Ecocriticism, Genre, and Climate Change: Reading the Utopian Vision of Kim Stanley Robinson's Science in the Capital Trilogy

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Abstract

This paper calls for a rapprochement between ecocriticism and what it often disregards as theory. Specifically, it argues for the relevance of genre theory, which explores the dynamic relations of author, reader, text, and the worlds they inhabit. Texts are locatable within the environment of a given genre; further, generic environments reciprocally shape, structure, and determine our sense of the wider environment. This paper offers a generically inflected reading of Kim Stanley Robinson's Science in the Capital trilogy, in which the representation of climate change is understood as a complex set of negotiations within the generic space of utopian science fiction.

Ecocriticism has arrived at something of an impasse with what its practitioners variously call "postmodernism", "postmodern theory", or simply "theory". I suggest here that ecocriticism has often been too quick to disregard as theory a range of critical apparatuses that would allow an interrogation of literary structure and form, and has thus failed to utilise potentially pertinent critical and theoretical concepts. Among such concepts are those offered by genre theory; I contend that questions of genre are directly relevant to the questions with which ecocriticism is concerned, but have often been overlooked in the context of what Dana Phillips has described as "the ecocritical attack on contemporary theory".¹

Having set out the context and terms of this proposition, I attempt to show how the issue of climate change and its representation in literary texts offers one way of appreciating

¹ Phillips, 137.

the relevance of genre to ecocritical endeavour. I focus on Kim Stanley Robinson's *Science in the Capital* trilogy, whose depiction of climate change is shaped by the author's generic inheritance, for Robinson brings to the trilogy his formidable reputation as a science fiction writer.

Beforehand, however, it is worth considering some basic questions: What kind of praxis has ecocriticism come to be? In that process of becoming, what is it that has been designated, even dismissed, as theory? And, of course, why has such a dismissal occurred?

One oft-quoted definition of ecocriticism is that offered by Cheryll Glotfelty in her introduction to *The Ecocriticism Reader*: "Simply put, ecocriticism is the study of the relationship between literature and the physical environment".² The simplicity of this broad claim deceptively suggests an innocence of motive for ecocriticism: to sketch ecocritical praxis as an impartial evaluation of relations between the literary and the environmental is to elide its politics. Indeed, some ecocritics have emphasised the material existence of this praxis over its ideological or political dimensions. For example, Scott Slovic proclaims, "ecocriticism has no central, dominant doctrine or theoretical apparatus—rather, ecocritical theory, such as it is, is being re-defined daily by the actual practice of thousands of literary scholars around the world".³ However, further in Glotfelty's account, the politics of ecocritical praxis is simultaneously announced and concealed, announced because it is explicitly stated but concealed because it is imagined as a default position—notice the work done by the initial "Just as" phrase. Glotfelty states: "Just as feminist criticism examines language and literature from a gender-conscious perspective, and Marxist criticism brings an awareness of modes of production and economic class to its reading of texts, ecocriticism

² Glotfelty, xix.

³ Slovic, "Ecocriticism", 161.

takes an earth-centred approach to literary studies”.⁴ The political position taken up by ecocriticism, expressed here as “earth-centred”, is a narrowing of the definition of environment to refer to the natural and non-human (rather than more generally spatial) and a stated preference for (rather than simply interest in) the non-human over the human.

It is hardly surprising, then, to find ecocriticism actively eschewing humanistic emphases in literary criticism, particularly structuralist and poststructuralist approaches, because these read the world as primarily textual, constructed and therefore never “natural”.⁵ Glen Love, for example, identifies a schism in literary criticism between what he calls “eco-consciousness” and “ego-consciousness”, “nature-endorsers” and “nature-sceptics”.⁶ According to Love, “the most harmful contemporary version of this ego-consciousness is the extreme subjectivism of much postmodernism Such subjectivism intimates no reality, no nature, beyond what we construct within our own minds”.⁷ Yet, even when one considers that Love’s is an extreme position, characterised by Lawrence Buell as “first-wave” ecocriticism, it is worth noting that anti-theory or anti-constructivist impulses are also evident in more moderate statements.⁸ Buell expresses similar concerns about cultural constructivism by consistently appealing to what he variously terms the existence of “environmental referentiality” or “environmental facticity” in any given text.⁹ Greg Garrard—like Buell, more even-handed than Love—identifies “postmodern theory” as “mainly inimical to ecocriticism”.¹⁰

⁴ Glotfelty, xix.

⁵ Jacques Derrida’s “Il n’y a pas de hors-texte” need hardly be recalled here; *Of Grammatology*, 158-59.

⁶ Love, 25 and 8.

⁷ Ibid., 25-26.

⁸ Lawrence Buell, 17 and 18.

⁹ Ibid., 17 and 32.

¹⁰ Garrard, 14.

Still, it is in such a willingness at least to consider the possible relationship between theory and ecocriticism that the possibilities for rapprochement exist.¹¹ Garrard notes that the “challenge for ecocritics is to keep one eye on the ways in which nature is in some ways culturally constructed, and the other on the fact that nature really exists, both the object and, albeit distantly, the origin of our discourse”.¹² Meanwhile, Buell envisions “a fruitful, energizing collaboration” between “theory and ecology”, but one that “build[s] selectively on poststructuralist theory”.¹³ Such a rapprochement, however, would have explicitly to address and alleviate the kind of theory-anxiety so passionately expressed by Love. It is therefore worth returning to Love, and particularly to his reliance on writer Edward Abbey’s now notorious challenge to constructivist attitudes to nature: “to refute the solipsist or metaphysical idealist all that you have to do is take him out and throw a rock at his head. If he ducks, he’s a liar”.¹⁴ My response would be, first, to concede the existence of the material world, expressed in that rock, inasmuch as it impacts against me. However, then, I would point out that, once I have been hit on the head, the only way to tell of that rock is to construct it, through language. Moreover, it is the telling, not the rock, that is at the nub of ecocriticism. Here, I would go further than Buell’s “environmental referentiality” and Garrard’s recourse to nature as “really exist[ing,] albeit distantly, [as] the origin of our discourse”.¹⁵ I would suggest that, because the literary critic’s business is to understand how a given text might refer to the environment or how any given discourse has operated upon nature, our business is to understand the way in which cultural constructivism works. If, as Love states, “The great blind spot of postmodernism is its dismissal of nature, and especially

¹¹ Indeed, for a notable recent exception, and an enlightening defence of theory in ecocritical terms, see Estok, 203-25. It is worth pointing out too that postmodernist or poststructuralist theorists have been, in turn, equally hesitant to engage with ecocriticism. For exceptions in this direction, see Clark and Conley.

¹² Garrard, 10.

¹³ Lawrence Buell, 10.

¹⁴ Love, 26.

¹⁵ Lawrence Buell, 10; Garrard, 10.

human nature”, then the great blind spot of ecocriticism is its dismissal of theory.¹⁶ Or, as Philips puts it, in his very stringent critique of the movement, “ecocriticism needs to be given a strong dose of formalism”.¹⁷

With this, then, we arrive at the concept of genre. As soon as I seek to tell of the environment, of its rocks or otherwise, I rely on conventions with which to do this telling. In order to gain an immediate understanding from my listener or reader, I am aware of, and respond to, his or her existing expectations about rocks, and I depend on his or her prior understandings of other rocks. That is, as soon as we communicate, we behave generically.

Yet, theories of genre are currently little employed in literary criticism, for several reasons. First, such neglect is, paradoxically, a result of the axiomatic and ubiquitous nature of genre, for literary scholars and critics often refer to genre, but very rarely draw on genre theory. Much ecocriticism, for example, considers genre very particularly in treating of obviously environmentally-centred genres such as nature writing and the pastoral; however, in ecocriticism and elsewhere, there is often little engagement with the subtler—and potentially productive—insights enabled by genre theory, even while genre itself is taken for granted. Second, theories of genre have famously been denigrated as mindless exercises in categorisation, and—by inference—as doing scant justice to the unpredictability and ineffability at the heart of literary endeavour. Intriguingly, much of that denunciation has originated with those critics we might call poststructuralist or postmodernist, which is a crucial reminder that what is so often designated as theory by ecocritics is really a complex of theoretical approaches, not all mutually compatible. Thus, Jacques Derrida declaims against genre as inimical to the originality that marks genuine literature, “putting to death the very

¹⁶ Love, 26.

¹⁷ Phillips, 168.

thing that it engenders”, while Frederic Jameson describes modern-day genre as “a brand-name system against which any authentic artistic expression must necessarily struggle”.¹⁸

However, such a position against genre misreads the very concept, simplifying genre as taxonomy and genre theory as a set of regulations put in place to police taxonomic boundaries. In contrast, contemporary theories of genre recognise that it encompasses the shared expectations between writers and readers that govern communication and enable comprehension; they realise that, far from discouraging innovation, genre becomes the grounds for any innovation. As John Frow states, “No speaking or writing or any other symbolically organised action takes place other than through the shapings of generic codes”.¹⁹ For Frow, “genre theory is, or should be, about the ways in which different structures of meaning and truth are produced in and by the various kinds of writing, talking, painting, filming and acting by which the universe of discourse is structured”.²⁰

To frame literary genre in this way, as “a structured complex which has a strategic character and interacts with the demands of an environment”, is to begin to understand its usefulness to ecocriticism.²¹ Genre theory, in dealing with the meta-textual practices of authors as they write and readers as they read, and in exploring the links between these practices, recognises that literary endeavour takes place in the world. Here, rhetorician Anis Bawarshi’s “ecological view of genres” is pertinent. Bawarshi recognises that any given genre functions in a way that is akin to an ecological system, for example, in its reliance on the repetition and typification of forms, and its dynamic of shared and conventionalised expectations.²² Bawarshi further notes that, while genres “individually constitute their own microenvironments—their own social situations, practices, and relations”, groups of genres

¹⁸ Derrida, “Law of Genre”, 203; Jameson, *Political Unconscious*, 107.

¹⁹ Frow, 10.

²⁰ Ibid., 10.

²¹ Ibid., 14.

²² Bawarshi, 71.

“interact to constitute [a] macroenvironment”, a so-called “biosphere of discourse”.²³ In other words, genre’s recurrent codes and expectations exert a familiarising, normalising force on our perceptions of the environment around us, while any given genre resembles in itself an environment as those codes and expectations interact with each other and are exchanged amongst writers and readers; for Bawarshi, then, genres are both “habits” and “habitats”.²⁴

Barwarshi continues:

even in places ostensibly outside of rhetoric, places we call “wilderness” or “nature”, we cannot escape the power of rhetoric in shaping how we socially define, recognize, and experience our environments and ourselves in relation to them. Discourse and reality are deeply, ecologically, interconnected, so much so that we create the rhetorical conditions within which we perform and come to understand our environments, our social activities, and our identities.²⁵

The critical—and, indeed, ecocritical—application of genre theory that I am advocating here, then, is much more than a discussion of a text as belonging to a given literary genre, for instance, pastoral, nature writing or even the urban novel. It requires an understanding of the habitual dynamics between authors and readers, the shared generic habitats in which authors and readers situate themselves, and the way in which such generic spaces interact with—that is, reciprocally shape, structure, and determine—the environment at large.²⁶

One place in which to explore the possibilities of generically aware ecocriticism is in the fictional discourse of climate change. The question of climate change, so much more

²³ Ibid., 74.

²⁴ Ibid., 71.

²⁵ Ibid., 72.

²⁶ Lawrence Buell comes close to practising a generically aware ecocriticism in these terms, 34-44. Yet, while Buell’s critique of six literary descriptions of trees demonstrates the diversity and complexity with which literature performs a mimetic function, and pays attention to the broad differences, generic or otherwise, between the texts, it does not take account of the generic “habitats” in which each text exists, that is, he never reads diachronically as well as synchronically. He does not consider, for example, the generic game that Wordsworth plays with picturesque poetry in “Lines Written a Few Miles Above Tintern Abbey”, or the private/public negotiations that Thoreau must make in writing within the genre of the journal with *Walden*.

abstract than, say, rocks, and so ideologically charged, allows us greater scope for exploring the process by which understandings of environment, and, in this case, of environmental crisis, might be shaped by generic conventions and located within generic habitats. In addition to Robinson's trilogy, a number of prominent novels have recently depicted climate change (or associated phenomena such as rising sea levels and global warming), including Margaret Atwood's *Oryx and Crake* (2003), Will Self's *The Book of Dave* (2005), Cormac McCarthy's *The Road* (2006), Liz Jensen's *The Rapture* (2009) and Ian McEwan's *Solar* (2010).²⁷ As this far from exhaustive list suggests, imaginative narratives about climate change occupy a wide range of genres. Yet, some notes toward the generic possibilities of fictively representing climate change can be made here. The dramatic and emotional contours of climate change have to do with the future, not the past or present, for, although climate change may be happening now, it is what this changing climate will result in—its predicted impacts—that are of concern. This leads, usually but not inexorably, to genres that have to do with future worlds. It explains the reliance, noted by Ursula Heise, on “apocalyptic narrative”²⁸. Indeed, one could plot cultural representations of climate change along a line of imagined present to imagined future, for example, starting with the present day of *Solar*, to the less definable temporality of *The Road*, and on to the much less recognisable world of *The Book of Dave*.

One possible appeal in constructions of climate change, then, lies in the way in which a far-away climate-changed world is imagined. Unsurprisingly, as with Atwood and Self, some writers are compelled to draw on the strategies of one of the primary genres of futuristic imagining: science fiction. As Lawrence Buell suggests, “No genre potentially matches up

²⁷ Intriguingly, few literary scholars have risen to the challenge of discussing climate change; scholarly contributions to the subject of literature and climate change include Clark, 45-68; Heise, 205-10; Kerridge, 65-86; Middleton, 218-33; and Slovic, *Going Away to Think*, 118-33.

²⁸ Heise, 206.

with a planetary level of thinking ‘environment’ better than science fiction does”.²⁹ When it comes to representing a sense of place, science fiction is often, to use Buell’s phrase, “ecology-lite”, but when it comes to encompassing a sense of planet, and particularly a global environmental phenomenon such as climate change, the generic strategies of science fiction are no doubt useful.³⁰ According to Darko Suvin’s magisterial analysis of the genre, science fiction is “*the literature of cognitive estrangement*”, its world-building impulse expressed in the creation of what Suvin terms a “*novum*”, that is, a world of “strange newness”.³¹

On the face of it, then, it seems logical that the subject of global climate change would appeal to a major science fiction writer such as Robinson. Robinson is, in science fiction circles, a “figure who not only deserves but seems assured of a major reputation”.³² This reputation is built primarily on the immense critical and popular success of the Mars trilogy, *Red Mars* (1993), *Green Mars* (1995), and *Blue Mars* (1995), in which Robinson creates a novum extraordinaire, detailing, on an epic scale, the human colonisation of Mars over centuries. This colonisation is known as “terraforming”, a term that, since its invention by science fiction writer Jack Williamson in 1942, has given its name to “a science that exists only as a thought experiment, as the uncertain and arbitrary simulations designed to engineer a biosphere, sufficient at least for plant life, on Mars”.³³

Nonetheless, as we shall see, in applying science fiction strategies to the depiction of climate change, Robinson does not simply establish a future, climate-changed novum; indeed, he compromises its status as a novum in generically challenging ways. It pays to read Robinson’s texts as generically self-reflexive—for, from the outset, Robinson has been “keenly aware of the complex intellectual issues he faces as a writer of sf”—and to

²⁹ Lawrence Buell, 57.

³⁰ Ibid., 57.

³¹ Suvin, 4; original emphasis.

³² Roberts, 320.

³³ Markley, 357; see Stableford, 134, and Robinson, *Imagining Abrupt Climate Change*, 1, for the origins of the term in Williamson.

complicate our understanding not just of science fiction but of Robinson's particular science fiction practice.³⁴ Such a generic awareness usefully reminds ecocritics that Robinson's fictive world relates not just mimetically to the world in which we live, but to the world-building impulse of the genre as a whole and thus to the many science fiction worlds that precede and influence Robinson's.

Specifically, Robinson identifies himself as a *utopian* science fiction writer, in a way that has significant implications for any reading of his representations of climate change. It is worth understanding, then, the links between science fiction and the utopian, a relationship much commented on by science fiction critics. For Suvin, the two are inextricably linked: the utopian impulse is intrinsic to science fiction, which "has always been wedded to a hope of finding in the unknown the ideal environment, tribe, state, intelligence, or other aspect of the Supreme Good (or to a fear of and revulsion from its contrary)".³⁵ In this analysis, it is worth noting the difference between the utopian and the dystopian: the fundamental distinction lies in the relative superiority or inferiority of the alternative world to the reader's world.³⁶ However, nuances exist, as with Tom Moylan's descriptions of "critical utopia" and "critical dystopia". These are characterised by their open endings: the former "reject utopia as blueprint while preserving it as a dream" and the latter "not only critique the present system but also begin to find ways to transform it".³⁷ In short, these more sophisticated forms recognise the possibility of perfectability while acknowledging the reality of a flawed world. Thus, critical utopias and dystopias allow the reader to navigate between hope and despair, whilst what one might term simple utopias and dystopias run the risk of either a bland happiness or an unrelenting bleakness.

³⁴ Prettyman, 183.

³⁵ Suvin, 5.

³⁶ Wegner, 80-81.

³⁷ Moylan, *Demand the Impossible*, 10, and *Scraps of the Untainted Sky*, 190.

In his overt identification with the utopian, Robinson shows a degree of generic *nous*, not just because he breaks with late twentieth-century trends in science fiction towards dystopia,³⁸ but because he re-defines the form in a way that builds upon the notion of the critical utopia. Discussing the Mars trilogy, Robinson rejects accusations against “Utopia as ‘pie-in-the-sky’, impractical and totalitarian”, and instead insists, “Utopia has to be rescued as a word, to mean ‘working towards a more egalitarian society, a global society’”.³⁹ He has remarked, in writing the Science in the Capital trilogy, that:

I think of myself as a utopian novelist. ... Utopia is a name for one course of history, a progressive course in which things become more just and sustainable over the generations. We’re not there now, but depending on what we do, and what our descendants do, we could still be said to be living in a utopian history, as being on the path. I prefer to work as if that were the case. And it seems to me the great work continues.⁴⁰

Thus, for Robinson, goodness exists not as panoply, in a simple utopian sense, nor as possibility, in a critical utopian sense, but as a work in progress. Jameson—Robinson’s former doctoral supervisor and perhaps the most distinguished commentator of his work so far—writes of the Mars trilogy that, even in its conclusion, the reader is aware that the “achievement” of utopia on Mars “must constantly be renewed”, so much so that “utopia as a form is not the representation of radical alternatives; it is rather simply the imperative to imagine them”.⁴¹ Robinson’s definition of utopia is, needless to say, profoundly ideological, for in his depiction of utopia as a “working towards”, as a “progressive course”, he requires of his characters not just the ability to imagine utopia but a political commitment to it. The utopian terraforming of Mars does not simply involve a biological alteration of the planet; it

³⁸ Moylan, “Look into the Dark”, 57.

³⁹ Foote, 56.

⁴⁰ Szeman and Whiteman, 185.

⁴¹ Jameson, ““If I Find””, 231.

provides a space in which human beings are in turn politically and ideologically transformed, that is, “in which humans are areoformed—shaped by Mars—even as Mars is terraformed”.⁴² Through centuries of conflict, consultation and, eventually, consensus, Martian society comes to be shot through with what the Mars trilogy identifies as “eco-economics”, a kind of scientifically-informed, ethically-minded, green socialism.⁴³

In turning to the Science in the Capital trilogy, then, it is worth not just examining the extent to which it establishes a novum, in science fiction terms, but exploring, too, how this novum bears out the progressive politics that Robinson defines as central to his notion of utopia. First, a brief synopsis is necessary. *Forty Signs of Rain* (2004), *Fifty Degrees Below* (2005) and *Sixty Days and Counting* (2007) acquired the informal label of the Science in the Capital trilogy from the author’s working title for the first novel in the sequence.⁴⁴ As with the Mars trilogy, the three novels are ideally discussed together, as they form not so much a trilogy but a single text in the style of a Victorian triple-decker, as Robinson has himself indicated.⁴⁵ The Science in the Capital novels depict a scenario that Robinson calls “abrupt climate change”, after a 2002 report to the National Research Council that reconceptualised climate change as scientifically possible within three to five years.⁴⁶ Unfolding climatic catastrophe is told from the perspective of a group of scientists and policy advisors in Washington, DC: biologist Frank Vanderwahl; Diane Chang, his boss at the National Science Foundation (NSF); his colleague Anna Quibler; and Anna’s husband, Charlie, environmental advisor to the ecologically-minded Senator Phil Chase. In the course of events, Washington, DC, experiences extreme floods and record-breaking winters, with this microcosm

⁴² Frederick Buell, 279.

⁴³ Robinson, *Red Mars*, 298. For the radical politics of the Mars trilogy, see Burling, 75-96; Markley, 355-82; Otto, 118-35; and Swidorski, 43-56. However, see Gersdorf, 40, for concerns that the trilogy’s reliance on “the master narrative of US history” is essentially conservative.

⁴⁴ Robinson changed the names—his second and third novels were entitled “The Capital in Science” and “Global Cooling”—when his publisher insisted on more “novelistic” titles; Gunn, 4 April 2007.

⁴⁵ Robinson, *Imagining Abrupt Climate Change*, 16; Seed, 76.

⁴⁶ Robinson, *Imagining Abrupt Climate Change*, 6, citing Committee on Abrupt Climate Change.

dramatically emblematic of global chaos, climatic and otherwise: “they were entangled in a moment of history when climate change, the destruction of the natural world, and widespread human misery were combining in a toxic and combustible mix” (*Fifty*, 4). Yet, the narrative’s tone and dénouement are hopeful and happy: the scientists’ lives acquire a spiritual depth thanks to their friendship with a group of political exiles from the fictional Buddhist nation of Khembali; lonely misfit Frank finds true—if unlikely—love with a government intelligence agent enmeshed in rogue secret service operations; and romance blossoms between Phil Chase and Diane Chang, who end the narrative as, respectively, President and Presidential Science Advisor. This marriage provides the moral for the trilogy, that only science and politics in concord will save the day; it is such concord that enables the narrative’s large-scale scientific interventions, which ultimately mitigate and stabilise the many climate change disasters.

Already, this summary of the trilogy’s large-scale narrative, character ensemble, and interweaving plots suggests a generic mixing (espionage thriller or political romance?) that is provocative and therefore deliberate. Gib Prettyman’s analysis of the trilogy’s “generic experimentation” takes its cue, in part, from Robinson’s stated penchant for inserting generic “trap-doors” into his novels.⁴⁷ Further, Prettyman reminds us that such experimentation recognises genres to be “forms of living thought”, their dynamic nature recalling biological and ecological processes.⁴⁸ Yet, any reading of the novels’ generic blueprint also requires an awareness both of the relevance of utopian science fiction to their structure and of Robinson’s particular generic *modus operandi* in this regard, previously established by the Mars trilogy.

It is immediately tempting, but problematic, to read the setting of the Science in the Capital trilogy in terms of the novum of Mars of the earlier novels. This is not least because

⁴⁷ Prettyman, 192, citing Kleffel.

⁴⁸ Ibid, 191.

of Robinson's comments on the extent to which the triumph of eco-economic terraforming on Mars is a metaphor for successful ecological management on Earth:

It will be easier to live sustainably on Earth than to terraform Mars, but my Mars novels were written with the idea that they are metaphors describing what we need to do here, too, and that it's a matter of attitudes and intentions and individual actions, as well as global alteration technologies.⁴⁹

Indeed, for Robinson, such an interpretation could not have been lost on his readers:

as I wrote my Mars novels it was always present in my mind that what I was describing as happening on Mars—the conscious and successful management of an entire planet's biosphere—might serve as a model for what we will have to do on Earth too.... I believe part of their popularity is due to this fairly obvious analogy to our current situation.⁵⁰

It is as though, in response to Frederick Buell's disappointment that the Mars trilogy's extra-terrestrial setting is "ultimately so virtual", and that an "off-world utopia does not provide a model for earthly ecological reconstruction", Robinson has decided to literalise his analogy, and, as it were, ground his terraforming metaphor back on Earth.⁵¹ One could say that Robinson, long keenly interested in environmental issues, had already written a trilogy on (Martian) climate change and now wanted to write about it on Earth. Yet, at such an easy correlation of the novum of Mars with that of Science in the Capital, the reader must give pause. Robinson may describe the later trilogy as just "more ... science fiction", but, crucially, he qualifies this. He defines the novels as "day-after-tomorrow novels, a subgenre of science fiction sometimes called near-future science fiction".⁵² That is, Robinson engages in world-building in ways that are distinctly different from his construction of the novum of

⁴⁹ Szeman and Whiteman, 183.

⁵⁰ Robinson, *Imagining Abrupt Climate Change*, 2.

⁵¹ Frederick Buell, 279.

⁵² Szeman and Whiteman, 181; see also Robinson, *Imagining Abrupt Climate Change*, 5.

Mars. His attempt at bringing climate change down to earth (in a manner of speaking) has led him to utilise the near future, rather than a distant one, and a familiar setting, not an estranged one. Indeed, Robinson describes his discovery of the phenomenon of *abrupt* climate change as the trigger for being able effectively to portray Earthly climate change at all, precisely because it brings the crisis into the imaginative compass of his readers, both temporally and spatially:

As a novelist, it's obvious: you know, if something happens in three years, rather than five hundred years, you're better off in trying to figure out a story of how human beings are impacted and you can just frame the story better. And I've been interested in global warming for a long time, but I hadn't figured out a story to tell until I heard about abrupt climate change.⁵³

And, writing of his attempt to discuss climate change in the novel, *Antarctica* (1997), which appeared between the two trilogies, Robinson complains:

in the end, *Antarctica* is almost as remote from most people's consciousness as Mars. Also, sticking with the best scientific understanding of the situation at that time, I suggested there that although the long-term situation could be catastrophic in the extreme, it was only happening "fast" in geological time. In individual human time, which also means ordinary novelistic time, it would almost certainly happen so slowly that it was hard to imagine or depict what it would mean.⁵⁴

In other words, the near-future setting of the Science in the Capital novels enables the imaginative construction of climate change in a way that is psychologically and—one is compelled to add—politically and ideologically relevant.

Yet, this raises the question of whether Robinson's near-future novum is a novum at all. Certainly, it is on such grounds that Roger Luckhurst discounts the novels as utopian and

⁵³ Gunn, 10 Jan 2006.

⁵⁴ Robinson, *Imagining Abrupt Climate Change*, 5.

even as science fiction, preferring to describe them as belonging to the tradition of realism: “Science in the Capital not only abandons the scale and alterity ambition [of the Mars trilogy], but gives us a recognizable contemporary America without any futuristic enhancements or extrapolated intensifications”.⁵⁵ Even though the trilogy’s setting is never accurately dated—for, as Robinson asserts, “it is crucial never to have a date in a day-after-tomorrow novel”—Luckhurst reminds us that the action takes place “inside the horizon of current scientific research”.⁵⁶ In Luckhurst’s telling designation of the texts as realist rather than science fiction, it is possible to read Robinson’s near-future scenario as a significant gamble in generic terms. For in employing a near-future setting, the trilogy effectively eschews one of the most basic sources of imaginative appeal possessed by the genre of science fiction. As Moylan memorably evokes it, science fiction:

works by way of a readerly delight in the thoughtful and thought-provoking activity of imagining the elsewhere of a given text, of filling in, co-creating, the imagined ... paradigm of a society that does not exist but nevertheless supplies a cognitive map of what does exist. Such world-building is both the deepest pleasure of reading sf and the source of its most powerfully subversive potential.⁵⁷

In other words, Robinson undercuts a fundamental clause of the generic contract between the science fiction text and its reader.

Yet, Robinson is subverting science fiction, rather than rejecting it wholesale. In noting this, I am of course noting too that his representation of climate change—or, more accurately, of a climate-changed world—is something more than the simple mimesis or referentiality of nature of the kind often valorised in eco-criticism; it is a sophisticated revision of generic habit and habitat, a reimagining of the world-building impulse that characterises science fiction. Robinson’s generic subversion involves world-building of a

⁵⁵ Luckhurst, 171.

⁵⁶ Szeman and Whiteman, 181; Luckhurst 171.

⁵⁷ Moylan, *Scraps of the Untainted Sky*, 5.

sort, but the world that he builds in this trilogy is not of the same order as that of the previous trilogy—that is, it is not a novum. Certainly, he brings to the Science in the Capital novels the same techniques of world-building he had previously practised. In the Mars novels, it is possible to see that Robinson’s world-building occurs on both a textual and a meta-textual level; that is, by constructing a fictitious world in which terraforming takes place, Robinson both performs and dramatises the act of world-making. Thus, further, one could say that “the act of reading becomes a figurative terraforming”.⁵⁸ This second-level terraforming is achieved with the vivid descriptive method that Frederick Buell describes as “lovingly imagined, thickly detailed, scientific-aesthetic descriptions and evocations of the Martian landscape”.⁵⁹

Similarly, in the Science in the Capital novels, Robinson reproduces “in meticulous detail the complex institutional and political processes that frame the pursuit of scientific knowledge”.⁶⁰ Not only are the internal workings of the NSF conspicuously laid bare, but, for example, even the small San Diego bioinformatics company, Torrey Pines Generique, is exhaustively described in an early chapter in the first novel, although it plays a relatively minor role in the trilogy’s dramatic events. This “meticulous detail” is followed through in other respects, with events unfolding in a kind of real-time reportage. For one thing, conversations sometimes occur as pure dialogue over three or four pages, lacking even such expected narrative interpolations as “he said” or “she said”. Examples include Charlie’s telephone conversation with Anna as they assess the enormity of the flood (*Forty*, 350-2); Rudra Cakrin’s explanations of Khembali Buddhism to Frank (*Fifty*, 400-3); and Frank’s inflight telephone exchange with Wade Norton in Antarctica (*Sixty*, 356-9). Crucially, this paring down of reported speech is most obvious in a pivotal exchange between Phil and Charlie in the third novel, when, in seven pages presented in dramatic format, replete with

⁵⁸ Gersdorf, 37.

⁵⁹ Frederick Buell, 278.

⁶⁰ Heise, 207.

parenthetical stage directions, the President sets out his vision of eco-economics for the nation (*Sixty*, 347-53). Moreover, physical setting, as well as dialogue, is vividly portrayed, the result a Joycean psychogeography of the streets of the capital. Frank's first encounter with Caroline, for example, evokes a sense of real-time travel, first on the subway, "out to the prosperous parts of Northwest and Chevy Chase and Bethesda and Rockville and Gaithersburg" (*Forty*, 246), and, next, through the metro station: "Through the turnstiles, then, and along the tunnel towards the big escalator up and out. Then to his surprise she turned left, into the nook that held the station's elevators" (*Forty*, 247). Then, after their unexpected kiss in the elevator, Frank's pursuit of Caroline continues as faithful geographical reconstruction at street level:

They were on the sidewalk flanking Wisconsin Avenue, next to the elevator box and the old post office. ... In front of these witnesses nothing came to him, and she turned and walked south on Wisconsin ... he looked up to see that down the street she was turning right, onto one of the smaller streets west of Wisconsin.... By now he was on Woodson, running left and right, looking down all the little side streets and into shop windows, feeling more and more desperate. She wasn't anywhere to be seen. He had lost her. (*Forty*, 254-6)

Indeed, for any native of Washington, DC, the very spaces and streets of Robinson's novels are easily recreated in the mind's eye.⁶¹ But what, one must ask, is the effect of Robinson's insistent world-building in both topographical and institutional terms? If one brings to the text any science fiction expectations, then, regrettably, apart from the surely limited enjoyment of recognising scientific *realpolitik* or of re-experiencing DC à la Bloomsday, the reader is hardly a "traveller in a foreign culture", as Moylan describes the typical science fiction reading experience. Instead, one suspects that the kind of remark made by Heise is the

⁶¹ I am indebted to Adam Trexler for this insight.

more likely reader response: “such analyses of scientific and political institutions tend to make for rather dry reading”.⁶²

Hence, the reader of the trilogy must look elsewhere for imaginative appeal. It is worth complicating the idea of the novum by recalling Robinson’s generic renegotiation of science fiction as utopian science fiction, and, indeed, his redefinition of the utopian as a progressive cause. It then becomes apparent that Robinson’s exhaustive world-building takes place not simply in order to create a world in meta-textual terms but to convey an impression of the immense ideological effort that is needed to create that world within the text. And thus it is not just detail of description but scale of plot that matters. Robinson has said of this trilogy that “Some stories just need lots of pages to tell right”.⁶³ The sheer length of the text as triple-decker (some 1,500 pages), the precision of its institutional and geographical settings, and the real-time nature of its dialogue, combine actively to involve the reader in the achievement of the utopian dream. Carol Franko astutely analyses the Mars trilogy as an exercise in Bakhtinian dialogism, emphasising how the novels “dialogise the concept and hope of Utopia”.⁶⁴ Similarly, the reader of the Science in the Capital trilogy experiences Utopia in and as progress: one is made aware of character psychology through dialogue, in a manner that resembles the slow process of getting to know people in the so-called “real” world; one walks and travels with these characters through the cityscape or landscape; and one is embedded, like them and with them, in the various milieux in which they work and live. All this occurs in order to invite and involve the reader. Robinson’s utopia is thus both progressive and participatory.

Moreover, such an approach to utopia requires a distinctive narrative pattern. Instead of setting up a structure that locates a protagonist with or against a utopian or dystopian setting, the trilogy presents us with no obvious hero. Although it is possible to identify Frank

⁶² Heise, 207.

⁶³ Robinson, *Imagining Abrupt Climate Change*, 16.

⁶⁴ Franko, 61.

as the central character, as do Luckhurst and Prettyman, it is significant that Frank's experiences do not come to the fore until the second novel, and that the first novel opens with Anna and expends much narrative energy on the Quiblers.⁶⁵ Indeed, another, perhaps more obvious candidate for the role of hero is "*Unconventional, unpredictable, devil-may-care*" (*Sixty*, 49; original emphasis) Phil Chase, the Vietnam vet turned self-styled World's Senator turned President; yet, even this mercurial character enjoys only a brief moment of heroic focalisation, when he takes office at the start of the third novel. It would seem, then, that the inclusive nature of Robinson's utopian vision requires a corporate or, more accurately, communal hero. Just as one commentator of the Mars trilogy considers Mars to be the hero of those novels, Robinson maintains that the Science in the Capital trilogy presents us with the NSF, or indeed, science itself as hero.⁶⁶ This shift of focus from planet to ideology is significant. If, in the Mars trilogy, it matters both what the novum is and how it comes to be, in the Science in the Capital trilogy, *how* seems to matter more than *what*. In Robinson's climate-changed world, the spotlight is on the ideological work of those who positively terraform it out of the negative terraforming it has undergone over the twentieth century.⁶⁷

The inclusive, progressive utopia of the Science in the Capital novels represents one way of narrating the complex topic of climate change. To consider the efforts of other writers who have approached the topic is to realise that numerous other generic paths present themselves, depending on the particular negotiations that take place between writer and reader, not to mention critic, and that arise between the text and others in a writer's *œuvre* or generic purview. Any detailed analysis of such texts and such differences is beyond the scope of this paper, but even a cursory acknowledgement of their existence underlines the importance of a generically-inflected reading of literary constructions of environmental crisis

⁶⁵ Luckhurst 174 and Prettyman 187.

⁶⁶ Markley, 368; Gunn, 10 Jan 2006; Robinson, *Imagining Abrupt Climate Change*, 16-17.

⁶⁷ Robinson, *Imagining Abrupt Climate Change*, 1-2.

(or of the environment, in general). An awareness of the complex dynamics that constitute the generic space surrounding the text takes us a long way to determining the space depicted within that text. Very often, ecocriticism seeks to evaluate the success with which a text engenders an awareness of the environment. As Buell remarks, or perhaps concedes, this success is usually decided by the yardstick of mimesis, that is, how well a text replicates the world.⁶⁸ Yet, for various reasons, which Buell makes abundantly clear, mimetic ability or “environmental referentiality” is not always the most relevant test of a text’s success, nor is it necessarily the business of literary criticism to pass judgement on whether such success has been achieved. I would suggest that what is relevant to literary criticism is an understanding of how a text makes the attempt at success, and what is relevant to ecocriticism is how a text makes this attempt in terms of representing the environment. It is genre theory that enables us to locate that attempt.

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⁶⁸ Lawrence Buell, 30-2.

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