University Press, 1997: 43-72.
- Stevens, Wallace. *The Palm at the End of the Mind*. New York: Random House, 1967.
- Storr, Anthony. *The Dynamics of Creation*. New York: Antheneum, 1972.
- Stratton, Susan. 'The Messiah and the Greens: The Shape of Environmental Action in *Dune* and *Pacific Edge*.' *Extrapolation* 42 (2001): 303-16.
- Straub, Kristina. 'The Suspicious Reader Surprised, Or, What I Learned from 'Surface Reading'.' *The Eighteenth Century* 54, no.1 (Spring 2013): 139-43.
- Sullivan, Bruce Millen. 'Fluid Selfhood, Human and Otherwise: Hindu and Buddhist Themes in Science Fiction.' *IR* 17, no.4 (2014): 489-508.
- Suvin, Darko. *Learning from Other Worlds: Estrangement, Cognition, and the Politics of Science Fiction and Utopia*. Edited by Patrick Parrinder. Durham: Duke University Press, 2001.
- . *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*. New Haven: Yale University Press, 1979.
- Sweet, Timothy. 'Projecting Early American Environmental Writing.' *American Literary History* 22, no.2 (Summer 2010): 419-31.
- Swidorski, Carl. 'Kim Stanley Robinson's Martian Vision.' *The Utopian Fantastic: Selected Essays from the Twentieth International Conference on the Fantastic in the Arts*. Edited by Martha Bartter. Westport, CT: Praeger, 2004: 43-56.
- Szszynski, Bronislaw. 'The End of the End of Nature: The Anthropocene and the Fate of the Human.' *Oxford Literary Review* 34, no.2 (2012): 165-84.
- Taleb, Nassim Nicholas. *Antrifragile: Things That Gain from Disorder*. New York: Random House, 2014.
- . *Black Swan: The Impact of the Highly Improbable*. New York: Random House, 2010.
- Tavorima, Teresa. 'Physics as Metaphor: The General Temporal Theory in *The Dispossessed*.' *Mosaic* 13, 3/4 (1980): 51-62.
- Thacker, Eugene. 'Notes on Extinction and Existence.' *Configurations* 20 (2012): 137-48.

- The Holy Bible, Conteyning the Old Testament, and the New* (The King James Bible). London: Robert Baker, 1611. <https://www.kingjamesbibleonline.org>.
- Thoreau, Henry David. 'Walking'. In *The Works of Thoreau*. Edited by Henry S. Canby. Boston: Houghton Mifflin, 1937.
- Tieszen, Richard. 'Kurt Gödel and Phenomenology.' *Philosophy of Science* 29, no.2 (June, 1992): 176-94.
- Tolkien, J. R. R. *The Lord of the Rings*. London: Harper Collins Publishing, 1995 [1966].
- . *Tree and Leaf*. London: Harper Collins Publishing, 2001.
- Trexler, Adam. *Anthropocene Fictions: The Novel in a Time of Climate Change*. Virginia: University of Virginia Press, 2015.
- Trungpa Rinpoche, Chögyam. *The Tibetan Book of the Dead: The Great Liberation Through Hearing in the Bardo*. Boston & London, Shambhala, 2000.
- . *Transcending Madness: The Experience of the Six Bardos*. Boston: & London, Shambhala, 1992.
- Varela, Francisco J., Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge: Massachusetts: MIT Press, 1993.
- Velazquez, Maria. 'Finches of Mars by Brian Aldiss'. *Strange Horizons*, issue 2 (September 2013). <http://strangehorizons.com/non-fiction/reviews/finches-of-mars-by-brian-aldiss/>
- Vint, Sherryl. 'Archaeologies of the 'Amodern': Science and Society in *Galileo's Dream*.' *Configurations* 20 (2012): 29-51.
- Voermans, Paul. 'Scripts Deep Enough: Kim Stanley Robinson's Antarctica.' *New York Review of Science Fiction* 125 (January 1999): 1, 4-5.
- Wallis Budge, E. A. *The Book of the Dead*. London: Kegan Paul, Trench, Trübner & Co., 1909.
- Wark, Mackenzie. *Molecular Red: Theory for the Anthropocene*. London: Verso, 2015.
- Watts, Alan. *The Way of Zen*. London: Penguin Books, 1990 [1957].
- Webb, John. *The Most Notable Antiquity of Great Britain, vulgarly called Stone-Heng, on Salisbury Plain, restored, by Inigo Jones...* London, 1725.
- Wegner, Philip E. *Imaginary Communities: utopia, the Nation, and the Spatial Histories of Modernity*. Berkeley: University of California Press, 2002.
- Wells, H. G. *The Time Machine*. Edited by Patrick Parrinder. London: Penguin Classics, 2005.
- Westfahl, Gary. *The Mechanics of Wonder: The Creation of the Idea of Science Fiction*. Liverpool: Liverpool University Press, 2004.
- Westfall, Richard S. *Never at Rest: A Biography of Isaac Newton*. Cambridge: Cambridge University Press, 1980.
- White, William. "'Structuralist Alchemy' in Kim Stanley Robinson's *Red Mars*." *Extrapolation* 48, no.3 (2007): 578-602.
- . "'Structuralist Alchemy' in *Red Mars*." In Burling, *Kim Stanley Robinson Maps the Unimaginable*, 204-223.
- Wilson, Edward O. *Half-Earth: Our Planet's Fight for Life*. New York: Norton & Company, 2016.

- . *Sociobiology: The New Synthesis*. Cambridge, Massachusetts: Belknap Press, 1975.
- Winthrop-Young, Geoffrey. 'The Rise and Fall of Norse America: Vikings, Vinland and Alternative History.' *Extrapolation* 43 (2003): 188-203.
- Woolf, Virginia. *Penguin Great Ideas: A Room of One's Own*. London, Penguin Books, 1945, 2004.
- Wordsworth, William. *Selected Poems*. London: Penguin Books, 2004.
- Yanarella, Ernest. 'Terra/Terror-forming and Death Denial in Kim Stanley Robinson's Martian Stories and Mars Trilogy.' *Foundation* 89 (Autumn 2003): 13-26.
- . *The Cross, the Plow, and the Skyline: Contemporary Science Fiction and the Ecological Imagination*. Parkland: Brown Walker, 2001.
- and Christopher Rice. 'Global Warming and the Specter of Geoengineering: Ecological Apocalypse, Modernist Hubris, and Scientific-Technological Salvation in Kim Stanley Robinson's Global Warming Trilogy.' In *Engineering Earth: The Impacts of Megaengineering Projects*. Edited by Stanley D. Brunn (London: Springer, 2011): 2233-52.
- Zizek, Slavoj. *Less Than Nothing: Hegel and the Shadow of Dialectical Materialism*. New York: Verso, 2012.